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Engaging with children's graphic ensembles of an archaeological site: A multi-modal social semiotic approach to learning

Abstract

Children's drawings have been widely used in the field of museum education as indicators for learning, as well as means for evaluating the teaching that takes place in a museum or a heritage site.

This paper employs social semiotics and multimodality as tools for introducing a different perspective when it comes to building a descriptive and an interpretative framework for analysing children's production, as representative of their learning. The insight into their work is based on the assumptions that learning can be multi-modally mediated through a particular pedagogy and further be made accessible to us through the material realisation of children's production across multiple modes. The paper aims to explore the implications of this position for generating knowledge about children's learning.

The main argument discussed here is that engaging with a child's graphic ensemble through a multimodal and social semiotic perspective can enable us, hypothetically, to recover children's meanings about the archaeological site as well as the aspects of their overall learning experience. Viewing their graphic ensembles as constructions that are interest driven and multi-modally realized could open up more possibilities for accessing the agendas and interests that guide their learning.

The paper further uses this visual material as an opportunity to argue that when engaging with children's learning, multimodality can work not as a theory on its own means, but as the framework that conditions a theory (e.g. social semiotics and discourse) into a direction of encompassing more possibilities for reading their understanding of the world.

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1. Introduction

This paper, informed by a multimodal social semiotic approach to learning, presents two examples from children's multimodal production as an opportunity to engage critically with what learning in an archaeological site means. Looking at two graphic ensembles as two instances of learning, I endeavour to reflect at one level, on the resources children use to make meanings about the site, and on another level at the resources that a multimodal/social semiotic approach to learning can contribute towards the description, articulation, analysis and interpretation of children's production, within the 'view of the world' that this theory has defined. This consideration aims to show on one hand how an approach to a graphic representation through a multimodal perspective creates new possibilities for generating knowledge about children's learning; on the other, it aims to discuss the importance of anchoring multimodality, as an analytical perspective, onto a theory with its own descriptive and interpretative language, as in the case of social semiotics and theory of discourse.

1.1. Current understandings of the use of drawings within various disciplinary and theoretical positions

When it comes to an analysis of children's drawings the dominant perspective in the literature comes from the world of psychology. Drawings have been used as a tool for understanding cognitive and emotional growth, developmental stages, attitudes and particularly several behavioural disorders (Kellog 1970, Freeman 1980, DiLeo 1983, Cox 1993, Yavuzer 1995, Wetton/McWirther 1998, Wallon 2001). More recently there has been a renewed interest in drawing, with approaches that consider the configuration of drawings beyond the developmental determination that usually permeates several of the above approaches so far. This shift has opened up additional possibilities for the interpretation of children's drawings, including a social semiotic approach (Cox 2005, Bessas et al. 2006).

Within the field of museum education and visitor studies, drawings have been used to evaluate the impact of museum experiences and exhibit effectiveness (Coe 1988, McClafferty/Rennie 1997, Priscitelli/Anderson 2001, Strommen 1995). Children's drawings have been usually considered as 'a way of gathering information about young peo-

ple's perceptions and memories of museums, as well as a way to engage children in a dialogue about the past museum experience' (Priscitelli et al. 2003: 47).

Drawings have been one of the resources used for eliciting information from children regarding their understanding of an exhibition. They are seen as an evaluation tool through which researchers access what children recall from an exhibition, their 'conceptions', 'misconceptions' and 'preconceptions', understandings, observation skills, memory, as well as their ability to represent; all of these are often used as indicators of learning and further to that, indicative of the success of an exhibition. The diversity of the approaches to children's drawings is underpinned by varying epistemological and ontological positions, in relation to what constitutes learning, knowledge, reality and representation.

The approach to drawings in this paper is aligned and conversant with the discourses of representation and learning one can encounter within the multimodal social semiotic field. It is further reinforced by the outcomes of a similarly theoretically informed research by Susan Cox arguing that *'in the process of drawing children are actually defining reality rather than passively reflecting a given reality'* (Cox 2005: 115).

2. Research contextual information

Making sense of the drawings, selected for this paper, requires locating them within the context out of which they emerged and relating them to the research questions, rationale and actual research design that generated and conditioned them.

The visual data presented here were gathered as part of research on how primary school children make meanings about an archaeological site, when engaged with it through an overall 'multimodal communication design', i.e. teaching methodologies that address and activate verbal, visual and actional modes of communication.

The main question that this research set out to explore is how children make meanings and shape knowledge about an archaeological site and what these meanings are; what patterns and configurations of meanings are emerging and how these are significant for children's learning; how the multimodal accounts of children attest to meaning making that

has taken place with reference to what the archaeological site represents as a multimodal and semiotic space.

2.1. Rationalizing the quest for meaning through image

The research grew out of my personal interest in children's making sense of the world of museums and archaeological sites and was linked to my professional practice as an archaeologist and museum educator in Greece. In most of the educational programmes on the archaeological sites I had worked on or experienced, especially for younger audiences, the main priorities and central foci would normally be the reproduction and transfer of an official, school knowledge. This was expected to be reflected in the children's responses with as much accuracy as possible and closeness to an original account of it. The latter would normally be found in school books or archaeological and historical academic work.

Once children pass a particular stage in their schooling and the teaching of history is a part of their curriculum, then any kind of imaginative thinking has to retreat. Under the increasing pressures of the school curriculum, the shaping of knowledge has to demonstrate its links with the original historical accounts. Archaeological sites and museum objects are used as the resources that are validating or documenting in concrete terms what the school books are describing.

The main indicators for learning on sites are built around verbal communication, oral and written, as well as the children's ability to reproduce particular factual statements that derive from the museum educator's or teacher's teaching. The dominant communication paths are assumed to be the verbal ones, interspersed only occasionally with visual and actional elements.

Current museum education practice and theory still seems to be favouring particular texts that are validated as true. Children are allowed a personal construction of meanings, but this is usually acknowledged when done within a broad realm of acceptable dispositions to knowledge. Any deviation from that would be considered a misconception.

Foregrounding the children's multimodal production and particularly their images is underpinned by an understanding that drawings are not so much conditioned by various conventions as for example writing is. Children's drawings in their various genres (observational, conceptual, narrative), do not necessarily fall within the realm of the

'schooled' ones. A drawing depicting a day in the archaeological site is telling a different story from that of a written account representing the same theme. The latter is highly regulated by particular expectations in terms of its configuration as a genre.

With assumptions in mind linked to multimodal social semiotic theory, drawings can facilitate access to a different 'negotiation' of meanings linked to the archaeological site. Drawings are 'sites' upon which the children's understanding of the reality of the archaeological site is defined and represented. More specifically, it is the 'criterial' or characteristic aspects of that reality that are redefined in ways that are relevant to their interests and context specific needs. Drawings are also the 'site' where the various discourses, informing children's representations, become materially manifested. Children are defining their own reality of the archaeological site and the learning programme. Both of these are shaped by particular discourses, which can potentially filter down to the children's representations, once the children inform their own definitions of the site, using elements that are significant for them.

2.2. Designing a programme for multimodal learning

The specifications that the programme design was envisaged to serve were: a) to provide a framework that would allow for a range of possibilities for making meanings on site to emerge, and to make available resources for seeing the site through different perspectives. b) to establish a communication pattern within which children's discourses and personal elaborations of meanings made, will be considered valid, while placing equal emphasis on meanings generated across a range of modes (oral, visual, actional etc.).

The selection criteria for the archaeological site had to do with the physical aspects of it, as well as the fact that it is not as familiar to most children, as the adjacent site of the Acropolis. The site includes buildings in different states of preservation, ranging from flat terrain with ruins to reconstructions, representing a period in history of over 1.700 years. The main emphasis in the programme was on the 5th century B.C., when the site was the main political, administrative and commercial centre in Classical Athens and a space linked to the birth of democracy.

Figure 1. A group of pupils working on the site's redesign project

The research was designed as a series of three case studies with nine year old pupils from three different primary schools in Athens, two schools from the state and one private. It consisted of a programme of workshops and activities that run over a period of four days and took place in the classroom and the archaeological site of the Agora. The programme included a variety of art and drama workshops on the site and the classroom, art projects, a storytelling session, guided discussion and presentations. All these activities prioritised linking the past with the present, contextualising the archaeological resources and legitimising children's emerging discourses.

2.3. Resourcing our approach to children's learning

The working tools that resourced my approach to the children's visual production provide a perspective for looking at children's meanings and their link to the overarching discourses that facilitated them. These methodological resources stem from the area of social semiotics and visual grammar (Hodge/Kress 1988, Kress/van Leeuwen 1996), discourse analysis (Fairclough 2003) and multimodality (Kress/van Leeuwen 2001). All these merge to constitute a multimodal, social semiotic theory of representation and communication (Kress 1997). This pro-

vides the research into drawings with a descriptive language and possibilities for interpretation.

A starting point for this theory is that meanings are made through the semiotic process of materially realizing signs and transforming available resources into new signs. This notion of sign as a *'motivated conjunction of form and meaning'* (Kress 1997: 13) is central to this work. The driving force behind meaning-making is the notion of *'interest'*, out of which the signs and the '*criterial'* aspects of the representations arise. The meaning makers represent what needs to be communicated in the most apt form for the purpose, always within the context of the available resources that the different modes and media provide.

'Multimodality' comes into the picture to name these social resources as *'modes'* and *'media'* and locate them in the various realms of the communicational landscape. This comes as an apt tool, since the specific characteristics of the children's multimodal texts dictate the use of an analytical and interpretative framework that attends to both writing and image, thus allowing for both of them to be looked at in conjunction with each other, along with the social context that generates them.

Multimodality is seen as the engagement with all the resources that a culture makes available for the representation of knowledge at the levels of design, production, interpretation and distribution.

> 'Multimodality is the combination of different semiotic modes in a commnicative artefact or event' (van Leeuwen 2005: 281)

This understanding has informed the classification of children's production as multimodal, as well as defined the analytical approach towards their visual work. The approach here is aligned with Kress and van Leeuwen's initial conceptualisation of multimodality that does not equate modes with sensory channels (2001: 4).

The research into drawings takes as one of its starting points that meanings about children's understanding of a heritage site are visible as representations, once they are realised materially. 'Materiality' here refers to the actual modes and media involved in the representation of meaning. Modes, such as visual (writing, drawing), oral, kinaesthetic, gestural etc. and media, such as paper, crayons, paintings etc. are culturally available resources that the children engage with (Kress 2003),

when making meanings within the realm of what is understood as learning in an archaeological site.

The mode, as a cultural resource is anchored in the social domain and it refers to possibilities for representation beyond those of the senses. The descriptive word 'multimodal' is defined here as that which takes into account the presence of modes, both as a resource for materially realizing and recovering meanings from various sites.

Interrogating through a multimodal social semiotic methodology would involve asking questions about the affordances – possibilities and limitations for representing meaning – of the various modes and media, and about the location of meanings across the various modes. The method of analysis of a narrative representation in visual social semiotics would entail the naming and description of the semiotic resources first and then at another level, the description and explanation of their use (Jewitt/Oyama 2001).

Multimodality employs a vocabulary to describe the resources of the modes, but it can not describe and explain the use of these resources without resorting to theoretical frameworks that employ descriptive and interpretative language. 'Multimodality' and a 'theory of communication and representation' are two different discourses that are mutually shaped by each other; the first is constituted as a perspective, the second as a theory.

> 'Multimodality is not a theory, even though it is often used as though it were. The term maps out a domain of inquiry and work. In its use in various disciplines and professions theories from those disciplines are used with a multimodal 'take' on the respective field of work. Each brings its theoretical orientation, its issues and questions. As a consequence 'multimodality' is embedded in distinct approaches and shaped by them. (Kress forthcoming)

This understanding constructs multimodality as the framework that helps us locate the various possible material resources through which meanings are realized. It also defines some of the locations where we can read meanings when engaged in research on learning.

Understanding the communicational and the representational meanings of the children's 'visual ensembles' (Mavers 2003) – texts where the visual modes of writing and drawing are co-configured – relates to hypothetically recovering the interests of the meaning makers and

the resources they draw from in order to transform them. Within the realm of resources we can include the discourses that partly condition the children's representations.

Discourse analysis underlies this semiotic stance and brings our attention to 'the dialectical relationships between discourse – including language and other forms of semiosis – and other elements of social practice' (Fairclough 2003: 205). The analytical tool of discourse analysis presupposes an understanding of discourse as a *'socially constructed knowledge of some aspect of reality'* (Kress/van Leeuwen: 4-5) that can be 'realised' in many different ways, and many different modes.

> 'Discourses are resources for representation, knowledge about some aspect of reality, which can be drawn upon when that aspect of reality has to be represented. They do determine what we can say about a given aspect of reality, yet we cannot represent anything without them. We need them as frameworks to make sense of things… Discourses are plural. There can be different discourses, different ways of making sense of the same aspect of reality, which include and exclude different things and serve different interests'. (van Leeuwen 2005: 95)

These discourses can actually make themselves available as a resource, which is put at the children's disposal for transformation into visual ensembles. The institutions of the 'school' and the 'heritage site' produce their own discourses as particular 'configurations of knowledge'. It is the encounter of the children with these discourses that enables a possibility for their material realisation and filtering down into their representations. In any case, the catalyst for transformation is the interest of the learners who are 'agentive in their own interests' (Kress 2007: 29). Interest can be traced in children's representations, as it defines the selection of the discourses children will draw upon for their transformations.

Engaging with learning through a multimodal perspective that is anchored in social semiotics and theory of discourse, necessitates an understanding of what constitutes learning in terms that are conversant with the overall theoretical framework:

> Learning is 'a change in my resources as a result of the active transformative engagement with an aspect of the world on the basis of principles I bring with me to that engagement'. (Kress 2007: 29)

It is through such a conceptualisation of learning, which 'acknowledges the agency of learners' that we can begin to locate signs of new resources that children recruit and bring in to the equation. This way we make reflections not only upon what has been learned, but also explain how particular meanings are made and why they are materialised in specific ways.

3. The children's multimodal production

The engagement with the children's drawings in the programme is a response to the assumption and theoretical position of multimodal social semiotics that children can make meanings across a range of media and modes, employing the resources available to them in a learning environment and represent what they find interesting and relevant to their lives. Drawings are considered as an apt field to observe possible transformations and representations of the site.

The main body of the research data consisted of children's visual production in the school and classroom. Their graphic ensembles in particular can be grouped in three main areas, reflecting not only temporal and spatial aspects of the programme, but also particular discursive positions within which the children were immersed when producing them:

a. *Designing the landscape of the Agora*. Visual representations of this kind are linked to a classroom based activity, where children were located in the past and adopted the role of Athenian citizens and town planners contributing to an advisory committee to the parliament.

b. *Depicting the present and reconstructing the future*. This group of visual ensembles emerged from a role play that had the present time as a point of reference, and in which children were in the role of heritage specialists.

c. *Drafting a map of the Agora for a foreign visitor*. These multimodal ensembles came up from a role play, writing and map making activity, for which children assumed the roles of the hosts of a foreign embassy.

The children's multimodal production and engagement with the site spanned across the time and space dimension, as the design of the programme facilitated the creation of conditions for the emergence of a

range of possibilities in relation to those two dimensions. In order to shed light on children's engagement with the archaeological site, one would need to look equally across the two visual modes (writing and image) that mediated in the above learning tasks; and further to that identify the various points of view of the learners, attending to the different reading paths that both the modes and the various discursive positions dictate.

3.1. A letter/map of an ancient Athenian to the Spartan embassy

The first example is linked to the last of the above genres of the letter and map, and emerged as a prop out of a role-play activity. The children had to assume the role of the Athenian citizens who were getting prepared for receiving some Spartan ambassadors to their city. The actual classroom space and its various elements were transformed into the ancient city centre for the purposes of the role play. The children engaged in different make-believe activities supervised by one of the Athenian citizens co-ordinating the reception.

The design of the letter with the map (figure 2) representing the city centre emerged out of the role play, as an essential part of the preparations for the embassy. What constitutes it as a multimodal ensemble is the recruitment of the visual modes of writing and image in the representation. The latter is mediated through the child's act of materializing his meanings on a yellow A5 paper with the use of pencil only. A starting point in the analysis is to name and describe each mode and medium employed, and locate first of all the possibilities each resource entails for realizing meanings. Further to that I describe the way these resources have been used, as well as explain their significance and their meaning making potential.

The choice of the yellowish small paper is important, as it is meant to resemble an ancient writing material, such as parchment or papyrus. In addition to the choice of colour, the way most children rolled up the paper at the end of the task is suggestive of their interest in making it look like the way they assumed old letters and maps must have been kept.

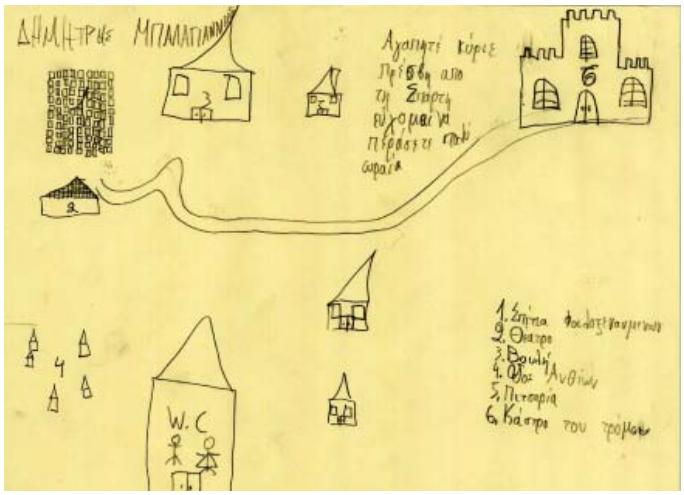

Figure 2. A multimodal ensemble featuring a map of the Agora

The images on the page are in the form of pencil sketches spread across the surface of the paper, whereas the text is limited to the top left, top middle and bottom right part of the page. Each of these locations carries a text of a different genre, function and significance. At the top left, we have the child's name in upper case letters, attributing the text with the most important aspect of his identity, his name as a creator of the image. Despite the fact that it starts off in large letters, compared to the scale of the rest of the text, the name has to shrink a bit and follow the line of the roof of the adjacent house, in order to fit into the existing space, once the image was completed.

The text at the top spreads across six lines, reading in translation from the Greek as: *Dear Mr/ambassador from/sparta/I wish you/have a very/good time*. The text includes a personal message from the map maker to the ambassador. The message constructs the city centre as a space, within which one can have a really good time and fun. This accords with the depiction of the rest of the buildings, most of which are linked to fun activities.

The layout of the message, developing across several lines, despite the fact that it consists of one sentence only, evokes practices linked to the writing of letters and greeting cards. In addition the choice of the

Greek adjective 'αγαπητός' (formal form of *dear*) for opening the sentence is reminiscent of the opening line of a formal letter. Such a choice would be the most appropriate for the occasion, as the position of an ambassador suggests seniority.

The writing at the bottom right hand corner reads as:

1. Guest houses	4. Flower Street
2. Theatre	5. Pizzeria
3. Parliament	6. Castle of terror

The presence of such a key to the map offers an alternative reading path, in addition to the one that the prescribed route from left to right suggests. This means that the reader would need to read back and forth to be able to identify the letters on the drawing with the letters and words of the key. Such a choice defines a reading path that radiates from the key outwards and inwards many times.

The configuration of writing and drawing in this ensemble is suggestive of a design that makes the most of the maker's knowledge of maps and the function of keys. He thus employs the resources of the visual genre of the map in the service of a hybrid genre. This merges a drawing, a letter and a map.

The child's work and overall communication arrangements are designed with the ambassador in mind and shows an intention to facilitate the movement of the guest through the city. The representation also suggests that the child has clear understanding of the significance and function of each of the choices he makes. He offers the ambassador ample choice in terms of reading the map, as the various devices and resources suggest. The ambassador or actually the readers have the option to start off from the key and see the range of buildings and functions that exist. They can then refer to the image to see how the buildings look as well as how they can get there. Alternatively, they can allow the physical characteristics of the represented space to inform their choices and subsequently enrich their understanding of them through the additional information found in the key.

The image part of the ensemble includes buildings of various sizes and types in front view. The use of pencil, as the only medium, has particular potentials and restrictions in terms of making a representation. This means that to signify particular aspects of the represented space

the child has to make the most of the possibilities that the resource allows for (e.g. intensity of line, building thickness of lines and layers, filling in with black pencil colour, designing interrupted or straight lines etc).

The child's representation suggests that the Spartan visitor would have to follow a prescribed route through the Agora from the left to the right of the map. This is accentuated by the presence of a winding path running horizontally from the left to the right, linking the theatre to the castle of terror. In addition the numbers ascribed to the buildings suggest a numerical order from one to six spreading across the page from left to right. The buildings numbered 1 to 3 are close together at the beginning of the path and are represented as being within a short distance from each other, whereas the transition to the area numbered as 4, is not explicitly indicated by any other paths, frames, lines or connections.

Starting out from the 'guest houses' at no. 1, we notice a dense accumulation of tiny squares, offering a view from above. These are the guest houses. Their large number necessitates that the child negotiates their size in relation to the rest of the buildings and the space available on the page. The way these houses must have looked in the past does not seem to be of significance to the child or within his interests. The emphasis is placed on their function, their location and their numbering. They signal the space where the foreign embassy would be based. It is located within the most central part of the city next to buildings with important function. The choice of number one for this complex constructs this area as an important reference point for the visitors and a starting point to the map. The importance is reinforced by the positioning of the guest houses at the top left hand corner of the map. This is a place that is usually associated with what is 'known and given' to the reader (Kress/van Leeuwen 1996). In addition, following the conventions of writing from left to right, starting at the top of the page, the location is such that it can signal a start to the reading path. It can also serve as equivalent to an arrow that some orientation maps have, usually accompanied by the text 'you are here'.

In close proximity to the complex with the guest houses lies the theatre, depicted as a tiny house with a tiled roof and no openings for windows or doors. This is definitely far from being reminiscent of the stereotypical representation of the open air ancient Greek theatre that is

quite familiar to most children. The child though does not show any interest in attributing any characteristics to the building that would easily help us identify it as a theatre. The most salient element here is the tiled roof, accommodating the priority for creating a closed roof building. There is also an understanding that the key to the map would be used as a resource that will help clarify any misunderstandings in relation to the function of that building.

A large house with two windows and a double door features next to the guest houses. This is the Parliament, an element that was introduced in the learning sessions as an integral part of the Athenian city centre and an indispensable element of the democratic constitution. The child conforms to the teachers' expectations for a 'correct' representation of the city centre and includes this essential building. Its size, particularly in relation to the nearby theatre is large and disproportionate given the fact it is further away in the distance. This could be a sign of importance linked to the function of the building.

On the bottom left hand corner of the page under number four we find a small group of houses, in a circular arrangement around an open space. The key of the map names it as 'The street of blossoms'. Even though there is no indication of a street, the place bears a street name, probably reminiscent of another important street that had been at the centre of the activities and guided tours; that of the 'Panathenian' street. The circular arrangement with the small open space has more similarities with what appears in several other drawings as the representation of the Athenian citizens' assembly. Once more, the child does not seem to be interested in elaborating further on the function of the street or the arrangement of the houses, as this may not possibly fit well with the entertainment agenda.

A pizzeria features next to the Parliament, as the most obvious and natural place one should go to eat in the Athenian Agora. This choice of a place for eating demonstrates a great link to the child's life and experience and definitely sits well with the purpose of showing the Spartan a good time. The choice reflects the child's selection of a space that is closely related to his idea of a fun way for dinning out; no other choice for a place for dinning would have been more relevant to his experience.

The winding path from the theatre area can possibly lead us all the way up hill to a castle. This is presented in a larger scale than the other buildings, thus allowing it to have a dominant position on the page. The castle consists of three towers with patterns of crenellations framing their walls. Crossed lines covering the window probably signal the presence of metal bars. This conjures up images of a medieval castle, or a theme park, where people walk through a dark castle of horror for adrenaline rising experiences. In most of the children's drawings linked to this task, this particular position normally features a representation of the 'Acropolis', overarching all other graphic elements. This child's interest in this case dictates a more practical and useful approach to a building that serves the purpose of constructing the site of the Agora as a fun place for a visitor.

The visitor has the option of accessing the other buildings of the map, like the houses of the 'Flower Street', despite the fact that there is no clear indication on the path for a possible exit route to these. The long horizontal path, linking the hostel to the castle of terror, seems to dominate the page, emphasizing the element of play and entertainment as the sole purpose of the visit.

A contemporary toilet features quite prominently at the foreground. The child has used the contemporary conventions, with the initials W.C., as well as the symbol of a man and a woman to suggest the presence of facilities. Most of the maps children made included toilets as well as places for drinking. Both of these were reference points linked to their experience of the site, since visiting the toilet and drinking water turned out to be key issues for them on a very hot day. It is also characteristic that the children seem to have associated these facilities with the actual function of the 'Stoa of Attalos' – the reconstruction of the ancient equivalent to a shopping centre – which is where these are located.

The way the buildings are designed in the drawing demonstrate no obvious link with any of the conventional representations of the historical buildings, as seen in the history books or even on the site. There is no interest in attributing these buildings any characteristics that can help us with their identification more clearly. The emphasis seems to be more on the functions that these would serve; a meaning that is realized here only in words and not in any graphic form. This makes the addition of a key to the map a necessity.

Viewing this drawing in the context of the others we can observe that there is the absence of any building that could connote a religious function or trading, despite the fact that these were both salient elements in most of the activities. The child here is making choices between a range of options available to them; from following a convention learned as strictly as possible to attempting various degrees of transformation according to aptness for the purposes of their personal agendas. A divergence towards the latter seemed to be the case with most of the children's drawings.

Convention and alignment with what has been learned at the programme makes its presence strongly, particularly when it comes to deciding the content of the representations. When the child negotiates the visual rendering of the concepts, the element of transformation according to his/her personal interests and priorities becomes more evident.

The transformation according to aptness for purpose applies in the case of picking and mixing elements usually identified with particular genres. The numbering in the drawing, for example, is an approach linked to list making. The key to the map is an integral element to the genre of maps. The child shows a clear understanding of the conventions of the genre of maps and the practices of referencing items on an image through numbering. The overall graphic ensemble here provides the site for a new hybrid structure to arise; one that most aptly responds to a task that involves and requires an equivalent merge of practices, such as drawing, writing and role play.

Engaging in a multimodal social semiotic analysis, one could ask: What is the 'story' that each of the modes tell? What are the meanings the image communicates as an ensemble of modes? If we transcribed what a conventional map with a key would normally 'tell' in writing, we could come up with something along the lines of: 'There is a theatre, guest houses, a restaurant...' or 'Here is the Agora with the following elements: houses, theatre, parliament, castle etc'. In this particular occasion the numbering on the key in conjunction with the text, adds a different dimension to the possible linguistic utterance, into which a drawing could be *'transducted'*: 'Start at the guest houses, then go the theatre, visit the Flower Street, see or attend a meeting at the parliament, eat at the restaurant and have fun at the castle of terror…'. It adds the dimension of sequencing, while implicitly dictating a movement.

The drawing and the writing jointly explain how one can have a good time. The drawing names and describes all the resources available for one to use and have fun. It also locates these resources spatially and in relation to each other.

Such an overall arrangement seems to accommodate and fit with the child's communication design, having the Spartan ambassador in mind. The resources of *'layout'* and *'framing'* of the individual elements of the image on the page can be of particular significance when it comes to attributing meaning to the children's choices regarding the overall design. Drawing from the grammar of visual design (Kress/van Leeuwen 1996), we can reflect on the significance of these two resources of the visual mode.

The various sketches of buildings are laid out on the blank page, allowing the blank spaces between them to create a framing. There is no apparent device used to frame and connect these elements except from the winding path that spreads across the page. The absence of any apparent framing can be suggestive of a display of elements rather than any kind of subordination of one to the other.

The configuration of the whole as a multimodal ensemble thus enables a different reading of the image in conjunction with the modality of the text and the conventions of the various genres. Understanding that the boundaries of the genres of the map and the letter writing are blurred and merged, could lead us into giving a slightly different answer to the question: 'What is this drawing a representation of and what does it tell?' It can be seen as a graphic representation of a child intending to explain to a visitor *how* to enjoy the city of Athens.

A step beyond naming and explaining the resources used in the building of the representation is the actual identification of the various discourses that inform all these resources and filter down to children's representations. In the case of this drawing, the choices of the child in terms of the words used in particular demonstrate a link with the discourses of children's popular culture and entertainment (theme parks, fun fairs, pizzerias etc). In order to locate these, one would need to go beyond the initial insights that the multimodal analysis enables, and anchor more firmly on the interpretative framework of multimodal discourse theory.

The second drawing selected for this paper is analyzed further as a site of emergence of particular discourses that are brought to our attention through the analytical framework of multimodality. The analysis here uses multimodality further as an exploratory tool for indentifying discourses materially manifested across the modes.

3.2. Re-defining the notion of the archaeological site in a drawing

All the resources that were made available to the children have gone through a process of transformation. These resources have been the school sessions, the education programme activities, their personal experience of the site, as well as the various educational materials that mediated in the children's visual work. The actual physical engagement with the archaeological site that preceded the making of the following drawing of figure 3 is a potentially powerful resource that could inform its shape and provide a significant point of reference. Attempting an analysis of the discourses that permeate the image, we can make our assumptions regarding whether and how the site – as a semiotic and discursively formed space – actually informed the children's work and made material available for redefinition.

Figure 3 instantiates a different representation of the Agora. It is drawn by a girl and is titled 'The place of the Ancient Agora, as I would like it to be'. This is the response to the task set on the third day of the programme, when the children had to engage in a re-development project of the archaeological site that would address the children's interests. This drawing documents the design she envisaged and she further presented in the press conference role play. The latter involved a presentation to the press as well as the minister of culture who would approve one of the projects and authorize its implementation. The purpose of the task was to engage the children in a process of thinking and discussion of what was important for them and why and what elements of the site are relevant to their lives. The overall aim was to get an insight into their interests and criteria for selection.

The girl envisaged the reconstruction of the Agora, as a playground. The central bottom part of the picture is dominated by a bright and shiny red slide and orange swings. A particular salience is achieved by very intense pressure in the application of a thick layer of red crayon.

What is also fore-grounded in the picture is a set of clothes, a dress and a pair of trousers hanging from hangers set on a rack. This is suggestive of a shop and the activity of shopping. The overarching framework for the shop and the play ground is a set of large musical notes, quite toned up by thickly applied red crayon. These seem to be filling the air over a stand with a cassette player.

Figure 3. The archaeological site as a playground

At the top of two hills, there stretches an ancient temple with its three Ionian columns and 'correctly' drawn flutes. The temple is there to mark the scene as one of an archaeological site. Despite its prominent position at the top of the picture and the hills, the temple is not placed there to draw attention. It is only drawn in pencil. This is a huge contrast to the vibrant colours of the playground.

Despite the fact that people are absent from the picture, the signs present are indicative of activities, e.g. swinging, sliding, shopping, listening to music, and playing. The selection and arrangement of signs that constitute the reconstruction of the archaeological site suggests a design that communicates very powerfully the need for relevance to life and connection with the known and familiar. Elements in the picture, such as the musical notes play an eminent role in the design, as they appeal to our various senses.

The drawing emerges as the graphic response to the question 'How would you want the archaeological site to be like?' The absence of any written text in the visual response necessitates that we become more attentive to the actual logics and affordances of mode of image. We should also bear in mind that the main modes of the task instructions were speech and writing. The image developed as a response to speech and writing.

> 'The organisation of writing-still leaning on the logics of speech- is governed by the logic of time, and by the logic of sequence of its elements in time, in temporally governed arrangements. The organisation of the image, by contrast, is governed by the logic of space, and by the logic of simultaneity of its visual elements in spatially organised arrangements.' (Kress 2003: 1-2)

Both modes represent relationships in the world and meanings. They do it through different affordances, i.e. possibilities and potentials for making meaning that each mode and medium allows for. Writing represents things about the world through words that are ordered in sequence, whereas image represents same or different relationships through particular spatial configurations of elements simultaneously presented.

Different modes can dominate and shape different genres more aptly. A redevelopment plan of the archaeological site would be best served by a drawing that has the potential to make particular elements more visible. This is something that a written text could not easily do and would still have to leave a lot to the readers' imagination. A written text would also require the use of more advanced resources (e.g. the use of adjectives) and more elaborate structures that are not readily available to the children.

The drawing explains in detail how the swings should look like, where their exact location should be in relation with the other elements, while at the same time attributing value and importance to each constitutive element. The image also constructs the particular position of the visitor/viewer in relation to the represented site, through the design of the playground at an eye-level. The location of the swings in the most immediately accessible area, once one enters the site, is another way for the child to suggest what the priority should be.

Setting the above image within the wider context of the collectivity of the representations linked to that task, one could argue that this ap-

proach was typical for the majority of drawings. This envisaging of the archaeological site as a locality that has more relevance to children's lives and interests takes some of these forms: The Agora as a fascinating Disneyland theme park with fire works, as beautiful forest, park, as a shopping centre etc. The setting of the playground recurs as a pattern in many drawings, revealing the interest of the children for an archaeological site that is more '*colourful', 'fun', 'less boring and messy'*, as they additionally say in their writings.

On the other hand, no matter how typical the response was, one could easily argue that this representation should be described at least as a 'misconception' and the learning value of the educational programme could be considered as doubtful. A description of the resources in the drawing and an explanation of their use across the modes would not suffice to interpret the significance of the drawing in terms of what has been learned and reflected upon; that could have been the case here too, if our attention to the modes was not underpinned by a methodological and interpretative framework; one that would clearly define 'what', 'how' and 'why' particular meanings are represented; *'how the world is and how it should be'* (Kress).

As the dominant framework here is that of social semiotics, the various elements in the pictures are treated as representations, manifestations of interests and transformations and redefinition of a reality. What in other instances could be described as 'wrong', 'inaccurate', 'deviation from truth', a social semiotic interpretative framework would attempt to read as a sign that is meaningful at the time of its production within the context it is embedded.

4. Conclusion

This paper employed the concept of multimodality and located it within a social semiotic theoretical framework to look at drawings as instances of learning. This theoretical ensemble was considered as the most apt one in the study of children's work. The nature of their graphic production required a theoretical schema that would attend to the meanings that reside within the visual domain and within the various orchestrations and configurations of modes.

Multimodality informed the quest for signs of learning in drawings in this project by indicating various representational possibilities for

meanings. The overall approach foregrounded the visual, treating it as a domain within which learning can be negotiated and represented. This was to counter the belief that meanings made through drawings are complementary or subordinate to those mediated by speech and writing. The social semiotic and discourse theory further enabled us to hypothetically recover and identify the interests of the learners. It provided insights into what informed their choices and what was 'criterial' in their understanding. The resources of this theoretical ensemble (e.g. descriptive language, methodology) enabled us to reconstitute in verbal form some of the meanings that the children made about the archaeological site.

Without the alignment of multimodality with a methodological and interpretative framework, it may not have been possible to explain the use of the resources employed within each mode and make grounded assumptions about the learning that has taken place.

Amidst the plurality of discourses of 'multimodality', an approach to the study of children's instances of learning would need to anchor the concept firmly on frameworks that not only define learning and explain its processes, but offer interpretative tools to identify and explain its emergence across a wide range of sites.

Key questions that emerged out of the discussion here have to do with the implications of this approach for the study of drawings. What are the additional possibilities that a multimodal perspective adds, in terms of generating knowledge about children's learning? If multimodality is a) a manifestation of the different possibilities of engaging with the world and b) an awareness of the range of locations where meanings reside, how then are drawings 'constructed' and viewed within a theory of learning with a multimodal 'take'?

The analytical approach towards the two visual ensembles in this article offered a view of drawings not only as multimodal productions, but as multi-discursive constructions as well; a materiality, upon which various discourses about the world are accommodated, negotiated, transformed and registered; a unique context and time-specific means to negotiate meanings and re-define what is represented. Drawings are a *'material instantiation'* of learning. They are meaningful within the frame of interests and possibilities that generated them.

Studying children's multimodal ensembles in the search for capturing instances of learning requires on overview of the range of locations where meanings reside. Multimodality can operate as the analytical lens that leads our attention to other areas where meanings emerge, beyond that of language. It is always a reminder of the wider context of the multiplicity of modes that facilitate our meaning making. Further to that though, it is the overall theoretical framework assigned to multimodality that could possibly enhance or limit the interpretative possibilities of the method adopted.

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