ATOL: Art Therapy OnLine

Spacing it: Expanding perception of spatial relationships through art therapy

Orit Dudai

ISSN: 2044-7221

Date of Publication: 28/4/2020

Citation: Dudai, O. (2020) Spacing it: Expanding perception of spatial relationships through art therapy. *ATOL: Art Therapy OnLine 11 (1).*

Available at: http://doi.org/10.25602/GOLD.atol.v11i1.1395

Abstract

This article explores, in the context of art therapy, the perception of space as represented through maps. It focuses particularly on the way spatial perception is embodied, and worked through by the use of images which map and stand in for a physical space, such as the therapy room or a geographical location. Spatial perception is reviewed through the lens of brain research (Tolman 1973; O'Keefe and Nadel 1978; Maguire et. al. 2000, 2006), and approaches in psychoanalysis (Bick 1968; Meltzer 1975; Weddell 1975) and art therapy (Schaverien 1991; Meyerowitz-Katz & Reddick 2017). This investigation into spatial perception is then developed by comparing two individuals' uses of what I call 'geographical images', based on Meltzer's (1975) concept of personality organization as a geographic space. The first account is of maps representing the art therapy room created by an autistic child. These images seemed to embody a bizarre perception of space and transference relationships. The second is of an adolescent girl who created maps of her neighbourhood, which helped her to expand her ability to explore her environment as well as her object relations. Through comparing the two cases, the article aims to discuss the formation of mental space perception and to highlight the importance of making maps in art therapy as it expands—cognitively, conceptually and interpersonally—the quality and range of a distorted or limited perception of space.

Keywords: space perception, cognitive maps, mapping, spatial embodiment, geographical images

Introduction

Space has an important role throughout our existence (Tolman 1973; O'Keefe and Nadel 1978; Maguire et. al. 2006). We live in it, move through it, explore it and sometimes defend it. It can be thought of as the environment that surrounds, enfolds, and engulfs us, so that no one can be isolated from it or identified outside and apart from it. This means that 'one cannot observe an environment, but that it can only be explored' (Ittelson 1973, p12-13 in: O'Keefe and Nadel 1978, p75). It is quite difficult to imagine our existence without reference to the three-dimensional space within which one finds oneself. Having said that, space is also very difficult to come to grips with, and without proper knowledge of it, our ability to exist within it, in terms of our experience

and behaviour, both subjective and interpersonal, will be hampered. We need, then, to 'map' our space in order to orientate ourselves in it. Accordingly, the aim of this article is to illuminate the way art therapy can expand one's inner perception of space, as well as one's spatial existence in the world, through images that relate to the mapping of space.

Between cognitive maps and map images in art therapy

In brain research, a *cognitive map*[1] is an information structure, associated with the hippocampus, which enables the construction of map-like images as a way to know the environment. It is assumed that people store new information about the environment in a simplified form and in relation to the memory information they already have. Both are coded in a structure, which aims to represent (not necessarily in pictorial form) the world of three-dimensional space (O'Keefe and Nadel 1978; Kaplan 1973,). O'Keefe and Nadel conclude that the ability to construct cognitive maps must be innate.

More recent findings (Maguire et al. 2000; 2006) have proved that there is a capacity for local plastic change in the structure of the healthy adult human brain in response to environmental demands. These experiments, conducted by Maguire and her colleagues, have shown that people who are highly dependent on navigation skills, such as London taxi drivers, have a significantly larger posterior hippocampi (the area in the brain that stores a spatial representation of the environment), than subjects not relying extensively on navigation skills. Methodologically, their research begins with observation of behaviour, and then proceeds to explore how it enlarges the cognitive map in the brain.

While Maguire and her fellow researchers are interested in the way behaviour changes and expands the cognitive map, I'm interested in the way maps created within art therapy might expand the inner perception of space and as a result enhance one's conduct in the world. Thus, the direction of the exploration is reversed.

What is it about a map that helps effect this change? In order to address this, I turn to Schaverien's (1991; 2005) conceptualization of how image-making can express feeling

[1] The term was first used by Tolman and others (1948) in their studies on place learning in simple and complex mazes.

and as a consequence, the picture may be experienced as an extension of the feeling-world of its creator, uniting form and content. This unity of form and content is a kind of embodiment and as such can influence perception; the image is experienced as an incarnation of what it portrays. Accordingly, I propose that creating a map image is a praxis in which its creator has to re-enact his spatial existence, in the process of producing the image. This means he embodies[2] his space perception by representing it in a two-dimensional mode. The unique ability of these images to embody a cognitive map without its actual enactment in space is what makes them an intermediate domain in which to practice the expansion of space perception.

Schaverien (1991; 2005) also makes an important distinction between an 'embodied image' and a 'diagrammatic image' (1991, p87). While the embodied image is more coherent, and functions to articulate pre-conscious or unconscious mental images as pictures, the diagrammatic image represents conscious experience which once interpreted is dispensable. Therefore, according to Schaverien, the diagram is no more than a visual descriptor, relating to things in the way that linear maps, visual signifiers or plans do. This implies that map images do not have an embodied quality to them.

Rather than relating to maps as diagrams, I argue that map images are vehicles for a lived bodily experience, and communicate different levels of conscious and unconscious meanings of one's spatial perception and spatial relationships. In this sense the 'bodymind' concept (Meyerowitz-Katz & Reddick 2017, p8) is much more accurate in relating to map images. This concept describes the way neurological systems are integrated with interpersonal communication.

Here I make use of two further concepts of Havsteen-Franklin's (2008, p55): the 'unstructured' image, which could be considered chaotic, and the 'disembodied' image in which 'the term 'embodied' does not encompass the sense of difference, strangeness, alienation or loss of self that is encountered in psychotic states.' (p56). These concepts are very much in tune with what I will relate to as a bizarre geographic autistic image.

[2] Following Bloom (2006, pxvi), I use the term throughout the discussion to describe 'the integration of parts – mind, body, internal and external worlds.'

I begin by relating to the concept of maps and the process of mapping. This leads to a discussion of what I call *geographical images*, in order to describe map images that embody spatial perception, created in the process of art therapy. Finally, I turn to the clinical material and address two contrasting clinical examples. The first is from an art therapy process with an autistic child who created images that seemed to embody a bizarre perception of space. The discussion follows the transformation in the symbolic quality of his space perception as he began to explore the room and relationships in space. The second is of an anxious girl in early adolescence who was inhibited in her ability to explore her geographical surroundings. In therapy, she created topographic maps, first of her known area and then of further areas. This work led her to become more independent in reality. By comparing these two clinical examples, this article aims to highlight the importance of map-making in art therapy in overcoming cognitive, conceptual and interpersonal distortions and limitations in space perception. Let us begin with defining the concept of a 'cognitive map'.

Mapping and maps

The simplest definition of a map as noted by O'Keefe and Nadel (1978, p86) is that it is the representation (usually two dimensional) of a part of space. The constituents of space are places, and thus an alternative definition of a map is the representation of a set of connected places, systematically related to each other by a group of spatial transformation rules. O'Keefe and Nadel point to a striking feature of a map, namely its flexibility. They argue that while a route is goal-oriented and directs one from an origin to an endpoint in a chronological path, a map specifies none of these. It can of course be used for this purpose, but is also used for a variety of other goals and purposes. One of these is curiosity, the desire to explore the unknown aspects of our environment. Maps then represent a given space and are not a chronological representation. No object or place on the map is a goal, and a primary reason for the construction of maps is curiosity. One of the benefits of maps is that they are usually stable and relatively invulnerable to change. Furthermore, importantly, in order to create or read a map, one needs specialist knowledge of what are called coding strategies.

Lynn Kapitan (2013), in her discussion on mapping and art therapy images, defines maps as abstract representations used to cognitively simplify, organize, and

communicate information about the spaces in which we live. One can see that this definition involves the communicative dimension, which widens our perspective on spatial perception to include relationships between self and other. I would add here that maps are visual illustrations that mediate between our inner perception and external reality.

Kapitan (2013) also mentions the modern cartographer Christian Jacob, who defines a map as the point where three variables come together: the medium or space of representation, the referent signified by the map, and the gaze of the viewer, which attributes meaning to the map. This definition is most apt for the process of art therapy, where we have the art work, in this case the map, a concrete image; the referent, namely the inner experience of the client, represented by the map image; and finally the gazes of both therapist and client on the image, which act as a sort of joint attention, communicating a shared experience and charging the experience with meaning.

Art therapy: spatial perception and mapping imagery

There are few references to the subject of spatial relationships and map images in the art therapy process. What has been written is largely for diagnostic purposes, for instance the use of road drawings as part of a clinical interview in order to evaluate an inmate's risk of self-harm (Hanes 2008), or Pifalo's (2009) article on a mapping technique designed for use following a disclosure of sexual abuse. That article relates to mapping as a technique that uses simple line drawings and geometrical shapes in order to identify ways in which family members of children who have experienced sexual abuse relate to each other. Pifalo does however claim that beyond its use as a diagnostical tool, the structured nature of the mapping technique begins to restore order while respectfully validating the traumatic experience. In a more recent article, Takkal, Horrox and Rubio-Garrido (2018) discuss the relationship between existence, space and the representation of space through the prism of Heidegger's philosophy, as they reflect on their experiences of an art therapy group in a prison.

While these discussions widen perspectives on how map images are thought about in the therapeutic process, I want to stress the embodied quality of the images as a catalyst for change, and how these maps communicate the client's perception of space.

In order to relate to both functions of the image-making, I use the term ‘geographical image’, which I will now explore.

The geographical image

Meltzer (1975) uses the term the ‘geography of personality’ (p17) to describe, beside the differentiation between self and other, an organization of the internal world which includes four characteristic regions; internal and external to the self, and inside and outside of objects. These four areas in the ‘geography of phantasy’ (p17) relate to the internal world as a physical space in which changes in its landscape, and related phantasies and anxieties, can be detected through the transference. Autistic children, Meltzer writes, tend to experience difficulty in differentiating these four areas in the geography of phantasy, which impairs development. This pathological psychic geography, which he called ‘geographical psychosis’, manifests in a patient's distorted picture of the world in which he lives or is imprisoned (1981, p477 as cited in Bloom 2006, p60). Doreen Weddell's work with Barry (Weddell 1975) vividly illustrates this impairment. Interpreting the transference depicted in this autistic adolescent's diagrams of roads and routes, Weddell describes how Barry began to recognize ‘…something of the nature of the object in physical terms and in terms of psychic geography as well. This allowed for internal and external spaces and distances between objects and within objects’ (p130). These ideas will be helpful in my later discussion of the mapping process of an autistic child.

The capacity to feel a sense of space is dependent on having a sense of boundary, by which one distinguishes clearly between what is inside and what is outside, a sense of contour defining the borders of the container. This is where Esther Bick's ideas on the experience of the skin in early object relations are so important. Bick (1968; Bott Spillius et al. 2011) described how this function is gained only by an experience which is at first of something external, in the form of an object, a good enough carer who holds the personality together, in order to save it from falling apart in the most primal unintegrated state of the baby's experience. Bick describes the existence of these moments where ‘parts of the personality are felt to have no binding force amongst themselves and must therefore be held together in a way that is experienced by them passively, by the skin functioning as boundary’ (Bick 1968, p484).

The ability to feel passively held by a skin boundary is eventually internalized and a concept of space is achieved. But when this achievement goes wrong in situations where there is for some reason no ability to internalize and take in these experiences of boundary formation, then the personality simply leaks out into limitless time and space, like floating in an endless space. This, as Bick formulated, is where a defence in the form of a *second skin* is formed (1968, p484). In this defence, dependence on the object is replaced by a pseudo-independence and inappropriate use of certain mental functions for the purpose of creating a substitute for the skin container. These substitutes are usually auto-sensuous, where the focus is on body sensations, part objects and physical particles. These are all functions that abolish distances between objects in space. These pathological states are not total and can help us think about the dynamic movement of space perception and mental functioning.

As can be seen, the geographical metaphor relates to the internal world as a physical space whose main scene includes not only a representation of the arrangement of objects within space in the external world, in the form of a cognitive map, but dramatizes, on an inner plane, the nature of the relationship between self and other at a given time. In her book about movement and psychoanalysis, Katya Bloom (2006) uses the term ‘spatial metaphor’ to help represent the dynamic spatial movement necessary to the formation of object relatedness. In this accord, Alvarez's (2006) acknowledgment of how movement is necessary in order to give a dynamic quality to the geographization in thinking about mother's body parts is also quite helpful in thinking about spatial perception, whether internal or external, as a dynamic action.

Pursuing this line of thought, I describe spatial images as ‘geographical images’, hoping, after Meltzer and Weddell, to bring to mind the way they function to explore the meaning of not only physical but also psychic space. Going back for a moment to O'Keefe and Nadel's (1978) definition of maps, I want to relate to the distinction they made between *topographic* and *thematic* maps; this will be useful for the discussion of geographical images. As noted above, maps can be used for finding one's way around the world, where we aim to orientate ourselves and explore the environment. These sorts of maps are *topographic* maps. In these maps the entities which are located in space are symbols for objects.

By contrast, the *thematic* map is a specialist map representing not just concrete things and places, but ideas and hypotheses, and there can be a relaxation of the rules of spatial transformation to suit the particular purpose of the cartographer. This relaxation means that the relationship between space on the map and the space in the real world is not one of strict correspondence. The definition of thematic maps as a class of maps representing not only facts in the real world, but ideas, is quite fascinating when we think about Meltzer's idea of psychic geography.

The geographical image can relate both thematically and topographically to the world, but being an image created within therapy, it contains both phantasy, transference relationships and aspects of space in the real world. Even more, as space surrounds us and cannot be observed, only explored (Ittelson 1973), a spatial (geographical) image is a very good option if one is to observe his spatial perception from an aesthetic distance. Geographical images contain a physical, concrete dimension. Other than planning the composition on the paper plane and deciding what objects are placed in relation to others, creating an image means using materials and the motor action of working with them. In this way geographical images are not only mere representations of a three-dimensional space, but have a performative aspect to them. This means that one has to use his body in creating the image and use his navigating skills in both planning and making the image.

Although this is not the same as actually driving in the streets of London, which was part of the empirical base of the research of Maguire and her colleagues (2000,2006), as noted above, I propose that image-making facilitates space perception both internally and in external reality. I would suggest that it is an intermediate tool that both represents by means of a concretization of a cognitive map, and at the same time is a performative act that can trigger change in spatial existence. Thus, a geographical image has the potential to transform one's awareness of one's position in space from a rigid and limited perception of that space to a wider one, in other words to inform it with space, making it spacious. This process will be discussed in the light of two clinical examples: the first will focus on a thematic geographical image, the second will demonstrate the creation of a topographical geographical image. Both relate to the transformation from a rigid and limited perception of space to a wider and more dynamic one. Thus, the focal point of my exploration will be to explore how images of maps created within art therapy

might expand the inner perception of space and as a result enhance one's conduct in the world.

Clinical Discussion

First account: The geographical images of an autistic boy

Adam was three years old on entering therapy as part of a treatment program in a nursery centre for children aged three to six diagnosed with Autistic Spectrum Disorder (ASD). The main approach in the centre is inspired by Francis Tustin's (1981, 1994) and Ann Alvarez's (1992) psychodynamic theories of autism. This approach regards autism as a defence, which diverts the course of development in two stages: First there is an *abnormal perpetuated* state of adhesive unity with the mother resulting in a traumatic premature sense of separation. Then, in order to block this traumatic experience, these children develop an *auto-sensuous insulation* that blocks incoming and outgoing experiences, a protective shield against the fear of separation.

This autistic shutdown means that all functions of the self are affected: emotional, communicative, motor, cognitive and play skills, together with the ability to integrate them into a coherent experience. But it is vital to remember Tustin's insistence that these autistic defences are never total and that there is always a fringe awareness to work with. This is where psychotherapy has an important role in holding and containing the unintegrated or severely depressed sense of existence of the autistic child. Even more, the aim is to form a space, which, like an incubator, creates conditions through which the child can be *reclaimed* (Alvarez 1992) for the sphere of object relations.

Adam

When I first met Adam, he was just over three and in his first days in nursery. He looked much younger, with his cute and chubby baby face. He was very clumsy and seemed not to notice his surroundings, stumbling around. I noticed that he preferred to lie on the floor and he usually held small hard toys such as cars or figures of action heroes in both hands, refusing to let go of them. He used to scream in response to any request to let go of his hard objects, or to any change in his restricted routine. Adam used only a few words, usually in the form of commands such as: "bring" and "come", and did not call people by their name. He didn't play, other than to move cars from side to side while

lying down, and showed no interest in his surroundings. He very rarely initiated communication with adults except around minimal functional needs, and seemed to ignore other children.

Adam's behaviour conformed to the criteria of ASD (*DSM-5*, 50), which are described as follows: persistent deficits in verbal and non-verbal social communication and social interaction across multiple contexts including deficits in developing, maintaining and understanding relationships. The disorder also includes restrictive, repetitive patterns of behaviour, interests, or activities, insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal and non-verbal behaviour. Interests are highly restricted and fixated and are abnormal in intensity or focus.

Informed by psychodynamic approaches to working with autism, I saw Adam in twice-a-week therapy sessions, and also met his parents once every fortnight. His therapy lasted three years, until he was six, when he moved to a small class for autistic children in a regular primary school. After an initial observation in the nursery, when I introduced myself to Adam, he had no problem coming to the therapy room with me, and while holding my hand he did not seem to notice I was a new figure in his life. He moved from the nursery space to that of the therapy room without noticing the transitions, though we needed to leave the nursery, walk through a yard and enter the therapy complex in order to reach the art therapy room. Adam moved through all spaces without exploring them, ignoring obstacles on the way, and I had to make sure he did not stumble.

The first sessions were composed of moments where Adam lay on the carpet, moving a toy car in straight lines very close to his eyes, and moments when he wandered from one side of the small room to the other, in what seemed to be lack of purpose. I felt extremely helpless, restless and claustrophobic, and I noticed that I couldn't think. In time, Adam discovered the sink and would open the tap, seeming to be hypnotized by the endless flow of water. This became a ritual in the sessions, and everything around became wet from the endless flow of water, including Adam's clothes. It felt as though we were in a scene from the *Sorcerer's Apprentice* from Disney's *Fantasia* (1940). I felt that everything was wet and dissolving into a limitless space within which one could not even breathe. I had the feeling that this interminable splashing of water in the sink and wetting of everything around was the physical enactment of a sense of endless drifting,

which, although unbounded, was at the same time very limited and depressing with no option to explore and grow. I was determined to make it possible to breathe and to create a hatch in this undifferentiated space.

First intervention

I brought Adam a pot, filled it with water and placed it in the sink. This would be his water for every session, and it would be filled again in each session. This limited supply of water at first enraged him; he tried to take my hand to open the tap and screamed when I did not fulfil this. I felt like a wicked witch, destroying his boundless free-floating experience. But something else happened. Adam suddenly put his finger in the water and started to circulate it inside. He was fascinated by the way the water reacted to the way he moved his finger inside it. He seemed to have a primal realization that his body was interacting with a material which was outside his body and in the world. He then said for the first time: "water", and a spatial moment was formed.

A spatial process of awareness

In time, after a long exploration of the water in the pot, spilling it and acknowledging the idea of non-water, or that of the drain hole in the sink where water disappears, all concepts relating to the formation of a mental container, Adam became interested in other materials. He began to draw and use finger paint. He began with smearing the paint but soon made drawings with lines and circles. The most astonishing process, however, was when he began to draw representations of space in what seemed to be a primal attempt to orientate himself in it, to make sense of what is un-sensible. In the next section I present three examples of this process, which will show how spatial imagery was transformed from being a primal effort to make sense of space into something more complex and symbolic.

First image: The bizarre geography image

The first image was made within the first year of therapy. For many sessions Adam used hand paint to smear and scribble lines and circles on paper. In time, he began to show an interest in literacy, scribbling letters and words. Words had become an important factor in his existence and it was impressive to see his skills developing, even though they were often used as a pervasive defence of a second skin. On one occasion, Adam drew the therapy room (Fig. 1).

Fig. 1: The therapy room

The drawing uses mixed techniques: paint and felt-tips. What is quite interesting in this image is the representation of space through the placing of scribbled words together with visual representations on the paper plane. Adam asked me to write what he had scribbled. On the bottom of the picture plane is a line that represents the floor and beneath it I wrote the word ‘floor’ (in Hebrew). Above it in red he scribbled the word ‘bottle’, and I wrote the word in small letters next to it. On the right side in blue is the word ‘colours’ and next to it, on the right side, where the two x’s appear, he asked me to write his name and mine[3]. In the upper part of the picture plane an oval form appears with a circle inside and what seems to be another word scribble which in my association looked like a bodily form with a representation of thoughts inside. Above it there is another line, which logically would be the ceiling, but he said: "room."

The content of the objects depicted is quite striking, and seem to reflect Adam's interest in the issue of spatial relationships. From all the objects in the room, he chose to represent boundaries, a bottle and colours, which record how he became very aware of the physical aspect of the room. Adam had a toy milk bottle in his box and it seemed to me that his ability to place it within the picture plane reflected his interested in it as a

[3] The names are concealed for reasons of confidentiality.

feeding object, which I had given him. Colours were his main tools of expression, which can also be seen as a material which I had supplied, another ‘feeding object’. Finally, his request to write our names on the side points to the way the objects on the picture plane represented Adam’s attempt to embody his emerging sense of spatial relationships in terms of physical and psychic geography. This brings to mind Weddell’s (1975) account of how Barry began to recognize the nature of the external and internal spaces between and within objects.

Looking at the image Adam made, what comes to mind is the uniqueness of the way space is represented. First, coloured spots are used together with literary forms. One notices that the word-scribbles keep the correct syntagmatic structure (De Saussure 1916) for forming words in Hebrew (from right to left), which is quite impressive. While the scribbled words represented names of objects in the room, the coloured spots were nameless and seemed to be free floating in the picture plane. Thus, I would say that the mapping image represents an intermediate phase containing a more primal and fluid autistic sense of drifting in space, as well as the beginning of a symbolic ability to define one's position in space.

While the word-scribbles hold to a certain logical and grammatical sense, the image itself seems not to be similarly restrained (and enabled). Looking at the drawing as a whole unit gives the impression that it is primarily associative, in which the relationship between objects on the paper plane are connected by an internal logic. That said, the line he called ‘floor’ makes it also clear that Adam has some boundary perception, and that he is aware of the relationships between objects within space, whether in reality or internally, and that he is thematically (O'Keefe and Nadel 1978) interested in mapping the room.

These connections seem to reflect a kind of synchronized and bizarre geographical mix. This is not only due to the mixing of names of objects with spots of colour, but also due to a blurring of boundaries between container and contained. What I mean is that it is not quite clear what holds what. If the upper line which he called ‘room’ is what holds everything, then what is the relation of the ‘floor’ to it? Is it part of the room or is it outside of it? Then we have the named objects free floating in space and the oval form/container, which is itself a kind of a room within a room. Presumably, if the inner

floating oval form represents Adam's mind, the image depicts ‘a geographic type of confusion..." (Meltzer 1975, p17). A sense of being inside the rabbit hole in *Alice in Wonderland* is what comes to mind, a space which has an idiosyncratic logic of its own to it, a ‘geographical phantasy’ now communicated through the map image.

Second image: a schematic geography image

Fig. 2: The contents of the room

Here we can see a more schematic and graphic image of mapping. Within the paper plane there is a series of rectangles, each in a different colour, all arranged adjacent to each other. In each rectangle there are words in Hebrew, each standing for an object in the therapy room. These are as follows, from the upper right hand of the paper plane and going down: gouache, house (doll house), colours, toys, box (his own box), building blocks, water, Lego, animals (plastic toys), helicopter, hand paint.

All objects in the drawing were objects of interest to Adam in the therapy process (for instance the word ‘water’, which was a focal point at the beginning of the therapeutic process, as noted above). But I want to stress the way the space is embodied in this image. When we look at the drawing as a geographical image, it seems that the

rectangular forms with the words inside resemble an atlas or globe where the name of each country is written inside the graphic form representing it. In this sense Adam was using his growing literacy and his aesthetic sense to map the therapy room, to form a representation of what was in the room. Comparing this image to the former, one can see that the relation between objects in space is much clearer and more grounded, and one may presume that clear boundaries are being formed, which though perhaps rigid at this point, show differentiation emerging in parallel to the formation of literacy.

Embodiment: The action geography image

In time, Adam began to draw impressive symbolic pictures of different situations from his life in space, many of which depicted the transference relationship and included scenes of us in both realistic and phantasized situations. He turned out to be a talented painter with developed graphic skills and a rich inner world.

Within this process I want to highlight the way embodiment was a crucial factor in using geographical images, which were used not only as mere representations but also as actions, which expanded spatial perception together with object relatedness. This happened as Adam began to explore the boundaries of the room. At first, he used the walls to attach his work to, and physically mapped the room by doing this. Not only this, but he would also attach the number one to the wall and say that he was number one. I interpreted this as his wish to be the first and only one in the room as well as in my thoughts. I thought that Adam was using his body to assert his presence in space, and especially in my mind.

But as he began to explore the space of the room, he found out that this was limited. He opened the door and put his work, which said ‘Adam is number one’ on the outside. Now everyone passing in the corridor could acknowledge his spatial existence, the existence of a space which he inhabits not only physically but also mentally, through the objects he holds in mind, a space which is not endless, but does have a solid existence. I believe this process of embodiment was translated into the symbolic images of his life space.

It is important to note that the seeds of this spatially conscious assertiveness were there even in the bizarreness of the first image, and we recall Tustin's reminder that one

needs to see the fringe awareness through which therapeutic interventions can percolate. Thus, Adam's three-dimensional potential was there from the beginning and it seems that the process of embodiment gained through his ability to work with images, together with the use of the therapeutic space, enabled him to move developmentally. In other words, he learned to ‘space’ his inner perception of his existence in the world.

Second clinical account: Amy

The geographical-topographical images of an adolescent girl

Amy was twelve years old when she asked to come to therapy, with the encouragement of her parents. She was a highly intelligent, pleasant looking girl, fashionably but modestly dressed. She came from a very aware and supportive family. On first entering therapy, she described her difficulty as a social one; she wasn’t finding her way around the social matrix of her environment. She was in her last year of elementary school and would soon have to move to junior high, which would be in a totally different school. Changes made her anxious and in general she would only feel free around her family and in known spaces. Two main areas of special difficulty were described: the only food she would eat was specific and limited kinds, prepared by her mother; therefore, she couldn't stay for meals at friends' houses. Secondly, she was reluctant to walk independently in her neighbourhood, something that a girl her age would be expected to do.

I invited Amy to engage in two tasks: the first was to create a self-portrait; the other was to draw a map of her environment. Both ideas seemed to interest her. I will focus here on the process of mapping, the main interest of this discussion. The idea of mapping seemed to suit her rational and schematic ability. She began by drawing a very detail topographic map of her block, and it was quite amazing to see her accurate spatial perception. Then an interesting thing happened: in parallel to working on the map during our sessions, she began to walk more independently in her neighbourhood. She found out that she was very good at orientating herself. It seemed to me that maybe her strength, being able to visualize so accurately, is also what makes her phobic, since there is always some discrepancy between inner and outer realities, and a realization of this gap may be a source of anxiety. I also asked myself what did she imagine was beyond the familiar?

This is where drawing a map is such an important intervention, since it embodies one's own perception. The making of it acts as an intermediate space between inner and outer spatial realities. Mapping is a way to work through these discrepancies, not only symbolically but also using the body as an active participant in the process. In this way the image, as seen below in Fig. 3, is not only a representation of a cognitive map, but also an active projection of the process of mental visualization[4].

Fig. 3: The neighbourhood

In this first drawn map image, one can see that there is one very detailed area. This is Amy's familiar living space in which her mother used to accompany her and which she now explored independently. It contains the school, the country club, the neighbourhood gardens and some familiar houses. It is noticeable that beyond the familiar lies a void. I propose that these empty spaces, placed in their correct spatial orientations (for instance the sea in the west, represented in blue on the right side of the paper plane, or the roads at the top of the paper plane), depict her inability to imagine space that she knows is there but is not yet embodied, and which therefore remains empty. In turn, this

[4] The map images are my reconstructions, made in order to protect confidential information.

void in her spatial perception is a source of anxiety and restricts her ability to move in space.

The dynamic movement between spatial perception and reality proved itself once again when Amy was about to begin junior high. Oddly enough, as mentioned above, she was placed in a school outside her neighbourhood, which meant she had to explore a totally different environment. The new school was somewhere between her house and my clinic, which was also at the time a drive away. So, a second map was needed.

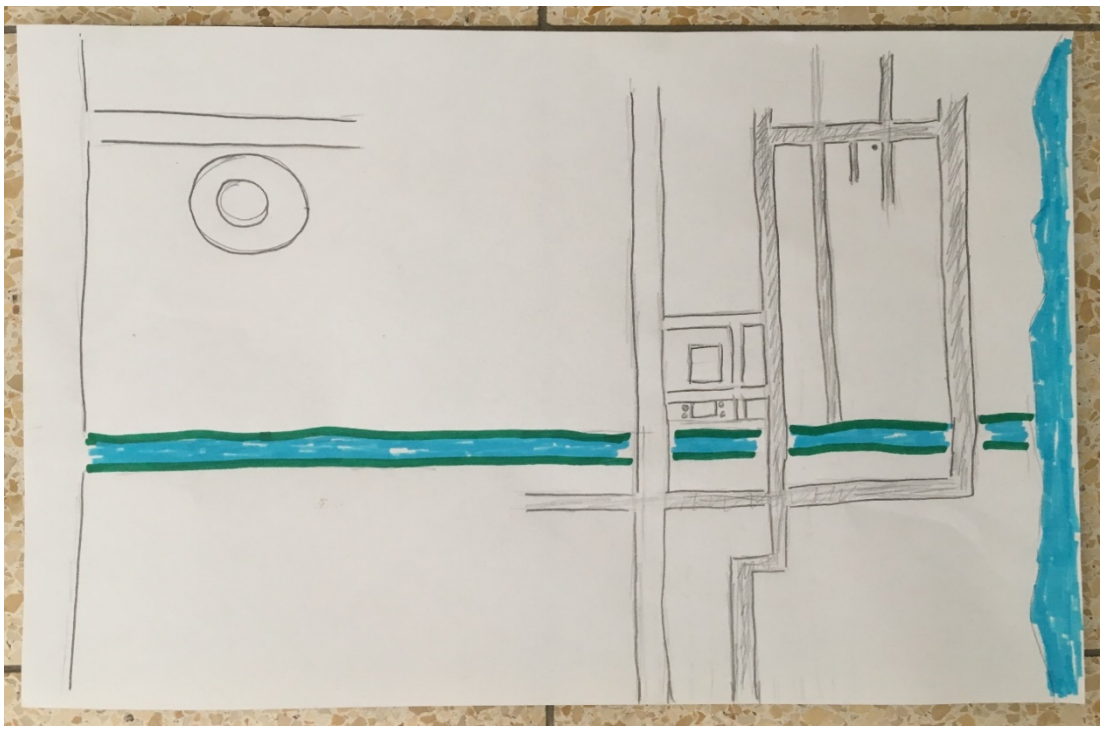

Fig. 4: A far away area

This map, just like the first one, is very detailed and accurate in representing spatial reality when it comes to areas which Amy had experienced in reality, namely her school, the nearby streets and the route to my clinic. She filled these in, in grey. One can see that her topographical perception is faultless, and she had a very clear sense of orientation.

When I reconstructed her drawing, though, I noticed that the only disproportionate object on the paper plane, in terms of its position in space, is the circle in the right-hand

corner, which represents a well-known shopping square. One also notices the empty spaces between the detailed known area and this square. I understand this as follows: Amy knew this square because she had been there a few times. But since visits were only sporadic and not part of her daily routine, and furthermore, she did not go there out of her own curiosity, it was not embodied in her experience. She knew it was there but it was not part of her bodily experience in space. Thus, her map image contained the square, but as an object distant from her subjective embodied experience. This supports the idea that mapping images are intermediate spaces containing a dynamic interchange between inner and outer realities in spatial perception.

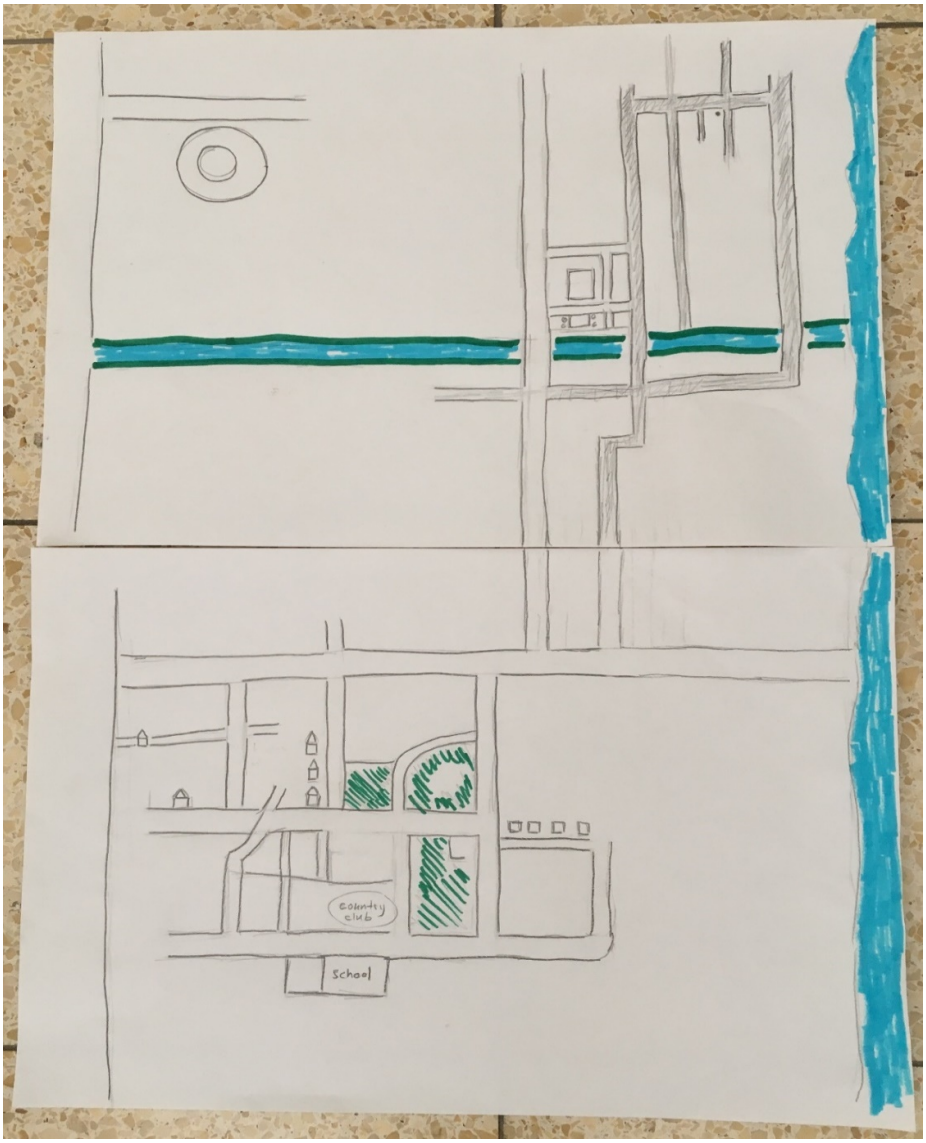

Fig. 5: Expanded map

The third map shows the connection of both maps, which was her purpose from the beginning in making the second map. Amy's expanded map represents and embodies the expansion of both her cognitive map and her actual movement in real space. Through creating the maps in therapy, she could practice and communicate the routes she took from her house to her various activities, which were by now enlarged. She took the bus to school and even to therapy and became a very lively and socially engaged teenager.

Discussion

Although the map images in both cases have 'diagrammatic' features, I would say that they are primarily bodymind images constituting a matrix of mind, body, and worlds both internal and external. The use of maps, which I have termed 'geographical images', demonstrated how the process of mapping embodied one's spatial perception, and how these images encouraged a change in the spatial existence of both patients.

In Adam's case the images represented and were part of a process of working through a transition from a free floating and bizarre geographic autistic perception to a more symbolic understanding of the relationships of objects in a given space. I believe that the most outstanding object in the first map image presented above is the oval form, which can be seen as representing a container which could stand for a mind; the therapy space or a space, a container/contained (Bion 1967), a space for thoughts to be digested. In his synchronized images, Adam mapped his world-view of space both internally and externally, giving it form. This giving of form is what eventually led to its acquiring meaning. The mapping continued in a more abstract style of representation in the second image, where the names of objects in the room were written in blocks, as in an atlas. Accordingly, I would say this was a transformation in the *quality* of spatial existence.

Amy's case was very different since it had to do with an issue of anxiety and not a developmental disorder. This in turn illustrates a different perspective on understanding the process of what I call 'spacing' spatial existence. Amy's use of maps was topographical, a map representing the actual relationships of objects in a given space (a location) in the world (O'Keefe and Nadel 1978; Maguire et. al. 2006). Adding a further map to the initial one embodied the dynamic process of working through the growth of

her movement through space. This symbolized her ability to go further, farther out from her known objects. As noted above, going beyond is one of the main purposes of using maps. They do not have to be used with the aim of getting from one place to another. Although Amy has marked her different routes on the map, this is as a device for exploration and curiosity. I think in this case the major process was of *expansion*, in the sense of using the space around.

In her forward to Bloom's book *The Embodied Self*, Alvarez (2006, pxiv) contemplates the way gifted athletes and great dancers make such difficult moves seem so effortless and beautiful. She goes on to presume that this is due to the way they seem to experience the very air, space, height and depth around them as something inviting, accessible, and smoothly scalable. Alvarez beautifully describes the way movement represents an inner perception of being in the world. I think Amy's case gives an example of a transition in such inner perception through the work of mapping images.

In both cases the maps created seem to visually ‘geographize’ (Alvarez 2006, pxii) Adam's and Amy's spatial experiences in the here and now. Adam's first image had a bizarre and free-floating quality to it, embodying a sense of getting somewhat ‘lost in space’, while Amy's map was very accurate but seemed to end at the ‘tip of her nose’, and she seemed to experience the world as limited. Both managed to use their images as springboards to explore and move more freely through space, a space which one always inhibits and is never alone in.

To sum up, we exist within space and so issues of spatial perception are part of the therapeutic encounter. Reflecting on both cases has made it possible to acknowledge the unique ability of geographical images on paper to embody a cognitive map, without its actual enactment in space, and this is what makes them an intermediate domain in which to practice the expansion of space perception.

Some reflections for art therapy

Adam's and Amy's use of maps points to the importance of our attention as art therapists to the embodied qualities of an image, especially map images relating to space perception. Within the art therapy session, it may be useful to consider the total spatial transference, such as the patients’ use of the therapy space, art materials and

spatial relatedness to the therapist. Art therapy in this sense provides a unique opportunity to map spaces through concrete images and through the therapy space itself (the room and the setting), and thus expand one's spatial existence in the world.

Acknowledgments

I am grateful to Yemima Halfon for illuminating remarks on a draft of this manuscript. I also thank the Kibbutzim College for financial support and Mark Joseph for editing comments. I dedicate this paper to the memory of Yael Shapira, an art therapist, colleague and dear friend, whose insightful discussions accompanied the writing of this paper.

Biography

Orit Dudai, Ph.D., is an art therapist practicing in a private clinic in Tel Aviv, Israel. She teaches in the Master's program in Art Therapy at the Kibbutzim College of Education, Art and Technology, Tel Aviv. Her research focuses on the interplay between art therapy, psychoanalysis and cinema with a special emphasis on how preverbal mental states are manifested and worked through in poetic cinematic style.

Bibliography

American Psychiatric Association, (2013) *Diagnostic and statistical manual of mental disorders: DSM V*. Washington, DC: American Psychiatric Press.

Alvarez, A. (1992) *Live company*, Hebrew edition, trans. by Golan, E. (2005) Tolaat Sfarim, Tel Aviv.

Alvarez, A. (2006) 'Introduction', in Bloom, K. *The embodied self: Movement and psychoanalysis*, Karnac, London, pp. xi-xiv.

Bick, E. (1968) 'The experience of the skin in early object relations'. *International Journal of Psychoanal*ysis, vol. 49, pp. 484-486.

Bion, W.R. (1967) *Second Thoughts*: *Selected Papers in Psycho-analysis*, William Heineman, Medical Books: London.

Bloom, K. (2006) *The embodied self: Movement and psychoanalysis*, Karnac, London.

Bott Spillius, E., Milton, J., Garvey, P., Couve, C., & Steiner, D., (2011) *The new dictionary of Kleinian thought*, Routledge, London.

De Saussure, F. (1916) *Course in general linguistics*, Hebrew edition, trans. A Lahav, Resling, Tel Aviv (2005).

Hanes, M. J. (2008) 'Signs of suicide: Using road drawings with inmates on suicide observation at a county jail', *Art Therapy*, vol. 25, no. 2: pp. 78-84, DOI:10.1080/07421656.2008.10129418

Havsteen-Franklin, D. (2008) 'The composite image: An exploration of the concept of the 'embodied image' in art psychotherapy', *International Journal of Art Therapy*, 13:2, 53-64.

Ittelson, W. H. (ed.) (1973) *Environmental cognition*, Seminar Press, New York.

Kapitan, L. (2013) 'Re-examining the map: Extending and disrupting art therapy assumptions of representation', *Art Therapy*, vol. 30, no.3, pp. 96-97, DOI:10.1080/07421656.2013.819548

Kaplan, S. (1973) 'Cognitive Maps in Perception and Thoughts', in R. M. Downs and D. Stea (eds.), *Image and Environment: Cognitive mapping and spatial behaviour*, AldineTransaction, London, pp. 63-78.

Maguire, E. A., Gadian, D. G., Johnsrude, I. S., Good, C. D., Ashburner, J., Frackowiak, R. S., & Frith, C. D. (2000) 'Navigation-related structural change in the hippocampi of taxi drivers', *Proceedings of the National Academy of Sciences*, vol. 97, no. 8, pp. 4398-4403.

Maguire, E. A., Woollett, K., & Spiers, H. J. (2006) 'London taxi drivers and bus drivers: A structural MRI and neuropsychological analysis', *Hippocampus* vol. 16, no.12, pp. 1091-1101.

Meltzer, D. (1975) ‘The psychology of autistic states and of post-autistic mentality’, in D. Meltzer, J. Bremner, S. Hoxter, D. Weddell, & I. Wittenberg (eds.), *Explorations in autism*, Karnac, London, pp. 6-29.

Meyerowitz-Katz, J. & Reddick, D. (eds.), (2017) *Art Therapy in The Early Years*, Routledge, London.

O'Keefe, J., Nadel, L. (1978) *The Hippocampus as a Cognitive Map*, Clarendon Press, Oxford.

Pifalo, T. (2009) ‘Mapping the maze: An art therapy intervention following disclosure of sexual abuse’, *Art Therapy* vol. 26, no.1, pp. 12-18, DOI:10.1080/07421656.2009.10129313

Schaverien, J. (1991) *The revealing image: Analytical art psychotherapy in theory and practice*. London and Philadelphia: Jessica Kingsley.

Schaverien, J. (2005) *Art and active imagination: Reflections on transference and the image*. International Journal of Art Therapy: Inscape, 10(2), 39-52.

Takkal, A., Horrox, K. & Rubio-Garrido, A. (2018) ‘The issue of space in a prison art therapy group: A reflection through Martin Heidegger’s conceptual frame’, *International Journal of Art Therapy*, vol. 23, no. 3, pp. 136-142, DOI: 10.1080/17454832.2017.1384031

Tolman, E. C. (1948) ‘Cognitive maps in rats and men’, *Psychol. Rev*. vol. 55, pp. 189-208.

Tolman, E. C. (1973) ‘Cognitive Maps in Rats and Men’, in R. M. Downs and D. Stea (eds.), *Image and Environment: Cognitive mapping and spatial behaviour*, AldineTransaction, London, pp. 27-50.

Tustin, F. (1981) *Autistic states in children*, Hebrew edition, trans. A. Bergenstein and H. Aharoni, Eitav Press, Tel Aviv, (1994).

Tustin, F. (1994) 'The perpetuation of an error', *Journal of Child Psychology* vol. 20, pp. 3-23.

Weddell, D. (1975) Disturbed geography of the life-space in autism— Barry. In D. Meltzer, J. Bremner, S. Hoxter, D Weddell & I. Wittenberg (eds.), *Explorations in autism*, Karnac, London, pp. 99-161.