
Printmaking Pedagogy: A multimodal social semiotic approach to the intaglio hardground process.

A minor dissertation submitted in partial fulfilment of the requirements for the award of the degree of Master of Education in Adult Education.
Faculty of Humanities
University of Cape Town

Zelda Thompson (THMZEL001)

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in this dissertation from the work of other people has been attributed, and has been cited and referenced.

Signature: _____

Date: _____

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

Author

Zelda Thompson

Year

2014

Supervisor

Dr. Arlene Archer

University of Cape Town

South Africa

Contents

Acknowledgements	4
Abstract	5
Chapter 1: Introduction	6
1.1. Overview of thesis	6
1.2. Aims of the research	7
1.3. Research question	7
1.4. Rationale for interrogating printmaking pedagogy	7
1.5. Outline of chapters	9
Chapter 2: Theoretical Framework	11
2.1. Printmaking pedagogy	11
2.2. An argument for social semiotics	13
2.3. Using social semiotics to identify semiotic resources in printmaking	15
2.3.1. The hardground print as communicated and represented through modes	16
2.3.2. Medium and materiality in the printmaking process	18
2.3.3. Temporal aspects of printmaking	20
2.3.4. The relation between modality markers and the hardground print	21
2.3.5. The composition of the image	22
2.3.6. Potential site of display	22
2.4. Conventions and constraints within the printmaking studio	23
2.5. A summary of chapter two	26
Chapter 3: Methodology	27
3.1. Methodological considerations	27
3.2. Applying a multimodal social semiotic framework in printmaking	28
3.3. Context of study	29
3.4. Research Methods	30
3.5. Ethical considerations	31
3.6. Data analysis	31
3.6.1. Establishing a metalanguage	31
3.6.2. Emphasis on specific semiotic resources within the social semiotic framework	33
3.7. A summary of chapter three	36
Chapter 4: Communication and representation in the printmaking Studio: Proposing a metalanguage	37
4.1. Conventions and constraints related to intaglio hardground	37
4.1.1. Stage one: Preparing the plate	38
4.1.2. Stage two: Transforming the plate through a sequence of etchings	40
4.1.3. Stage three: Generating an image onto paper	40
4.2. Multimodal communication within the printmaking studio	42
4.3. Exploring the materiality of medium	45

4.4.	Choices and interest of the student	46
4.4.1.	The temporal aspects pertaining to intaglio hardground	46
4.4.2.	The elements of composition	49
4.4.3.	The modality markers as indicators of student interest	52
4.4.4.	Potential site of display	54
4.5.	A summary of the argument for metalanguage	55

Chapter 5:	The interest of the student: Working within and around the constraints of the intaglio hardground process	56
5.1.	Temporal aspects that represent interest	56
5.2.	Working within and around the constraints posed by the modality markers	59
5.3.	Interest as reflected through medium and materiality	64
5.4.	A summary relating to the students' interest	68

Chapter 6:	Findings and implications for process related practices	69
6.1.	Overview of the thesis	69
6.2.	Findings related to this thesis	70
6.3.	Implications for process driven disciplines	71
6.3.1.	Utilising a metalanguage of intaglio hardground	71
6.3.2.	Inculcating the artist's sensibility	72
6.3.3.	Implications for assessment	72

Bibliography		74
---------------------	--	----

List of Tables		
Table 1:	Modality markers in relation to the criteria of a hardground print	35

List of Figures		
Fig. 4.1:	The relation between time and tone in hardground etching	48
Fig. 4.2:	'Botanic' by John	51
Fig. 4.3:	'Botanic' by Dominic	51
Fig. 4.4:	'Botanical illustration' by Yolandie	54
Fig. 5.1:	'Untitled' by Sarah	58
Fig. 5.2:	Variants between prints: Botanical Print 'White Lily' by James	61
Fig. 5.3:	Variants between Botanical prints by John	62
Fig. 5.4	A sequence of altering an image by Andile	65

Acknowledgements

I wish to thank my supervisor Dr Arlene Archer for her time, encouragement and guidance. You have been a source of inspiration and strength. Thank you to Dr Jeanne Gamble for your insight and humour, it has been wonderful to engage with you during my time at UCT. I am also grateful to Salma Ismail and Linda Cooper. I would also like to extend my gratitude to my work colleagues, friends and the SAME group for all their support and advice. A special thank you to my family, especially my husband for his patience and emotional support throughout this learning experience.

Abstract

This thesis presents a novel approach to printmaking theory and pedagogy, focusing in particular, on the intaglio hardground process. It is a qualitative study that gives an account of a group of second year graphic design students who encounter the hardground process for the first time. A multimodal social semiotic framework is utilised to shed light on the meaning-making practices related to intaglio hardground. This can be a somewhat deterministic process which is hindered by conventions and constraints.

This research explores a metalanguage for the intaglio hardground process. This metalanguage is explicated by addressing the practical processes involved during the intaglio process, interrogating the semiotic resources that are available during this process, and the pedagogic practices within the printmaking studio. Meaning-making is also explored in terms of how students employ the semiotic resources as coping mechanisms when coming to terms with the conventions and constraints associated with the intaglio hardground process.

Process-driven disciplines like intaglio hardground are convoluted and the semiotic resources assist the students to navigate between the technical and the creative process of intaglio hardground. The argument is that students engage with semiotic resources according to their needs, in other words, their interest determines the use of semiotic resources at their disposal. The findings show that each student follows a unique and sometimes, unconventional path during the meaning-making process. These different paths to meaning-making encourage students to explore and take ownership of the semiotic resources that they utilise, as well as their own meaning-making experiences.

Chapter 1: Introduction

1.1. Overview of thesis

Intaglio hardground is a deterministic process, in the sense that it relies heavily on sequential procedures in order for the outcome, namely the print, to be considered successful. A paradox occurs within the classroom. On the one hand, art is considered creative and imaginative. On the other hand, printmaking is structural and can sometimes be rigid in the process. A balance to accommodate both the creative input and structured process is required in art. This research specifically looks at intaglio hardground, due to the multifaceted process that involves creativity and technical ability during the students' meaning-making processes. The thesis presents a novel approach to exploring the intaglio process in printmaking. A multimodal social semiotic lens is employed to illuminate pedagogical practices in a printmaking studio at a higher education institute based in Cape Town.

Multimodal social semiotics can be described as a two prong fork (Kress, 2010:105). The first prong is multimodality. Humans do not communicate only through language; we communicate visually, spatially or through our bodies. We rely on a combination of semiotic resources to realise communication and representation. The second prong is social semiotics. This is how we approach communication. Communication is influenced by social and cultural context and must not be seen as having universal conventions (Jewitt and Oyama, 2001). Semiotic resources include mental, physiological or material tools that assist in the meaning-making process. Semiotic resources can be remade or modified because the individual or group's interest is subjected to change (Kress and van Leeuwen, 2006). Communication and representation impact on students' meaning-making practices. Therefore, multimodal social semiotics provides an exploratory account of the communicative and representative aspects within the context and content of pedagogic practices relating to the intaglio process of hardground.

The printmaking module is offered to both fine art and graphic design students in first and second year. This research focuses on second year graphic design students and interrogates how the students' meaning-making is enriched through the exploration of semiotic resources. Printmaking as a subject is process driven and a

pedagogic exploration can provide insight into the nature of these kinds of practice-based subjects. There are many different methodologies within intaglio, but this thesis focuses on hardground. Intaglio hardground refers to a process of printmaking that creates incisions into a metal plate by dipping the plate in acid at different time intervals. Intaglio is an Italian word and means “to engrave” or “cut into” (D’Arcy Hughes and Vernon-Morris, 2008:14). The print is obtained by covering the plate with ink which then rests in the recesses made into the plate. The excess ink is removed and the plate is covered with archival paper and rolled through an etching press. The print is commonly known as an etching.

1.2. Aims of the research

A multimodal social semiotic framework provides a lens to examine the semiotic resources used by students. A theoretical account of the printmaking domain is useful because it provides a metalanguage for describing and analysing printmaking practices. This metalanguage consists of technical and conceptual nomenclature and can theoretically contribute towards a multimodal social semiotic framework on a macro and micro level. Secondly, this thesis aims to present a pedagogical account of the intaglio hardground process, by looking at the access students have to semiotic resources, as well as identifying conventions and constraints within the printmaking environment.

1.3. Research question

1. What semiotic resources do second year graphic design students draw on during the intaglio hardground process?
2. How do students evidence ‘interest’ by working within and against the constraints of hardground intaglio?

1.4. Rationale for interrogating printmaking pedagogy

The rationale for this research is twofold and can be considered from a macro and a micro perspective. The former relates to art education in South Africa and the fact that there is scope for further exploration in this field. On a micro scale, this research explores a specific domain within art education, namely printmaking.

Researchers that have used multimodal social semiotics in a South African context include Andrew (2014), Newfield et al. (2003), Stein (2000), Salaam (2012) and

many others. Newfield et al. (2003) are concerned with multimodal assessment and regard the process of production as important as the outcome. Stein (2000) highlights the importance of semiotic resources in assisting students with the meaning-making process in order to enhance their voice and agency. Both Newfield et al. and Stein explore the use of language but Andrew (2014) and Salaam's research (2012) is more akin to the art and design domain. Andrew (2014) argues for a multimodal framework that nurtures practice, playfulness and exploration within the student/artist. These semiotic resources can lead to an aptness in the student/artist which he refers to as the "artist's sensibility". This thesis extends the notion of 'artist's sensibility' to that of the design student as well, as both artist and designer explore creativity. Salaam (2012) investigates the design process in jewellery design and the semiotic resources that students draw on during the process. My research values the printmaking process, the meaning-making of the students and the semiotic resources that students draw on to enhance their meaning-making. Furthermore, printmaking pedagogy can be explored from a local perspective and contribute to local art education.

Currently, printmaking pedagogy is loosely based on the apprenticeship model. The lecturer gives a demonstration and the students are expected to imitate what they have seen. Hardground is a complex process due to its temporal procedures. This often leads to students experiencing frustration and anxiety during the intaglio process. In addition, printmaking practices are sedimented in convention. In other words, the intaglio processes are fixed. Students are encouraged to follow these processes accurately. The students' frustration is exasperated by the fact that they work on a surface that is not the final product. This means that they are uncertain until the final moment when the print is revealed. Exploring the semiotic resources used during the intaglio process, can benefit the pedagogical practices around printmaking.

Intaglio hardground is a process-driven discipline, but the emphasis is on the end product, namely the print. This can be problematic, as it is only the print that is assessed. Thus, the students' motivation for creating a hardground etching is often determined by assessment, which can lead to the process not always resonating with the students. This research calls for a return to valuing the process. Andrew's (2014) vision pertaining to the "artist's sensibility" allows students to engage

consciously with the process, therefore making the process salient. Students can be made explicitly aware of semiotic resources and the importance of exploring the process from a creative and technical perspective. This in turn, can prepare them for when things go wrong because complications can often arise. With emphasis on the process, students can analyse their final print and recognise what is needed the next time to produce a better print.

These factors mentioned above, namely a rigid process along with students' indifference to the process, and the balance between creativity and technical accomplishment, pose challenges within art education. This research explores the students' learning experiences pertaining to intaglio and the resources that they rely on to navigate through the process. In addition, it also investigates the interest that these students display when they draw on different semiotic resources to work within and around the constraints of the printmaking studio.

1.5. Outline of chapters

Chapter one outlined the area of interest pertaining to the research, namely multimodal social semiotics. The aims and rationale highlight the fact that this research makes a theoretical contribution to multimodal social semiotics and explores the meaning-making practices of students within a printmaking environment. Chapter two provides some insight into printmaking pedagogy and presents a conceptual framework that develops the components of multimodal social semiotics. Chapter three expands on the methodology by outlining the analytical framework this research draws from. This chapter discusses the research methods employed for collecting data and how the data analysis is operationalised.

Chapter four explores the metalanguage through a theoretical exploration of multimodal social semiotics within printmaking pedagogy. The emphasis shifts to the semiotic resources and how they are utilised to make meaning. The pedagogical nature of the printmaking workshop is also explored, by looking at the conventions and constraints that are associated with printmaking pedagogy. Chapter five focuses on the students' navigation within and around the constraints of the hardground process. This is done by looking at the prints they make during the process. The focus of this chapter is on the students shift from unfamiliarity (due to the implicit nature of hardground) to recognising the criteria associated with intaglio prints. The

relation between the prints that the students produce and their interest is also explored. The last chapter explores the findings related to the metalanguage and semiotic resources of intaglio hardground, as well as the interest of the students. The findings show that students engage in autonomous meaning-making practices, sometimes working within or against the constraints of printmaking practices. The thesis concludes with a discussion relating to future possibilities for process-driven practices.

Chapter 2: Theoretical Framework

This chapter provides an account of intaglio printmaking, social semiotics and the semiotic resources of the intaglio process. Printmaking pedagogy is an under-theorised field and this research aims to make a contribution to printmaking pedagogy, in order to ascertain which modes and resources students draw on to convey meaning. This chapter argues that social semiotics can reveal the interest of the student within the pedagogic domain, as well as ways that students utilise resources to enhance their meaning-making potential. The theoretical lens for looking at printmaking pedagogy can be widened by exploring the relation between semiotic resources and the conventions and constraints associated with intaglio practices. This thesis intends to add to the vision of other educators working within the field of process-driven disciplines.

2.1. Printmaking pedagogy

Traditionally printmaking was not considered an art form, but rather a form of communication. Illustrations in the form of prints accompanied written text, which established an early relationship between the modes of image and writing. The wooden plate (hereafter, it will be referred to as plate/surface) was replaced by more hard-wearing metal plates and it was artists such as Francesca Goya and Rembrandt van Rijn that embraced the new medium in the form of intaglio hardground, which also made it the archetype of printmaking (Hobbs and Rankin, 1997:70). Printmaking is offered as a subject of study and therefore it needs its own form of exploration to improve pedagogical practices. Intaglio hardground is a process that allows one to create an image on a metal plate, by covering the plate with an acid resistant ground and dipping the plate in acid for different time increments. Intaglio refers to a recessed image on the plate, which retains ink and when placed under immense pressure, transfers a positive image onto paper (Hobbs and Rankin, 1997:54). The recessed image is generated by covering the plate with hardground whereby the plate is altered through a sequence of etching techniques (Ibid).

Hobbs and Rankin (1997:3) refer to printmaking as a social practice due to the collaborative relationship between printmakers and artists. Within the printmaking studio, artists who want to transform their concepts into prints, but do not have the necessary expertise or equipment to implement printmaking methods, rely on printmakers to convert their images into prints. This collaborative spirit is mirrored within the learning environment. The lecturer collaborates with the students to equip them with the necessary expertise to become printmakers in their own right.

Printmaking can be a complicated process. Hobbs and Rankin (1997:3) provide a definition that epitomises this process:

.....the print is a product of delay, the process laborious and time consuming, and the result of each technical step withheld until the final moment of ink discharge and the generation of the print from the plate.

This quote points to the possible frustration that teachers and students may experience during this process. The teacher has to communicate to 'unveil the mystery' while the student expects to make sense of this process. Current printmaking pedagogical practices provide instruction, which rely on language and physical action or gesture. The significance of social relations, the studio environment or critical analysis of the context and its practices are not foregrounded. Multimodal social semiotics provides a useful approach to explore these social relations, context and pedagogic practices within the printmaking studio.

To my knowledge, there is no multimodal social semiotic research that has been conducted within the intaglio printmaking field. It is my contention that in exploring the application of a multimodal social semiotic framework in an intaglio hardground process, the development of a metalanguage may be useful. Unsworth (2006:1) argues for the "importance of developing an appropriate metalanguage to enable explicit discussion of these meaning-making resources by teachers and students." Kress and van Leeuwen (2006) have adapted the linguistic use of metalanguage to image. However, the emphasis has often been on the relation between language and image (Jewitt and Oyama: 2001; Kress and van Leeuwen: 2006; Unsworth: 2006). The emphasis in this research shifts to the relation between the process and the image (print). The metalanguage pertaining to the intaglio process and the print is further discussed in the next section.

2.2. An argument for social semiotics

Semiotics enables one to produce, analyse signs and explore the impact these signs have within a particular social situation (Chandler, 2007:10). Semiotics is useful in helping one to explore and dissect how the sign is represented and how the individual can make meaning of the represented sign (Ibid: 223). We are not always actively aware that information is generated through us and this information is constantly being remade and redistributed, in other words, information is not confined to one particular event. Semiotics is “intellectually empowering” (Chandler, 2007:11) as it enables us to see that “things are not as they seem” (Ibid).

Historically speaking, the central key figures in the development of semiotics are Ferdinand de Saussure and Charles Peirce. These two theorists differed in their approach, but both did not overtly focus on social interpretation in the study of signs. A social semiotic perspective views the social as a vital gauge where meaning-making is concerned. Kress and van Leeuwen (2006:6) acknowledge that the roots of social semiotics lie within Saussure’s stream of semiology and it is not their objective to negate traditional forms of semiotics, but rather to continue building and adding to the theory. From a social semiotic perspective, the motivated interest of the sign-maker is the source of the selection. In other words, the sign-maker chooses from a variety of modes to represent the sign (Kress and van Leeuwen, 2006:7).

Due to the fact that social semiotics is derived from linguistics, much of the terminology resembles linguistic nomenclature. Social semiotics was first introduced in systemic functional linguistics by Halliday (Kress and van Leeuwen: 2006)). Halliday & Hasan (1989:4) argue that signs cannot be interrogated in isolation and therefore one must view signs as the study of meaning. Halliday regards language as one system of making meaning, but concedes that there are others such as art (Halliday and Hasan: 1989; Kress and van Leeuwen: 2006).

Saussure was mostly interested in ‘langue’, but in social semiotics, ‘parole’ is more important when investigating a person’s meaning-making process, because the social context in which humans make sense must be taken into consideration (Hodge and Kress, 1988:18). Social semiotics adds a third component, namely

'potential'. In social semiotics, langue is a system of "available forms and classifications", parole involves the "individual act of sign-making" and potential is the notion that the sign-maker can represent their meaning in whatever mode or medium that is available (Kress and van Leeuwen, 2006:9).

Thus, 'potential' relies on the sign maker's access to semiotic resources within a particular context (Kress and van Leeuwen, 2006:9). Jewitt (2009:304) describes semiotic resources as mental or technological artefacts and actions that are structured in a particular manner to enhance our communicative intentions. Research relating to semiotic resources and students' interest can be seen in Salaam's (2012) work where she explores jewellery design pedagogy through a multimodal social semiotic lens to provide an account of students' meaning-making process through the use of resources. She reiterates the importance of recognising the interest of the students to ensure improved pedagogical practices. She argues that it is only through making the process of design explicit, that a relationship between design and meaning-making can develop. It is with this in mind that this research wants to explicate the link between the process of intaglio and the meaning-making potential of the student.

Thus, the concept of 'interest' is important within a multimodal social semiotic framework. 'Interest' relates to the choices that students make when selecting semiotic resources made available to them. These choices are "historically, socially and culturally shaped" (Bezemer et al., 2012:6). Interest has a close relationship with the two following notions, 'choice' and 'constraints'. Representation always involves choice that the students make to express their own meaning (Kress and van Leeuwen, 2006:154). Representation is always fractional because the students are selective in what they want to represent (Kress and van Leeuwen, 2006:7). In addition, the motivated interest of the students are influenced by the available semiotic resources (Bezemer et al., 2012:6).

Every sign produced by a student is not replicating or imitating, but the creation of a new sign (Bezemer et. al, 2012:6; Kress and van Leeuwen, 2006: 10). The sign is influenced by factors such as the environment and the available semiotic resources. Meaning is always made within a social context and it is this social context that limits potential sign-making due to the conventions attached to that particular social

context (Kress and van Leeuwen, 2006:12). These constraints are taken into account when the student's interest is explored as they may limit the semiotic potential in meaning-making (Kress and van Leeuwen, 2006:10 & 154). Another factor to take into account regarding the students' interest is diversity. Their interest is reflected in their own individual concerns or awareness, even though they inhabit the same social environment (Kress and van Leeuwen, 2006:20). A social semiotic approach acknowledges that the action and interests of the individual can change over time and that semiotic resources can also change (Kress and van Leeuwen, 2006:13).

Kress and van Leeuwen (2006:13) distinguish between communication and representation. Communication is the act between two or more participants where one is providing a clear message, and the other participant(s) choose to make meaning of the message. Representation takes on the form of expression that the sign-maker selects. From a pedagogical perspective one can view the lecturer as communicating knowledge and the students producing representations of their meaning potential. Social semiotics encompasses a relationship between communication and representation. The former deals with the social structures that are in place which influence the sign-makers' understanding and the latter deals with the choices that the sign-maker makes to represent their understanding (Ibid).

Social semiotics focuses on production of text and the context in which it is produced (van Leeuwen, 2005:xi). Text not only represents the conventional concept of written text or the spoken word, but encompasses a range of communicative artefacts such as visual, gestural and audial artefacts. The print that students produce during the hardground process is therefore a communicative artefact. A social semiotic approach interprets the print according to the particular social conditions in which the print was produced and the range of semiotic resources that were used during the process. In other words, social semiotics is a form of enquiry that relies on semiotic resources and social interaction (van Leeuwen, 2005:3).

2.3. Using social semiotics to identify semiotic resources in printmaking

The social practices discussed in the previous section are shaped by choice and have a direct impact on sign-making and how these signs are interpreted. In the printmaking studio, the print (etching) represents a sign in which the students'

meaning-making is captured. Sign-making can be viewed as the process in which the students engage with semiotic resources to produce an intaglio print.

The scope of semiotic resources available depends on the cultural capital of a social group (Bourdieu, 1991), as well as the cultural heritage of intaglio printmaking which has a range of semiotic resources to facilitate the meaning-making process. These semiotic resources include modes, medium and materiality, temporal aspects, modality markers, composition and site of display. In the next section, these resources are discussed in more detail.

2.3.1. The hardground print as communicated and represented through modes

Mode can be defined as a linguistic or non-linguistic method to communicate and represent meaning (Jewitt, 2008:22). We rely on a range of modes such as language, writing, image, gaze or gesture to create meaning. Furthermore, a particular mode may be considered useful in one social/cultural setting, but in another setting it may not qualify as a mode (Archer, 2008, 2011; Bezemer and Kress, 2008; Jewitt, 2009). Modes are used in conjunction with one another. This ensemble of modes is referred to as multimodality. The print artefact is physical and captured via the mode of image, but it can be described through text or language, in other words the print can be communicated or represented through different modes.

Jewitt (2009) claims there are four assumptions that underlie multimodality. The first is that language is not the only mode of communication. Kress and van Leeuwen (2001) and Jewitt (2008, 2009) argue that communication depends on many different modes to create meaning. For example, when one speaks, the person listening to you observes your body language (gesture) to understand what you are saying. Practices relating to the arts such as visual art, music or performance have always depended on different modes to bring them to fruition and in the past decade these practices have often been viewed from a theoretical and practical multimodal social semiotic framework (Duncam, 2004)). Print-making pedagogy is dependent on modes such as image, gesture, gaze and language to execute the meaning-making practices attached to intaglio and other printmaking techniques.

The second assumption underlying multimodality is that each mode has its own meaning-making potential because it is shaped by a particular culture. This is

referred to as affordances (Jewitt, 2009:15). To understand the affordances of each mode, it is necessary to understand that these modes have particular “logics” (Jewitt, 2009:24). The logic of a mode refers to the potential communicative practices that the mode encompasses. One can change between modes to communicate or represent meaning. For example, the explanation of intaglio in printmaking pedagogy can either be done via writing, use of speech or through a demonstration (gesture). The mode of writing offers the affordance of permanence. In other words, the student can refer back to the printed text in the form of a brief to recall certain information. The brief can only provide so much information. Verbal description as opposed to a written text affords the student a wider scope of explanation and expression through words. It also allows the student to be part of dialogue if questions pertaining to the intaglio method arise. The use of embodied acts in the form of a demonstration allows the student to see what the process entails. The affordance of the demonstration reduces the abstract nature of explaining hardground in words.

The third assumption underlying multimodality is the notion that humans make meaning through selecting and organising modes (Jewitt, 2009:15). This assumption is closely linked with the previous two assumptions. It has been established that some modes enable potential towards a particular meaning-making practice. If one mode reveals more potential towards meaning-making than another, it is up to the producer to decide which mode to select to express meaning-making. The choice of modes reflects the interest and agency of the student. Furthermore, we also have the ability to organise modes into particular patterns. For example, a student follows a sequence of different modes to complete the final print. This sequence involves reading the brief (written mode), then attending a demonstration (gaze), followed by a discussion (language) and finally attempting the hardground process.

The final assumption underlying multimodality supports the notion that modes are shaped by social/cultural and historical factors (Jewitt, 2009:15). This is evident when we see modes in action. For example, language is a social event. Students are expected to talk about their images through explaining concepts as well as choice of media. Printmaking is a hands-on, practical process. We rely on modes such as writing and language to reveal the theoretical methodologies of printmaking, because they form part of the pedagogic discourse. However, it is gaze, gesture and

language that play the vital social roles during the practical process. Reading about intaglio is a different social experience to producing intaglio.

To summarise, multimodality is a way of looking at the ensemble of modes that are used by humans to explicate their own meaning-making practices. In Archer (2008), students were given a choice of visual or written modes to create a text. The point of the activity was to give students choice and to experience the process of a sign-maker whereby they give an account of their interest (Archer, 2008:393). Similarly, students are encouraged during the printmaking process to engage with an ensemble of modes to provide a holistic meaning-making experience. This forms part of a social construct, whereby the students choose which modes to use and how to use them at a particular time. Andrew (2014) regards multimodality as the key for nurturing the “artist’s sensibility” and argues that “classrooms and schools might be reconceptualised for accessing and recognising learner resources”.

2.3.2. Medium and materiality in the printmaking process

Modes have a close relationship with medium. Bezemer and Kress (2008) used a social semiotics approach to highlight the changes in textbooks from the 1930’s, 1980’s and 2000’s to accentuate how social practices influence the use of different media and materials. Medium can be described as the vehicle for distributing mode. Henceforth, medium will represent both singular and plural form because media in visual arts may have other inferences such as mixed media or multimedia art.

Like mode, medium is also subject to “potentials and constraints for making meaning” (Bezemer and Kress, 2008:171). This refers to the affordance of a mode or medium. The authors use the example ‘print on paper’ as medium. The materiality of print on paper takes the form of artefacts such as newspapers, novels or textbooks. The potential for easy distribution is linked to print on paper. Due to technological advances, medium and artefacts are constantly evolving. Kress and van Leeuwen (2006:217) provide three categories relating to artefacts. They are artefacts employed by the human hand, recording technologies and synthesising technologies. Hand operated artefacts and recording artefacts are utilised during the intaglio hardground process. Artefacts such as rollers or etching needles are operated by the human hand. Technological artefacts are referred to as recording

technologies. Here mode and materiality have a close relationship, because the print represents a recording of a students' mark-making. The student relies on physical attributes such as seeing and even hearing to record the image onto a plate. Furthermore, students rely on modes such as language, written text and gesture to understand how the recording of this type of technology takes place.

The role of materiality is explored by Björkvall and Karlsson (2011) who emphasize the role of materiality in everyday practices. They provide a social semiotic account of meaning-making potential through the use of physical artefacts. Karlsson lists a range of material resources such as post-it notes, colour, size and surface of the post-it notes as well as the use of a white board. These material artefacts are specific to the event and serve a specific purpose during a particular activity. Karlsson states that these materials do not have universal meaning-making potential, highlighting the idea that semiotic resources are shaped by cultural and social practices. The materiality of the semiotic resources in printmaking is also context bound and may be used differently in other professional printmaking studios.

Björkvall (2009) offers a similar account whereby he investigates the affordances of artefacts through human interaction. He investigates the meaning-potential of IKEA tables that were purchased by customers and explores both the theoretical and actual semiotic potential. He also concludes that the activity impacts on the meaning potential of an object. As humans, we may be aware of the theoretical semiotic potential of a particular object but choose to repurpose the meaning of the object. This leads to two notions. The first being that an artefact can have semiotic meaning or it can just be a means to an end. The second notion is that medium has a social aspect (Bezemer and Kress, 2008). The question as to whom has access to these artefacts and what they choose to do with these artefacts has social semiotic implications (Bezemer and Kress: 2008; Björkvall and Karlsson: 2011; Kress and van Leeuwen: 2006).

Interest in the materiality of representation and representational practices reflects wider social and cultural concerns with questions of substance and materiality in a world in which the concrete becomes abstract, the material immaterial, the substantial insubstantial and reality 'virtual'. (Kress and van Leeuwen, 2006: 223)

Students may be aware of the theoretical semiotic potential of semiotic resources in printmaking but may choose to repurpose the meaning of these resources. The social context may also have an impact on the available semiotic resources, for example the pedagogic environment is different to that of a professional printmaking studio. The lecturer's teaching methods as well as issues of health and safety are taken into consideration. This has a direct influence on the student's choice of semiotic resources. It is advantageous for the student to grasp the materiality of the artefact they are working with and to understand that the artefact has potentials and constraints. Furthermore, the student can work within or around the potentials or constraints of the modes and mediums to assist them in the meaning-making process.

2.3.3. Temporal aspects of printmaking

Van Leeuwen (2005) argues that rhythm ensures that communicative practices have a level of cohesion. Van Leeuwen draws on several concepts that provide insight regarding rhythm. Rhythm provides meaning through structure and process (2005:181). The structure allows us to make meaning of the context whereas the act of communication is foregrounded in the process (2005:183). This research draws on van Leeuwen's concepts pertaining to rhythm, referring to these as 'temporal aspects'. Time and rhythm have a close relationship. Rhythm and layout form a vital link between "semiotic articulation and the body" (2005:181). From this viewpoint, this research regards temporal aspects as semiotic resources that students draw on during the printmaking workshop. Timekeeping is vital during the printmaking pedagogic process as students rely on time to ensure meaning-making.

Van Leeuwen's (2005: 196) three notions pertaining to time, namely measured time, metronomic and non-metronomic time are relevant for this research. Time is measured in accordance to the hardground etching process. The tones that the students have to create on the plate are measured in time. Metronomic time is realised through time keeping devices such as clocks and mobile phones. These artefacts which students draw on during the etching process have become naturalised within the studio. Non-metronomic time refers to the irregular intervals that students use when they draw on the plate. The process of drawing varies

between etching stages and from student to student, as it depends on the intricate detail that each image requires.

2.3.4. The relation between modality markers and the hardground print.

Students also draw on another semiotic resource, namely modality markers to produce an intaglio hardground print. Kress and van Leeuwen (2006:155) have adapted the term modality from linguists. In turn, this research has adapted Kress and van Leeuwen's modality markers for the purpose of printmaking. Kress and van Leeuwen (2006) argue that modality markers provide an image with credibility or 'truth value'. Modality markers are domain specific, in other words the field of photography contains its own set of modality markers to provide credibility to the image. In the field of printmaking, an intaglio print establishes credibility through colour, texture, tonal saturation and framing.

There are four domains to consider namely technological, sensory, abstract and naturalistic (Kress and van Leeuwen, 2006:165-166). An image that has high modality in the abstract domain may have low modality in the naturalistic domain. Visual art may be part of the abstract and naturalistic domain. The difference between these two domains is that the abstract domain is context specific. For example, it may be scientific or in the case of intaglio hardground, it falls into the spectrum of higher art. Thus for the informed artist, the modality markers of an intaglio print are high because they are able to recognise the visual cues. From a naturalistic coding orientation, etchings might have low modality due to the viewer being unfamiliar with intaglio prints. Modality markers are useful for students because it contributes to their meaning-making process. Recognising the modality markers that give an intaglio print its credibility, allow students to identify the different printmaking processes and distinguish an etching from other types of drawings or illustrations.

The modality markers related to a hardground print include colour, texture, tone, embossing and 'editioning'. Colour saturation refers to the range of colours in the print. The printmaking pedagogy at this specific institution is mostly based on monochromatic prints because the ink that the institution provides is by default black. The texture of the print is not tactile, but a visual impression created through a range

of mark-making techniques. The print consists of tones such as white, grey and black. Dark tones are created through layering of line and staggering of time. Embossing relates to the size and shape of the plate and the format of the archival paper. The only way to pull a print from the hardground plate is to roll it through an etching press. Not only is the image revealed, but an impression of the plate is left on the paper. This is known as embossing. These cues are all left behind on the archival paper when the print is 'pulled' from the etching press. These cues inform the viewer that the print is a hardground etching.

2.3.5. The composition of the image

Generally speaking, composition in visual arts pertains to the organisation of elements within a particular format. Elements such as colour, shape and line are arranged to provide a composition that has balance and emphasis. The balance of the composition is obtained through the counterbalance of negative/positive space and shapes, depth, direction of shapes/lines and lay-out. Kress and van Leeuwen (1996, 2006) provide three features of composition, namely information value, salience and framing. For them, composition reflects the meaning of the image in a figurative manner or in a physical manner between the image and the viewer (Kress and van Leeuwen, 2006:177). From a social semiotic perspective, the focus lies on the choices the students make in arranging the composition. Choices such as layout, in terms of landscape or portrait and placement of image on the plate, influence the balance and emphasis of the composition. Furthermore, the etching process plays a vital role in the tonal value of the composition. The tonal value is only revealed once the plate is rolled through the etching press and transferred on paper. Based on Kress and van Leeuwen's (1996) work, Jewitt and Oyama (2001) used compositional elements to analyse advertisements pertaining to men's sexual health and concluded that this framework is useful to describe possible meanings sometimes hidden, within the images.

2.3.6. Potential site of display

The 'site of display' is always socially and culturally located. In other words, a site of display is created by an individual or group for the viewing benefit of another social group (Jones, 2009:125). Site of display is dependent on the context of social

practices (2009:115). The pedagogic context of the school is a 'site of display'. Site of display does not represent only one type of context because it intersects with other forms of 'site of display'. Another site of display is the students' portfolio that they showcase to potential clients (viewer). The portfolio may be a physical collection of prints or may be digital in format. The students' interest, in other words, their motivation and meaning-making potential produces 'sites of display' that can be viewed in physical or virtual places.

In the realm of the professional printmaker, the 'site of display' varies. They can make use of other printmaking methods such as screenprinting or digital printing. Screenprinting is not bound by paper and an image can be printed onto another surface for example a t-shirt. This creates a mobile 'site of display' that can be part of almost any context. However, this research is concerned with the intaglio hardground print which narrows the scope of 'site of display'. The intaglio print is mostly found on gallery or museum walls and this type of 'site of display' emphasises social interaction or as Jones (2009:114) defines site of display: "It is an interaction between the display and those who use it." Thus site of display includes what is being displayed (the print), how it is being displayed (on a wall) and why it is being displayed (the purpose).

This section has shown which resources are used during the intaglio hardground process within a particular institutional context informed by social and pedagogical practices. Kress and van Leeuwen (2006:215) argue that each form of semiosis has a range of signifying resources. In intaglio printmaking, the signifying or semiotic resources namely modes, medium and materiality, modality markers, composition and site of display provide the meaning-making potential for students to create signs. The print is a sign that realises these semiotic resources associated with the intaglio hardground process. By analysing the print and observation notes, the semiotic resources are revealed that contribute to the students meaning-making potential.

2.4. Conventions and constraints within the printmaking studio

Gürşimşek (2012) investigates the affordances and constraints pertaining to virtual places in digital design to establish social complexities that are present within the sphere of virtual design. His findings include that affordances and constraints

negotiate social action, and semiotic resources are appropriated to suit the particular interest of the sign-maker. In line with Gürşimşek's research, this thesis explores how students use or reinterpret semiotic resources to represent their interest within a printmaking environment with its own particular conventions and constraints.

The first constraint is echoed in Andrew's (2014) argument that the curriculum and pedagogy associated with art education can be too prescriptive. The result being that teachers do not foster the notion of experimenting. In fact, conditions within the pedagogic environment can simulate a 'banking' style of education (Freire, 1970: 53). Andrew encourages a space that rejects orthodox pedagogy in favour of democratic pedagogy. This raises the issue of power relations within the classroom. Power and control is always omnipresent (Bernstein, 2000). In order to unmask the power relations within the classroom, Andrew encourages an 'artist's sensibility'. He argues that to develop an 'artist sensibility' the artist must practice 'makeshiftness'. This thesis interprets 'makeshiftness' as an ability to adapt, experiment, explore and play with the available semiotic resources at one's disposal to ensure optimal meaning-making. There is also a link between Andrew's notion of 'artist sensibility' and the multimodal social semiotic concept of students' interest. Tala echoes Andrew's argument by encouraging printmakers to explore and discover "the endless possibilities of experimentation with the process and display" (2009: 9). We can democratize the printmaking pedagogic process by allowing students to explore the concept of 'makeshiftness'. This thesis argues that students do, in fact, draw on the available semiotic resources to navigate their way around the conventions and constraints associated with intaglio hardground.

Evaluative criteria serve as a benchmark for the students to gauge whether they have control over the intaglio process. These criteria facilitate the meaning-making process (Bernstein, 2000:99). This thesis regards the evaluative criteria as a self-assessment tool for students to draw on during the printmaking workshop. The assessment criteria can be implicit or explicit during the printmaking process. When the assessment criteria are implicit, it is either due to the lecturer not being able to make the printmaking process overt, or that the process is too complicated and students find it difficult to visualise the outcome. Either way, the implicit assessment criteria are problematic, as the tendency is for the pedagogic space to be less democratic due to the lecturer being in control. However, when students become

more familiar with the process, the assessment criteria become explicit, and students tend to be more in control of the pedagogic space.

As mentioned in the rationale, the intaglio process is deterministic due to the sequential nature of intaglio hardground. What this means is that a sequence of practices must be followed to create an image onto the plate. Students find this difficult as they have to rely on visualisation. Gamble (2004) refers to this as the ability to conceptually and practically reconcile the process with the product. This reconciliation can be difficult for students. Only when the first print is produced, students notice undesired tones or mark-making. Tradition and convention in printmaking dictate that except for what is known as 'selective wiping'¹, there is not really more that one can do to 'fix' a print. Thus, one's option is to start the process all over again using a new plate. This is problematic because students cannot always afford new copper/brass plates and secondly, students simply just do not have the time to restart the process.

Based on the above discussion, the conventions and constraints pertaining to printmaking pedagogy relate to the curriculum, pedagogy and processes being orthodox and may hinder students from exploring and experimenting with the process. The assessment criteria are not always known to the students, which impacts on their meaning-making. Another constraint that students experience is time. Ultimately, students' meaning-making practices are subjective and predisposed to the choices they make during the intaglio process. The notion of 'artist's sensibility' can apply to both the lecturer and the student. The lecturer is willing to adapt traditional teacher methods in favour of more unorthodox methods that encourage students to experiment. This in turn, allows students to represent their 'interest' on an individual basis.

¹ 'Selective wiping' is a process that occurs during the printing process when the printmaker decides to wipe more or less ink off the plate. This has an impact on the tones. Less wiping ensures darker tones whereas more wiping ensures lighter tones. The image on a plate that is well considered in terms of form, space and tone and its relation to the etching time seldom relies on selective wiping because the different incised areas in the plate hold enough ink to create the desired tones.

2.5. A summary of chapter two

This chapter outlined the theoretical stance of this thesis. The printmaking field was briefly discussed to locate the subject within the theoretical framework. It also provides a description of what multimodal social semiotics entails and outlines the semiotic resources that are drawn on during the intaglio process. These resources are modes, modality markers, medium and materiality, temporal aspects, composition and site of display. The meaning-making process of the student is mediated through these semiotic resources.

As printmaking is regarded from a pedagogical perspective, it is useful to establish the conventions and constraints that are present during the intaglio workshop. The multimodal social semiotic framework is a suitable lens to investigate the manner in which students work within and around these constraints, thereby revealing the students' interest.

Chapter 3: Methodology

3.1. Methodological considerations

This research explores how students engage in a creative process. This thesis is interested in individual student's meaning-making processes, thus providing a qualitative account (Cohen, Manion and Morrison: 2007:7). Although I spend a significant time with the students, I have captured a particular period within the studio to be presented in this thesis. Björkvall and Engblom (2010:273) refer to the term social semiotic ethnography and argue that "a theoretical framework combines an ethnographic approach with social semiotic analysis of resources for meaning-making". This thesis does not claim to be ethnography, rather that it is relying on similar techniques that ethnography uses to collect and interpret data. The data collection includes observation notes, interviews and artefacts in the form of hardground prints. Cohen, Manion and Morrison (2007: 181-183) regard qualitative data collection as heterogeneous but warn that the researcher must use it appropriately and with intent. The purpose of the data is to provide an account of the social semiotic resources that students draw on to make meaning within the rather tight and controlled process of intaglio hardground.

In order to contribute to the methodological debate, a valid approach is warranted. Maxwell (1992 cited in Cohen, Manion and Morrison, 2007:135) accounts for five types of validity that contribute to understanding. These include descriptive validity, interpretive validity, theoretical validity, generalizability and evaluative validity. The latter two are not relevant to this research. In relation to descriptive validity, the data must be portrayed objectively and factually. Although the author is an observer-participant, the data displays events as they happened. Furthermore, the artefacts in the form of hardground etchings are real. The interpretive validity is only relevant in the interpretive/ anti-positivist approach which is related to this research. Theoretical validity relies on theory to explain phenomena. This thesis draws on a multimodal social semiotic framework to explore meaning-making practices within the printmaking studio.

3.2. Applying a multimodal social semiotic framework in printmaking

Multimodal social semiotics is the overarching framework for this research and is theoretically associated with socio-linguistics (Kress and van Leeuwen, 2006). Michael Halliday developed this system of functional grammar to provide a useful language that can be applied in analysing text. Halliday argues that language mediates the meaning-making process and is dependent on social and cultural context (Eggins, 2004:3). He is mostly concerned with the pursuit of social equality and meaningful education. Halliday argues that the function of language is to connect the individual to society (van Leeuwen, 2005: 76). “The idea of the ‘function in structure’ has carried over into social semiotics” (van Leeuwen: 2005:75). Social semiotics is not just concerned with the function of language but all semiotic resources that contribute to meaning-making. All these semiotic resources function within a particular social structure.

An analogy is useful to explain the practicality of social semiotics. Before Picasso ventured into cubism, he was an accomplished artist. This is evident by the work displayed at the Picasso Museum in Barcelona. Picasso mastered all the genres of classical painting such as mythological painting, portrait, everyday social scenes, landscapes and still life. He ventured into cubism because he wanted to explore and examine form (Sporre, 1989:442). He broke the rules of conventional painting in order to challenge the viewer’s orthodox views regarding art. Social semiotics is concerned with who sets the rules and on a micro level, if and how these rules can be altered (Jewitt and Oyama, 2001:135). Picasso was familiar with the rules relating to painting (conventions) and made the choice (social semiotics) to alter those rules.

The conventions and constraints associated with printmaking practices and pedagogy can be constrictive. Social semiotics explores how students work within and around these constraints by relying on available semiotic resources. These resources can be evaluative in nature and can be regarded as useful tools that students draw on during the act of making meaning, thereby serving the students’ interest.

3.3. Context of study

The research was conducted at a Higher Education Institution in Cape Town that specialises in art and design. There are four departments, namely Visual Arts, Graphic Design, Photography and Jewellery Design. A diploma is issued after the successful completion of the three year program. The second year graphic design program offers subjects such as desktop publishing, design, photography, object drawing, figure drawing, illustration, history of graphic design and printmaking. Each subject carries a different weight in terms of importance. This research explores the meaning-making of the second year Graphic Design students during an intaglio hardground workshop.

The printmaking workshops on offer at this institution are held separately for first year students (including fine art and graphic design students), second year graphic design students and second year fine art students. Each workshop consists of three days and covers a particular process. The first years are introduced to monoprints, collagraphs and linocuts, while the second year students are introduced to screenprinting and etching processes that use acid, such as hardground, softground and aquatint. There are other acid related processes that encompass intaglio but the collected data that made this research possible was gathered from an institute that only offers those three acid related intaglio processes.

This research analyses the process of hardground that six second year graphic design students undertook as part of the intaglio methodology. Data collection includes observation notes, text analysis and student interviews. The studio is used for printmaking and accommodates one group at a time. This makes it possible to provide the students with individual attention as needed. The workshop runs over three consecutive days and students are expected to produce the prints on the final day of the workshop (they submit one week after the print has been produced). Due to the complicated process of intaglio hardground, the task given was simplified. The graphic design students were tasked with a literal interpretation of botanical plants that grow in the Kirstenbosch gardens in Cape Town.

3.4. Research methods

The research includes three sets of data. The primary data includes the students' prints and observation notes, and secondary data is the student interviews. The print provides information relating to the student's personal history of the process, thus revealing the available semiotic resources made available to the student. The print is a text. Social semiotics uses the word 'text' to refer to multimodal artefacts that were produced within a specific context to convey meaning (van Leeuwen, 2005). The collected texts are "visual statements", produced by the second year graphic design students (Kress and van Leeuwen, 2006:1).

The text is analysed in terms of the processes involved, to produce the text. The text is also analysed by looking at the constraints and conventions affiliated with the hardground intaglio process. Once these constraints and conventions are established, the semiotic resources are identified. Then the ways in which students make meaning within and around these constraints are analysed and discussed. The text is also analysed as a sign. From a multimodal social semiotics perspective, one can regard the text as multimodal. Thus, the text is analysed and discussed to extrapolate the meaning-making practices of the students (Kress and van Leeuwen, 2006: 20).

I am aware that I am familiar with etchings which may lead to assumptions relating to semiotic resources that students could potentially have used. Therefore, it is necessary to rely on observation notes that I made during the class. Cohen, Manion and Morrison (2007: 201) refer to this type of data as 'documentary analysis' and state that it is context dependent, due to the fact that only members of that community or cultural group are literate in terms of the documentation. I consider myself as a 'participant-as-observer' because the group was aware that I was taking observation notes as part of my research project (Ibid: 404). This type of observation is useful when studying a small group over a short period of time as the participant is able to capture most of the data without missing extended periods of data (Ibid). Thus, the observations notes provided insight regarding the semiotic resources used, as well as the social interaction between the students.

In addition to the text and observation notes, I interviewed the students as well. Cohen, Manion and Morrison (2007: 349) state that interviews are not vernacular by nature because they serve a particular purpose. The interview can be regarded as an exchange of ideas related to a particular topic. The interview provided me with rich information, as the students were able to provide their own interpretation of the printmaking workshop. The interview also allowed me to look at the relation between students reported experience and my interpretation of the primary data.

3.5. Ethical Considerations

This research respects the anonymity of the participants as well as the educational establishment. I treat the collected data in the form of observation notes, reflections and interviews with the necessary confidentiality. I have made known the future possibility of publishing parts of this thesis in academic journals and have the consent of the participants involved. Each participant signed a consent form. Each student was given a pseudonym and I refer to these pseudonyms in my data analysis. One of the considerations regarding this research is that I am both teacher and researcher. The advantage is that I have an established relationship with the students. I am not responsible for evaluating their prints as that is the responsibility of the senior lecturer in printmaking.

3.6. Data Analysis

One aim of this research is to establish a theoretical account in order to develop a descriptive metalanguage. This is necessary to provide the reader with the appropriate descriptive language (Unsworth, 2006) and to establish the relation between the process and the image. The data is analysed to provide a theoretical account of the semiotic resources that contribute to printmaking pedagogy, thereafter the semiotic resources will be operationalised to identify the students' interest.

3.6.1. Establishing a metalanguage

My focus is on developing a metalanguage for the purpose of utilising a social semiotic framework to explore the nature of intaglio hardground. The metalanguage is useful in answering the first question of this thesis relating to the semiotic resources that students draw on. Metalanguage is based on Halliday's Systemic

Functional Social Semiotic Theory (Halliday: 2009; Unsworth, 2006: 57). Halliday (2009) views culture as a regular system of signs that are relational to a system of meaning, thus there is a close relation between metalanguage and meaning. In developing a metalanguage, I consider Halliday's three meta-functions, namely ideational function, interpersonal function and textual function.

The first meta-function is known as the ideational function. This function represents "the world around us and inside us" (Kress and van Leeuwen, 2006:15). This function represents the nature of the event taking place as well as those who are contributing to the event (Unsworth, 2006:58). The ideational function represents the intaglio workshop. In other words, it locates the pedagogical and printmaking practices of this institution. The curriculum ascertains the selection pertaining to printmaking pedagogy, whereas the hardground intaglio process determines the order/sequence of each stage.

The interpersonal function represents the manner in which we interact and communicate with one another. In the printmaking studio, the interpersonal function relates to the semiotic resources that students use to communicate and represent meaning. The modes highlight the various communicative practices within the classroom. These modes are talking, writing, drawing, gaze, gesture and acts of physical demonstration. Multimodal communication during the workshop indicates the shift between familiar processes and new processes. Modes and materiality have a close relationship. The manner in which the students use modes and artefacts depend on the affordances and constraints associated with them. In other words, each mode or artefact has particular communicative potential which the students may choose, to best represent their interest (Björkqvall and Karlsson, 2011).

The ideational and interpersonal functions are operationalised in a third function, namely the textual function (Halliday, 1993:107). This function represents the elements that are combined within a particular text to make meaning (Jewitt, 2009: 24). In this research, the print does not only represent the students meaning but also represents their interest.

3.6.2. Emphasis on specific semiotic resources within the social semiotic framework

Social semiotics provides a framework to explore the production of text as well as the context in which the text is produced (van Leeuwen, 2005:xi). Attention is drawn to the second question of this thesis, the notions of conventions and constraints, and how they impact on the students' meaning-making practices need some discussion.

Social traditions have a tendency to cultivate naturalisation. In other words, different cultures and social environments have conventions and constraints associated with them (Kress and van Leeuwen, 2006:12). The printmaking studio has its own unique culture, but it is also affiliated with a pedagogic environment. The conventions and constraints attached to printmaking culture are numerous. However, the relevant conventions and constraints specific to intaglio hardground are the deterministic procedures that are bounded by time, and the clandestine nature of the image which is only revealed once a print has been generated (Hobbs and Rankin, 1997). What also needs to be taken into account is the pedagogic nature of the printmaking workshop. Each pedagogic environment differs, but is subject to conventions and constraints.

The effect of convention is to place the pressure of constant limitations of conformity on sign-making; ...Convention does not negate new making; it attempts to limit and constrain the semiotic scope of the combinations. (Kress and van Leeuwen, 2006:12)

It is not possible to abdicate ourselves from the macro social structures and systems, but on a micro level it is more likely for the individual to experience moments of liberating oneself from conventions and constraints associated with a social institution or group (Kress and van Leeuwen, 2006:96-97). I am interested in the students' actions and the choices they make within the specific conventions and constraints of this social setting, in order to express meaning.

Realisation of time

Time holds many implications for the student. From a social semiotic perspective, I will rely on the following notions pertaining to time, namely measured time, metronomic and non-metronomic time to explore the impact time has on the

students' choices. Time is measured in accordance with the hardground etching process. The tones that the students have to create on the plate are measured in time. The data is analysed by applying the three notions of time (measured time, metronomic and non-metronomic) to determine whether students make beneficial choices relating to time and thereby show autonomy during the printmaking workshop.

Explicating the modality markers

The modality markers represent a particular groups' interest. The link between the modality markers and self-assessment are explored in terms of students relying on these semiotic resources to represent their meaning. The function of modality markers can differ, depending whether it is utilised within or outside of the printmaking studio. Outside the printmaking studio, one relies on the modality markers to inquire about the credibility of a print to distinguish it from other prints. However, in printmaking pedagogy, the modality markers function as a tool for self-assessment. This notion shares similar tenets with Bernstein's evaluative criteria. The print's modality markers are visible and students have a certain degree of control due to previous meaning-making experiences pertaining to the printing process. They are able to gauge whether the print fulfils the assessment criteria relating to colour, text and tone.

The students use the first print that they produce to establish whether the print represents their interest. Table 1 shows the relation between the different applications of the modality markers. The modality markers related to the intaglio print are seen from two different perspectives. They share the following indicators namely colour, texture, tonal value, embossing and 'editioning'. These indicators are explained in table 1, but as one can see they serve different purposes. The modality markers determine what type of print this is and those familiar with hardground etching will use the indicators to determine the prints' truth value. However, in the pedagogic environment, the students use the modality markers to assess whether the print is displaying modality markers in line with the assessment criteria of a hardground print. I analyse how students use the modality markers in regards to the choices they make, to establish how they work within or around the constraints of intaglio hardground.

The intaglio hardground print	
Modality Markers	Criteria of the hardground print
<p style="text-align: center;">Colour</p> <p>Are there a range of colours or is the print monochromatic?</p>	<p style="text-align: center;">Colour</p> <p>Wiping the plate to remove excess ink. Wiping in soft circular motion as opposed to hard linear motion to ensure that the areas sans ink are blended and do not reveal ink smudges or residue.</p>
<p style="text-align: center;">Texture</p> <p>Does the line-work create texture?</p>	<p style="text-align: center;">Texture</p> <p>The lines are delicate or robust. The lines are used to compliment the form and shapes within the image. Line-work is used to create textures and tones.</p>
<p style="text-align: center;">Tonal Value</p> <p>Are there a variety of tones or is there mostly contrast?</p>	<p style="text-align: center;">Tonal Value</p> <p>The plate is submerged in acid for an accumulative time period between 1-60 minutes. There are various time allocations that represent tone. Long periods represent black tone, whereas shorter periods represent mid tones (shades of grey). Disparate specks of grey on the plate point to 'foul-biting'.</p>
<p style="text-align: center;">Embossing</p> <p>Is there an impression of a plate embedded into the archival paper?</p>	<p style="text-align: center;">Embossing</p> <p>The edges of the embossed area are clean. The embossed area is centred on the archival paper.</p>
<p style="text-align: center;">Editioning</p> <p>How many prints are in circulation? Who is the producer of the print?</p>	<p style="text-align: center;">Editioning</p> <p>The student has produced the required amount of prints stated on the brief. The prints are signed and editioned prints correctly, the number is on the left and the signature is on the right. If the student provides a title it must be written in the centre. The editioning is done in pencil.</p>

Table 1: Modality markers in relation to the criteria of a hardground print

Organising compositional elements

The use of composition also impacts on the students' choices of arranging elements to create an image. The first feature of composition provides information that is placed in a specific manner, for example some elements are placed on the left and other elements are placed on the right. I draw on two terms used by Kress and van Leeuwen for analysis purposes, namely information value and salience (Kress and van Leeuwen, 2006:177). 'Information value' in this research relates to the balance of the composition and the layout of the composition in terms of landscape, portrait, circular or square format. It also points to the balance of the composition in terms of asymmetrical and symmetrical composition. Emphasis is created through contrast of value or colour, the size of the object(s) and placement of the focal-point within the chosen format. It is this emphasis that relates to Kress and van Leeuwen's (2006)

concept of salience. The salience of the elements is brought to the viewer's attention through the size, contrast and focus (or lack thereof). In terms of this research, salience is closely related to emphasis and is used to analyse the intaglio hardground print. Students' interest is visible during the arrangement of compositional elements to create balance, variety and contrast.

In analysing the prints, observation notes and interviews, a reflective account of the intaglio workshop is provided. The metalanguage provides the foundation for this thesis to discuss and analyse the data. The data provides insight into the nature of the printmaking pedagogy, by identifying the conventions and constraints related to intaglio hardground, as well as the semiotic resources that the students draw on to reveal their interest.

3.7. A summary of chapter three

The methodological chapter reveals the interpretive nature of this thesis. A brief outline provides insight into the context of the intaglio workshop and its participants and my role as researcher. A multimodal social semiotic framework is utilised during the data analysis. This framework also highlights the conventions and constraints related to the printmaking workshop. The collected data in the form of visual text, observation notes and interview transcriptions contribute to developing a metalanguage associated with intaglio hardground. The metalanguage not only makes a theoretical contribution but serves as an analytical tool. Thus, the metalanguage is deployed to explore the students' interest by interrogating the semiotic resources they draw on.

Each environment formulates a code of conventions that places constraints on the members of the institution. In order for students to enhance their meaning-making practices, they have to be provided with physical, abstract and intellectual tools to negotiate the constraints imposed on them. Jewitt and Oyama (2001) argue that social semiotics does this by identifying the semiotic resources within a particular culture. The semiotic resources associated with the hardground intaglio process is discussed to provide an account of what these resources are and the value they add to the students meaning-making practices.

Chapter 4: Communication and representation in the printmaking studio: Proposing a metalanguage

This chapter proposes a metalanguage for print-making pedagogy by drawing on multimodal social semiotics. Unsworth (2006:56) argues for “systematically theorising and describing resources for the construction of meaning”. The aim of this chapter is to explore a metalanguage that relates to the process of producing an image onto a plate and then onto paper, thus creating a print. Due to the specialisation of the intaglio process, it is necessary to give an account of the process. The constraints relating to printmaking pedagogy and the semiotic resources drawn on are foregrounded in this chapter, in order to explicate the process of producing a hardground print. This chapter identifies three stages in the hardground process, namely preparation, etching and printing.

4.1. Conventions and constraints related to intaglio hardground

The metalanguage of conventions and constraints are prevalent within a multimodal social semiotic framework. By establishing the constraints and conventions, it is possible to investigate if and how students work within the pedagogic context of printmaking. A constraint relating to selection is that of the students’ interest because the curriculum dictates what subjects are available to the students. There has always been a close relation between printmaking and graphic design (for further reading see Meggs and Purvis, 2006). However, there are students who do not have an affinity for this subject. Unlike the second year fine art students who elect to do printmaking, printmaking is a compulsory subject for the second year graphic design students. In other words, the curriculum has an impact on the students’ choice of subjects. The conventions connected with the intaglio hardground process determine the order and sequencing of each stage during the process.

The flux between familiar processes and unfamiliar processes, create moments of student autonomy and teacher dependency within the printmaking studio. Students only have three days to complete the intaglio hardground print, which may have an impact on their meaning-making practices. Inexperience can also be a constraint

when students are unsure of what is expected of them. This highlights the notion that at certain stages of the process, the students' meaning-making practices can either be inhibited or explicit.

Thus, the conventions and constraints within the printmaking studio relate to time, sequence and the implicit nature of the process. The graphic design students are compelled to produce a hardground print within a certain time limit. This process is deterministic and sequential in nature and relies on specific techniques to create an image. Due to the unfamiliarity of certain stages, meaning-making practices can be hindered. Students are expected to manage all these factors in order to make meaning. Therefore I argue, working within and around these constraints can motivate the students' interest, which in turn impacts on the choices they make.

4.1.1. Stage one: Preparing the plate

Every printmaking environment has its own sequence of the first three steps described below. First the plate is polished to prevent fine scratches from retaining unnecessary ink and to ensure that the white spaces on the paper remain crisp. The edges of the plate are filed down to a forty-five degree angle. The reason the edges are filed is to prevent the plate's sharp edges from cutting the archival paper when rolled through the press under immense pressure. The back of the plate is sprayed with paint to prevent the back of the plate being 'eaten' away by acid. The front of the plate is covered with a mixture of calcium carbonate and diluted ammonia. The plate is cleaned with this solution to ensure a grease-free plate. This is known as degreasing the plate. To confirm that the plate is free of residual grease, a little water is poured on the surface. The plate is gently shaken. If water pulls away from the sides, it still has a greasy deposit and needs to be cleaned again. A grease-free plate allows the hardground to adhere to the surface and lessens the chance of 'foul-biting'. 'Foul-biting' is a term that describes unwanted etched areas on the plate. This happens when the ground is too thin on some areas of the plate and is less acid resistant. The plate is then placed on a sheet of newsprint on top of the hotplate. The hotplate is set to a low setting to gently heat the plate and dispense of excess water.

A hard cake that consists of bitumen, rosin and beeswax is glided over the warm plate. A medium hard rubber roller is used to distribute the ground evenly across the plate. This is known as rolling on the hardground. It is important to take care that the

hot plate is not too hot because the roller will slip over the plate, or the roller will pick up most of the ground and prevent a film of ground covering the plate. Once the ground is evenly distributed, one must also look at the colour of the ground. A deep dark honey colour is a good indicator that there is sufficient ground on the plate surface. After cooling down, the plate is placed between two wooden tapers in an upside down position. A three wick candle is lit and the flame is gently moved over the surface. The wicks of the candle must not touch the surface at all. The ground turns black. This process is repeated twice. The second time, the plate is rotated. Although this process is not strictly necessary it does make the ground more durable, reduces imperfections and allows the drawn image to display better.

Due to the pedagogic nature of the workshop, power and control play a significant role. The students' attention is directed to the lecturer as she provides a short history of the intaglio process, then continues to explain the process. Initially, the power dynamic lies with the lecturer but when the students start preparing the plates, they start taking control of the process. This is mainly due to the fact that the students were introduced to a new acid-etching methodology that shares similar tenets in preparing the plate. Luke (1996:325) illustrates the concept of power, by referring to Foucault. Luke explains that power can be disseminated as the participants relate to a particular space and subject. In other words, power is not something that one possesses or hands over but unfolds according to the social action and meaning-making potential. When students are familiar with a particular part of the process, they can practice autonomy.

The manner of sequencing is mostly determined by the intaglio hardground process. However, the order of polishing, filing and protecting the background is initiated by the lecturer. The preparation following these three stages is always done in a specific order and students are discouraged to change the order. Time and pace is constantly shifting, depending on whether the students are familiar with the process. Familiarity enables the students to manage their own pace. However, during unfamiliar processes, the lecturer takes control of the pedagogic process. For example, the initial demonstration is always given by the lecturer, but afterwards, the students can work at their own pace (within reason). The students that have finished their tasks are encouraged to assist the other students who are still preparing their plates for the etching process. As most students work collaboratively during this

stage, they assume control of this stage. Educational theorists like Bernstein (Morais, 2002:560) continuously argue that meaningful learning is conducive where students “have some control over the time of their acquisition”.

4.1.2. Stage two: Transforming the plate through a sequence of etchings.

Before the image is transferred on the plate, the student examines the plate to detect pinholes or ground that is scratched away by the wooden tapers. These openings are closed with a permanent marker, which is acid resistant. The image is transferred onto the plate by placing carbon paper underneath the image. The outlines of the image are traced onto the surface of the plate. The student uses an etching needle to gently lift the ground through the process of drawing. The etching needle must not scratch into the copper surface.

The dark lines are drawn first and placed in the acid. The acid bites into the exposed surface of the plate. The image is made up through a sequence of acid bites. The lighter lines/tones will be drawn last and put in the acid for less time. The open ground that has been exposed to the acid for a longer time will be thicker and deeper than the open ground that has been exposed to the acid for short increments of time. The etching time is accumulative, in other words the plate cannot lie in the acid bath for more than sixty minutes in total.

Once again, the sequence of the process and pacing of the students are interrelated. The lecturer attempts to make the process as clear as possible, but it is difficult for the students to grasp them due to the unfamiliarity of the process. The students need to follow a systematic series of ‘etching the plate’ in acid. The pace of the student is in constant ebb and flow, due to the time increments related to etching the plate and the time allocated to drawing on the plate. When the student draws on the plate, the pacing is determined by the intricacy of the line-work. In other words, it is neither the lecturer nor the technical assistant that determines the pacing during this stage. Thus all the participants within the printmaking studio are dependent on the sequential and labour intensive activities related to the etching stage.

4.1.3. Stage three: Generating an image onto paper

Once the desired image is obtained, the rest of the ground is removed with turpentine. The plate’s edges can be filed again if the acid ‘bit’ into the edges. The

plate is ready for printing, however there is more preparation involved such as tearing paper and mixing ink. Archival paper is torn into the desired size and placed into the water tray. By soaking the paper the fibres of the paper loosen which allows more flexibility when it is rolled through the press under immense pressure. Soaking also allows for the ink to adhere better to the surface of the paper.

Although the ink can be used by itself, it is sticky and hard to manoeuvre over the copper surface during the wiping stage. To combat this problem, a ratio of one part oil paint and three parts ink are mixed together. This changes the viscosity of the ink and allows for better movement on the plate. The surface of the plate is coated with a moderate layer of ink. The excess ink is wiped off while the remaining ink resides in the recessed areas of the plate. The paper is removed from the water tray and placed between two clean towels. A heavy roller is manually rolled over the paper to drain excess water.

The plate is placed in the demarcated area of the register on the press. Then, the paper is placed over the plate and covered with a heavy felt blanket. The handle of the press is turned and the printing bed passes through the press. The blanket is lifted and the paper is carefully pulled off plate. The print is placed on one sheet of newsprint and covered with another. A heavy wooden board is placed over it and the print is left to dry for at least one week. The plate is removed from the printing press and placed back on the inking table. Another layer of ink is placed on the surface and the process is repeated until the desired amount of prints has been pulled.

When the prints are dry, the students sign and edition the prints. The prints are editioned as 1/3; 2/3 and 3/3 under the image on the left side. Their signature is on the right side. Giving the etching a title is optional and appears in the middle. The print is mounted and handed in for assessment.

The students are familiar with the printing process of intaglio, even though intaglio incorporates a large body of different processes pertaining to plate production. For instance, some intaglio processes rely on the use of acid while there are other processes like scratching into a plate using force to create an image. What most of the intaglio processes have in common is the printing stage. All intaglio prints (regardless of the process) are generated by inking up the plate, removing the excess ink and using an etching press to generate a print.

As mentioned before, when students are familiar with a process, the process becomes more student-driven. The potential meaning-making can be hindered as it is difficult to envision the print when working on the copper-plate. Composition and good quality printing are only made known as soon as the students generate their first print. Due to students being familiar with the printing process, they are also aware of what constitutes a good print. Thus, an interesting observation is made when the first print is produced, namely the print's modality markers serve as an assessment tool. The modality markers serve as a vital semiotic resource that the students draw on to ensure successful meaning-making. A more descriptive account of modality markers as assessment tool is discussed in chapter five.

4.2. Multimodal communication within the printmaking studio

Bernstein argued that there is “no pedagogy without pedagogic communication” (Davis, 2004:45). Communication is dynamic and relies on a repertoire of modes to bring meaning across. The metalanguage proposed here reflects the use of multiple modes for making meaning. The tenets of multimodality are omnipresent throughout each stage of the intaglio hardground process. As mentioned before, meaning-making occurs through an ensemble of modes. For instance, my observation notes foreground speech, writing, drawing, visual, gestural and audial modes during the printmaking process.

The intaglio hardground workshop is introduced by a brief that is placed on the notice board, one week prior to the starting date. The brief states the theme and provides a synopsis of the hardground process in writing. The brief comes across as abstract. As a single mode, it does not facilitate the meaning process. When asked how students regarded the brief at first sight, most answers were in line with the following: “I was confused and intimidated as I did not know what hardground was and I did not know the process.” [Yolandie, 2013/0726]

Multimodality is not a static state of communication. A wide range of modes are used to communicate and represent the brief in class.

After the lecturer reads the brief, she explains the process in her own words. She supplements her own words with visual aids that she has been collecting over the years. She is using gesture to describe different concepts. Concentrating on John, I follow his eye movement. He is looking at the lecturer's

hands rather than her mouth while she is speaking. While explaining the process of rolling hardground onto the plate, her hands are imitating that movement. She points to the artefacts that are used to fulfil this process. [Fieldnotes: 2013/07/23]

This moment of explanation is supported by a variety of modes. The transformation between modes is naturalised in the printmaking studio. The lecturer knows that reading the brief or talking about the process is not sufficient to ensure that students make meaning. In many ways, the knowledge associated with intaglio has become tacit knowledge for the lecturer. Gamble (2004:1) explored the nature of tacit knowledge and describes it as "...a difficult concept to grasp and an even more difficult concept to represent in words". Words become a constraint due to the lack of meaning. However, the lecturer relies on a physical demonstration to bring meaning across. Different modes have different kind of affordances for meaning-making and can be internally (tacit) or externally utilised. A study by Cook and Tanenhaus (2009) shows that the use of gesture, when explaining a task is helpful in the sense that the listener/viewer is able to make more sense of the task that is being explained. The gesture is a representation of a previously performed action and not the action itself.

Speakers' hand gestures, but not their speech, reflected properties of the particular objects and the actions that they had previously used to solve the task. (Cook and Tanenhaus, 2009)

During the preparation process, the students work together and help one another practically, or through explaining what needs to be done next. They engage in a variety of modes to represent their interpretation of the preparation practices. However, a shift in the social interaction of the learning environment occurs during the etching process. The students' meaning-making becomes more internalised as meaning is explicated through the visual mode, embodied gesture, gaze and occasional speech.

I notice the class is very quiet. Students are more dispersed, working in their own space and at their own pace. John and James completed their first minute of etching...this process is more internalised than the prepping of the plate. The students are less social and working individually. [Fieldnotes: 2013/07/24]

The external social dynamic has changed during the etching process. Students are engaging in a learning process similar to that of a primary/secondary class, where

they are together as a group but working individually. One reason for this is that the task has changed from straightforward action to more complex action.

Although the modes are used in conjunction with one another, they do not have equal weighting. In other words, a student may rely more on the mode of speech or gesture to make meaning at a particular point in time. In addition, one mode may relay a message more successfully than another mode. This is observed in the shift between writing and drawing. In the preparation process, the mode of writing appeared in the form of a brief. The brief states what the students must draw. During the etching process the written theme is transformed into a drawing. The student is redesigning the concept of flower from written to visual. The brief as artefact is redesigned into a drawing on a metal plate.

During stage three, the printing process becomes prevalent. This changes the social dynamic of the class back to the collective. The group is gathered around a large table where they ink up the plates. Due to previous printmaking workshops they are familiar with this process. In first year, the students work with other forms of intaglio that exclude the use of acid. The inking process for each form of intaglio might have slight differences but the general method is consistent. The inking process points to meaning-making that is internalised. It is tacit and is redesigned through embodiment. In other words, the familiarity with the inking process impacts the students' choice whereby they are able to manipulate the printing process to represent their interest. The plate contains an image, but it represents the hardground process. Once a print is generated onto paper, it automatically becomes a sign that represents the students' interest. Furthermore, this sign is multimodal. The image is represented through line work, tones, colour (albeit black), medium and composition. All these combined semiotic resources are present in the visual mode and have communicative properties which contribute to the students' meaning-making process.

An observation that must be noted is the close relationship that semiotic resources have with one another. There is a material aspect that is closely linked to mode. This is referred to as medium. The vehicle for distributing the print is archival paper, which is a medium. This is one aspect of the overall concept of 'medium' and requires

further exploration in the next section to supplement the metalanguage within the printmaking pedagogy.

4.3. Exploring the materiality of medium

'Medium' is influenced by the field/domain that is being explored. The intaglio hardground process relies on medium and materiality to ensure that the students are engaged in meaning-making practices. Artefacts or medium are either technological artefacts that are operated by hand or recording technology (Kress and van Leeuwen, 2006:217). The technological artefacts operated by hand are mostly present during the production of the print whereas the print is regarded as recording technology.

The materiality of medium has an impact on pedagogic practices. For instance, the institution selects to use Ferric Chloride as opposed to Nitric Acid. Ferric Chloride is less harmful but requires a different type of metal, thus changing the materiality of the plate. Instead of zinc, copper or brass is used. This influences time, as ferric chloride is more time consuming than nitric acid because copper needs a longer etching time. In terms of gains, this material is safer for students to use but in terms of time management, it can be a constraint. The sequence of altering the plate to produce a print is standardised in this environment. The darkest lines/tones on the plate are put down first and the lighter lines/tones are etched towards the end of the etching process.

Modes have materiality which can be physiological or in the form of an artefact (Van Leeuwen, 2005:3). An example of physiological materiality is the vocal cords that produce sound. Sound can also be produced through artefacts. During the process of producing an intaglio print, the students rely on modes to make meaning, but the meaning potential of different modes is subject to constraints. Here follows an example from the fieldnotes I made as technical assistant:

I walk over to where John is sitting and I look at his plate. I warn John that his line-work is robust and needs to be more delicate on the background. He carries on. I return after a while and realise that he does not grasp what I am saying. I ask him to carry on but to listen to the sound that his needle is making when he is drawing on the plate. I ask him if he hears that shrieking sound. He nods. I tell him that he must not produce that sound, if he hears

that sound he knows that he is pressing too hard with the needle on the plate. He understands and starts working more delicately. [Fieldnotes: 2013/07/24]

Here, the mode of speech fell short of fostering understanding with the student. The student relied on sound to ensure that his line-work remained delicate for the rest of the workshop. The sound created by the needle on the plate is context-dependent. This sound cannot be reproduced when a needle is scratched into wood or plastic. The sound that contributed to meaning-making is limited to that specific genre of intaglio and with practice, becomes tacit knowledge. Another example of tacit knowledge can be seen when students become familiar with a process, due to previous experience. This will be made explicit in the next section.

Experiences within the classroom and outside of the classroom impact on the choices students make within the studio to produce the print. These choices and interest that students display cannot be described as universal as they are context-dependent. However, I have argued that a descriptive account is necessary to pinpoint the interest and choices of the students and to present an account of how this interest is operationalised within the studio.

4.4. Choices and interest of the student

Within a multimodal social semiotic framework, the motivated interest of the sign-maker is the source of the selection. The sign-maker chooses from a variety of modes to represent the sign (Kress and van Leeuwen, 2006:7). These choices are “historically, socially and culturally shaped” (Bezemer et al., 2012:6). Printmaking pedagogy is adapted to represent the interest of both the institution and its members. Furthermore, interest is shaped by the constraints and conventions of the institution. Students do work within and around these constraints to represent their interest.

4.4.1. The temporal aspects pertaining to intaglio hardground

Time is important during the hardground process. The sequencing and pace highlight the constraints associated with the intaglio hardground process (as discussed in section 4.1). The sequencing of the hardground intaglio process is chronological – preparing the plate, etching the plate and printing the plate. The manner in which the lecturer chooses to make these stages explicit impacts on the

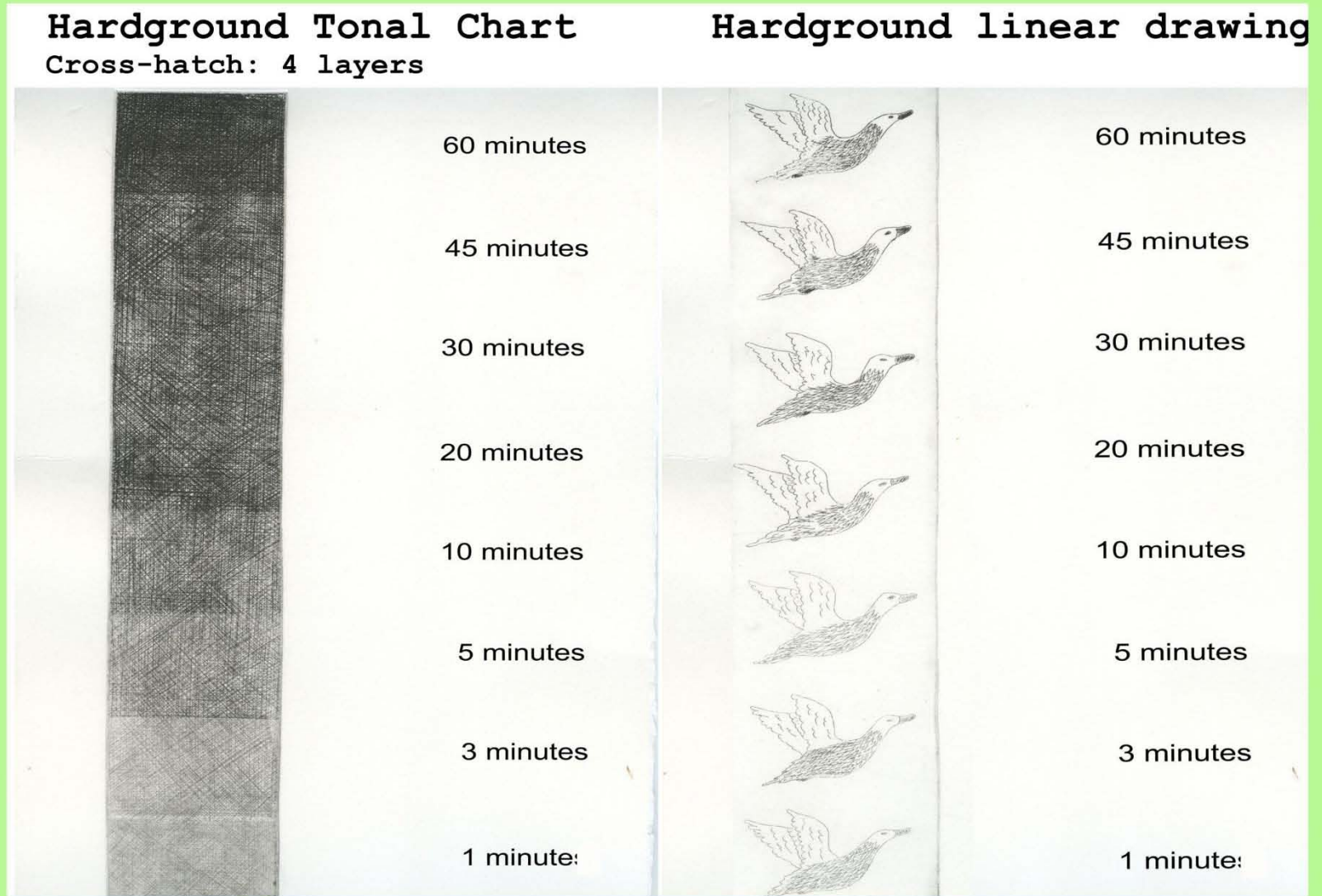
spacing within the classroom. These stages can be demonstrated in a continuous manner with no pause, or each stage can be demonstrated individually, giving students the opportunity to complete the first stage before the next stage is demonstrated. Students display autonomy at different stages, depending whether they are familiar with the process. Thus some stages of the process is student-driven, while the pace of other stages is determined by the lecturer.

The second aspect of time relates to time as a semiotic resource, for example artefacts such as a wall clock and the use of timers on mobile phones. During the etching stage, it is vital to keep physical time when the plate is submerged in the acid. Van Leeuwen (2005:196) refers to this as metronomic time keeping. It also fulfils the criteria relating to what Kress and van Leeuwen (2006) refer to as recording technology. The relation between time, acid and the metal plate represent measured time (Van Leeuwen, 2005). The etching process requires planning and a chart on the wall informs the students of the relation between time and tone (see fig. 4.1)². The plate can be submerged in acid for the duration of sixty minutes. However, this time is staggered and the time that students spend drawing on their plates during each stage is not accounted for in the sixty minute etching process. This unaccounted time is non-metronomic and impacts on the pacing of the student.

Students become timekeepers as they make written notes of the time the plate has spent in the acid. Thus, a second artefact (these written notes) is created which displays both qualities of hand operated as well as recording artefact. This artefact is vital as it provides information about the duration of the plate spent in acid and what tones are etched into the plate. Most students choose to use this artefact to make meaning. There are slight variations in the choice of temporal etching intervals. The choice remains with the students how they want to stagger the time as long as certain criteria in terms of tones are met. This also points to the translation of one medium into another medium. The chart on the wall (see fig. 4.1) at the etching station shows time corresponding with tone. These artefacts demonstrate how time operates as a semiotic resource.

² Due to copyright, the chart that is used in the printmaking studio cannot be displayed. The chart in this thesis is an example that represents tones and linear work.

Fig. 4.1 – The relation between time and tone in hardground etching



Students are expected to use a variety of tones in their etchings. As mentioned above, the manner in which these tones are obtained is temporal in nature. The longer the plate lies in the acid, the deeper the lines will etch. This means it will hold more ink and when the 'inked-up' plate is rolled through the press it will create dark tones. The lighter tones mean that the plate has shallow recesses and holds less ink. There are two implications with temporal tones in hardground. The first implication is that students need to visualise the print in terms of temporal tones. In other words, they need to plan where the sixty minute tones will be on the plate and work through a temporal series that further consist of a forty-five, thirty, twenty, ten, five, three and one minute tones. The second implication is the choice of representing these tones in the image. The student may or may not choose to use all these tones. Before the students can start etching, they display interest through planning and conceptualising their images in terms of line-work, tone and composition. All three of these elements are time constraints. The choices students make reveal how they work within and around the constraints of time. This is discussed further in chapter five.

4.4.2. The elements of composition

Composition refers to the arrangements of elements to create a balance between form and space. The composition is worked out before the image is transferred onto the plate. The image is drawn in reverse onto the plate to ensure that it is printed as the student intends it to be. The plate provides an embossed border on the archival paper and this embossed border does have an impact on the print. The 'editioning' of the print can also be part of the composition. Below the embossed border, the students include an edition number that is placed on the left and a signature/ name on the right. Giving the print a title is optional and is written in the middle. It is during the initial planning stages that students have choice when choosing and arranging elements for their images to represent their interest. I refer to John (fig. 4.2) and Dominic's (fig. 4.3) prints to bring across this point. This highlights the different choices that John and Dominic made to create their prints. The reason why I compare their prints with one another is because they made use of similar elements but arranged them differently. John chose a portrait format whereas Dominic chose a

landscape format. By comparing John's composition with Dominic's composition one notices that they both use a prominent line that divides the image in two.

John placed the flower on the left side of the image (fig. 4.2). The stem of the flower forms a diagonal line and thereby provides a large negative space. The composition's format is portrait. The focal point is slightly off centre to the left and it is emphasised by a mass of cross-hatch lines that form an irregular shape. This is considered the axis of the flower and creates an asymmetrical balance on the main part of the flower. The dark area in the background reflects John's meaning-making practices. He realized that he must not remove too much ground as this impacts on the dark tones of the images. The greyish background represents his understanding of the process prior to that realization. He had hoped to create a black background to ensure cohesion.

The representational aspect of fig. 4.3 is conceptual due to the stylized forms, making the flower appear almost abstract. Dominic placed the flower off centre towards the left. The leaves underneath the flower create strong diagonal lines which complement the stylised nature of the image. Cohesion is created through the grouping of line-work and form. Form is overt in this composition as each form is created individually through the line-work. The leaves underneath the flower create a strong diagonal line that divides the image into two areas: the bottom towards the right and the top towards the left. These negative spaces are well balanced, thereby creating a dynamic composition. The eye is able to move around the picture plane and rest in areas, only to be drawn back to the focal area. This image is cohesive due to the diagonal and sensitive line-work, form and range of tonal values.

These two compositions represent choices made by the sign-maker. The image that John chose is represented in a portrait format. There is an understanding regarding composition and it is validated through the choice of format. By turning this image (fig. 4.2) into a landscape format, the image appears more abstract. This is also



Fig. 4.2 – 'Botanical' by John



Fig. 4.3 – 'Botanical' by Dominic

evident in Dominic's choice of format. The landscape format compliments the image (see fig. 4.3). Another factor that impacts on composition is tone. John's background is a combination of grey and black tones while Dominic's background is left white. The images would have been less effective if John decided to leave his background white and Dominic created a tonal background. The use of visual elements in these two prints thus provides a useful lens on the multiplicity of meaning-making when seen from a social semiotic perspective.

The pedagogic implications are that these prints are assessed and a value judgement is cast on the print. The choice of layout and arrangement of elements affect the composition and the image is evaluated accordingly. The success of the focal point relies on tonal contrast between the foreground and background. Although the lecturer attempts to be as explicit as possible throughout the workshop, it does not always resonate with the novice printmaker. The student only understands once a print is generated from the plate; then they can self-assess the print as we will see in the next section.

4.4.3. The modality markers as indicators of student interest

The intaglio hardground print has modality markers that give it credibility, including colour saturation, texture, tone, line, framing and embossing. By looking at the imprint of the plate on paper (embossing), one is able to distinguish a hardground intaglio print from a screen-print or wood-cut. Each one of these techniques has its own "imprint of reality" (Jewitt and Oyama, 2001:151). The visual mode of an intaglio print provides cues that a particular technique was followed to obtain certain features. Table 1 (Chapter 3) reveals how modality markers can serve as an assessment tool in pedagogic printmaking practices and this is observable in the printing stage when students 'ink-up' their plates and proceed to wipe off the excess ink. Wiping the plate has an impact on the print. Too much wiping, known as over-wiping produces a grey print, whereas too little wiping, known as under-wiping produces black smudges on the image. However, this is not the only factor that represents students' interest. The choice for handing in a print for evaluation relies on a holistic view of the modality markers. The manner in which each student chooses to reflect different aspects of meaning is realised by relying on the different functions of the modality markers (Jewitt and Oyama, 2001:153).

Yolandie's print (fig. 4.4) shows how she over-wiped the right hand top corner and under-wiped the right hand bottom corner. The top of the leaf appears as a ghost image whereas the bottom has small patches of smudge-like areas. The tell-tale sign of an under-wiped plate is the absence of line. The texture of a hardground etching is linear because the drawing is made up of a combination of directional lines. Yolandie created texture through choosing directional line. Each leaf has its own directional set of lines that ensure each leaf is distinct from another leaf. Yolandie is aware that she over-wiped her plate, however she chose to hand in this print due to the other modality markers being strongly represented. Yolandie grasps the modality markers to a large extent as she was able to deliver a tonal print. Furthermore, the framing relating to the embossed imprint is satisfactory as it reveals clean edges and Yolandie felt that the other prints were not as successful.

Dominic's print (fig. 4.3) also shows how he chose to use the direction of line to create texture. The texture is fine and delicate in comparison to Yolandie's print (fig. 4.4) where the texture appears more robust. Dominic's print shows a range of tones. The delicate lines are lighter in tone and the black areas are created by cross-hatching lines. To create black tone during hardground etching is a time-consuming practice because a layer of line is drawn and then submerged in acid before another layer can be added. The black areas show that these tones were in the acid for sixty minutes while the light petals were submerged in the acid for about ten minutes. Dominic's interest is strongly represented by the line-work, selective contrast and variety of tone within the image.

The difference in interest between the two students is represented by two different processes. Dominic used the etching process to ensure a range of tones, whereas Yolandie relied on her experience and tacit knowledge pertaining to wiping to produce the best possible print for evaluation. Dominic entered the second year program at this institution with no prior experience in intaglio printmaking. He had limited experience in wiping an intaglio plate and therefore tacit knowledge relating to the wiping process has not manifested with Dominic.

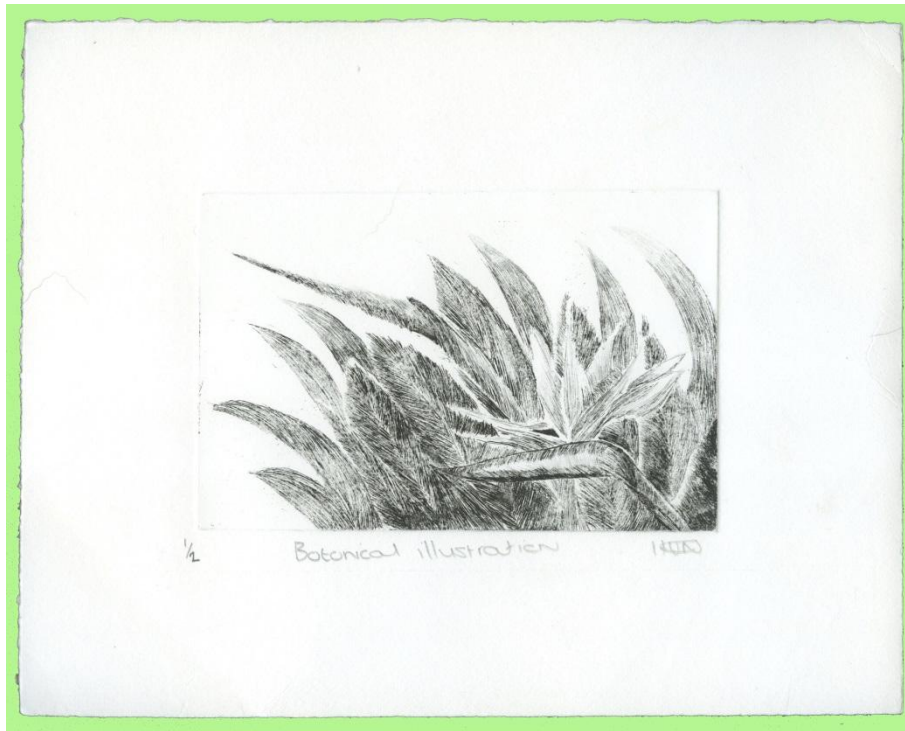


Fig. 4.4 – ‘Botanical illustration’ by Yolandie

4.4.4. Potential site of display

During this workshop the students’ handed their prints in for evaluation. The midyear exhibition provided a new context for Dominic to display his print as it was part of an exhibition. However, it was Andile that envisioned an alternative site of display for the hardground prints. During an interview, Andile mentioned a potential site of display which highlights his interest.

What I can say about the process is I enjoyed it a lot and I had fun with it... Ja, it gave a lot of ideas because I also had this idea of doing what you may call it – wishing cards (and all that stuff). So, by doing this process, I feel I have another way of doing similar things, using that same process. Meaning, I can do something unique.
[Interview between Andile and myself. Recorded on 2013/07/26]

Although Andile is talking about the materiality of the print by mentioning “wishing cards”, it points to the fact that Andile is considering the context of hardground printmaking in relation to his future. Site of display includes what is being displayed (the print), how it is being displayed (on a wall) and why it is being displayed (the purpose). However, Andile wants to display a hardground etching as a greeting card for the purpose of someone expressing a thought, thereby changing the site of

display from the exclusivity of the gallery to the everyday exchange of greeting cards. In other words, he wants to relocate the social interaction (Jones, 2009:114).

4.5. A Summary of the argument for metalanguage

A social semiotic metalanguage pertaining to intaglio hardground emphasises the use of semiotic resources. However, it is not possible to explore these resources without examining the constraints and conventions within printmaking pedagogy. Each stage of the intaglio hardground process reveals a repertoire of modes and highlights the notion that modes are never used in isolation, although one mode may be more prevalent at a particular instant than another. The metalanguage relating to medium and materiality is context specific and contributes to the intaglio process of hardground. However, the medium and materiality of printmaking artefacts fall under the nomenclature that Kress and van Leeuwen (2006) have identified as technological tools. The metalanguage is represented in the choices and the interest of the student. The interest and choices that students display are influenced by the context, in this case producing a sign in the form of a hardground print. The social aspect in terms of pedagogical practices is always present when students are involved in the act of making meaning.

Chapter 5: The interest of the student: Working within and around the constraints of the hard-ground process

This chapter intends to operationalize the theoretical discussion of the previous chapter by presenting three accounts of students' interest. The constraints and conventions of the printmaking studio have an impact on the choices that students make. The following constraints are emphasised in this chapter. The first constraint is time, followed by the implicit nature of the etching process. The third constraint is the defined relation between the plate and the image. Although the constraints and conventions are unique to this institution, the students differ in their approach because their interest motivates their choices.

There are three parts to this chapter. Firstly, the research focusses on the use of time-management and planning as a semiotic resource to represent Sarah's interest. The second focus is around James and John's first and second prints. They used modality markers as an assessment tool to produce prints that featured more contrast. The third focus is on Andile who produced a range of prints with different outcomes. Each case reveals the choices made by the novice printmaker to represent their interest.

5.1. Temporal aspects that represent interest

Time as a semiotic resource has implications for both pedagogy and intaglio hardground. From a pedagogic perspective, the pace can vary, depending on who or what is prompting the intaglio process. Due to the limited time of the workshop, the students are under pressure to finish in time. As mentioned before, the sequence relating to the process is deterministic. When a particular stage of the process is familiar to the students, they work independently. Time is not only measured to determine the psychological nature within the studio but manifests itself through artefacts that assist the student to physically measure time.

Sarah's interest reflects an individual analysis relating to time as semiotic resource. At the time of the workshop, Sarah was experiencing personal conflicts that related to her studies. This prevented her from attending the demonstrations relating to the

preparation and etching processes. She returned on the third day. The technical assistant (me) provided a quick introduction and demonstration of the hardground process. I demonstrated and explained the three stages collectively to Sarah. Thus, control remained with me during this initial introduction. After the introduction, Sarah displayed autonomy by taking control of the situation through planning her image in advance, in terms of tones. Sarah's astute selection and planning of the process, impacted on her pace.

The limitation of time impacted on Sarah's choices. Her concern about meeting the deadline motivated her interest. After the initial planning, Sarah and I conversed around the use of time and tone. She planned a simple image and decided to use only three tones namely, a sixty minute tone, a thirty minute tone and a five minute tone. Sarah used time as a semiotic resource to represent her interest. Her interest was motivated by the constraint of self-imposed time. Sarah had to catch up with the rest of her peers and worked around the constraint of time by producing fewer tones, through decreasing temporal units relating to the etching process. Another factor that impacted on Sarah's interest is that she has previous experience regarding the printing process.

Sarah's tacit comprehension relating to the time it would take to ink her plate and produce prints provided her with reassurance that she was able to complete the task. Here sequencing and pacing played a vital role. Students were aware that they were expected to print at one o'clock on the last day of the workshop. Sarah organised her time and was able to prepare and etch the plate in order to be ready by one o'clock. She worked around the constraints of time to represent her interest. Sarah's original plan to work with only three tones was altered when she realised that she did have the time to produce a ten minute tone (see fig. 5.1). The stems on the far right and the far left are a combination of five and ten minute tones. Sarah's grasp of time is significant, because she realized after the thirty minute tone was etched that there will be time to produce another tone. It would not have sufficed if Sarah only realized after completing the five minute tone that there was time for a darker tone because the tones are built up in increments of time within a specific order.



Fig. 5.1 – 'Untitled' by Sarah

Due to Sarah's selective choice of tones, the pace between her and the rest of the class stabilises as Sarah catches up with them. Except for Dominic, the group is familiar with the printing process which in turn is a student centred process due to the lack of intervention by the lecturer and the technical assistant. The pacing during the printing stage is driven by the students.

By applying van Leeuwen's (2005:196) notions pertaining to time, namely measured time, metronomic and non-metronomic time, it is possible to record Sarah's use of time as a semiotic resource. The chart (see fig.4.1) and Sarah's written notes are the artefacts that represent measured time. The intaglio hardground process determines the measured time. The etching times are constant, for example there are eight tones that are represented by measured time. These tones include a sixty minute, forty minute, thirty minute, twenty minute, ten minute, five minute, three minute and a one minute tone. The sixty minute tone represents the darkest tone while the one minute tone represents the lightest tone. Sarah originally planned to use only three tones to ensure she hands in her etching on time. However, Sarah was able to alter the plan by adding a fourth tone. The measured times that Sarah relied on are as

follows: The first etching is thirty minutes, the second etching is twenty minutes, the third and fourth etchings are both five minutes. In succession, these times add up to sixty minute tones, thirty minute tones, ten and five minute tones.

Creating an image onto a plate is characterised by two events, namely drawing on the plate and etching the plate in acid. This is a continuous process until the desired tones are achieved. Etching the plate in acid is relevant to metronomic time while drawing on the plate is related to non-metronomic time. In order to keep time during the etching stage, Sarah relies on a mobile phone. The mobile phone is a technological tool that assists with precise time-keeping (van Leeuwen, 2005:196). Every three minutes the mobile phone's alarm goes off and this reminds Sarah to gently shake the plate. This is known as agitating the acid and prevents the acid from settling on the surface which can cause 'foul-biting'. The drawing stage is non-metronomic. It is not possible to follow a specific time as the length of drawing varies due to intricacy of line-work and producing dark tones. Another reason for regarding each drawing stage as non-metronomic, is that it is a personal process as the interest of the student is captured in the choice of image and line-work they want to represent.

The measured time is deterministic and students are required to follow the temporal process in order to produce a hardground print. Sarah selectively chose which tones to reflect in her print. This selective choice of tones saved Sarah time. Sarah recognised this aspect of measured time and by applying only four tones she was able to finish in time and produce a hardground etching. The metronomic notion highlights the use of artefacts and how technology is brought into the classroom to assist students with the process. The student's choice of image determines the non-metronomic notion. The fact that Sarah chose a simple linear design had a considerable impact on the unaccounted time spent on drawing.

5.2. Working within and around the constraints posed by the modality markers

This section compares two sets of prints. The first set belongs to James (fig. 5.2) and consists of the first print he produced and one of his 'editioned' prints. The second set belongs to John (fig. 5.3) and also consists of his first print and one of his 'editioned' prints. I provide a brief description of the two images and refer to the

observation notes regarding their meaning-making process. The point is to show how the interest of the student can vary, due to the students own conventions hindering an implicit process and how the use of semiotic resources assist them to work around these constraints.

Both James and John's prints are figurative representations of lilies. James chose a landscape format and the flower (see fig. 5.2) is placed in the centre of the image, surrounded by leaves. The image consists mostly of line-work and the background (negative space) is made up of long and short cross-hatch lines. James opted to use the full range of tones. As mentioned before, tones are created by placing the plate in the acid at different time increments. However, line-work can also influence the intensity of a tone. This is noticeable on the flower's petals. The thick black lines are due to four/five layers of line-work while the broad lines that are formed next to the broad black line consist of two layers of cross-hatch. This layering of line-work has an impact on the intensity of the tone.

John's flower (see fig. 5.3) is placed on the left side of the image and is placed within a portrait format. John's image also consists of line work and the background appears to be made up of patches of dense cross-hatch areas alternated with areas of horizontal hatching. John's lily (positive form) consists of contour lines and short cross-hatch lines and retains more texture than the background. John's flower consists of contour lines and the dark areas are built up through the combination of fine cross-hatch lines.

The first prints that James and John generated consist mostly of grey tone with small black areas between the leaves and within the flower's axis. Both backgrounds represent grey tone. The prints that they presented for evaluation are much darker. As mentioned in chapter four, the modality markers can also be used as a self-assessment tool within the printmaking studio. The first prints generated by John and James were self-evaluated in terms of colour and tonal value. In other words, the criteria related to the intaglio print can now be "directly observed" (Gamble, 2004:198). Thus, James and John relied on visualisation (by examining the modality markers of the artefact) and embodiment (the printing process which they were familiar with) to alter the colour and tonality of the prints.

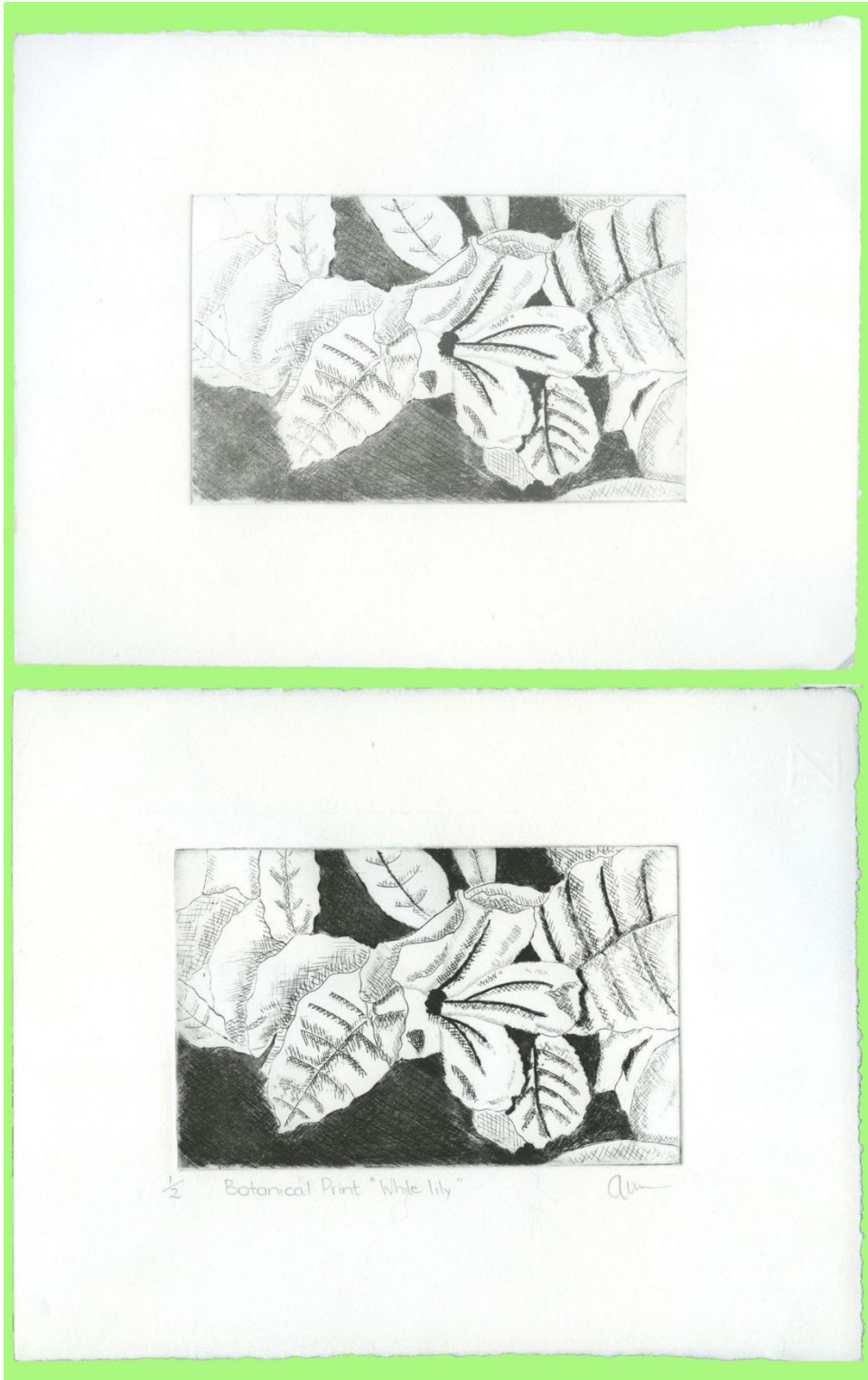


Fig. 5.2 – Variants between prints: Botanical Print 'White Lily' by James



Fig. 5.3 – Variants between Botanical prints by John.

Line-work can also contribute to the density of a tone. Unfortunately, James and John misconstrued the use of line-work through removing too much of the hardground deposit on the plate. During the etching process, both students deduced that black is obtained by scratching hard into the plate.

John and James thought that the more ground they remove, the deeper the acid will etch into the plate. The opposite is true. The acid needs to bite into something otherwise it just lies on top of the metal and corrodes it without etching deep lines. Liquid hardground was painted back onto the plate. This is very expensive but thanks to the generosity of the printmaking lecturer they were able to salvage their plates. [Fieldnotes: 2013/07/25]

This extract reveals the complexity of the intaglio hardground process. Due to the implicit nature of the etching process, meanings are reinterpreted and applied accordingly. Trial and error is important and it is not always acknowledged as a learning opportunity. These two students provided a learning opportunity for everyone in the workshop as 'what not to do'. Unfortunately, the deterministic outcome of hardground made its mark. The potential of the plate in terms of dark tones is not realised in full. Both students admitted that they wanted pitch black

backgrounds and due to the initial excessive removal of ground, the 'damage' was already done.

James and John drew on common knowledge to create dark tones. In other words, they relied on their own conventions to create dark tones. The convention of drawing dictates that one presses harder with the drawing object or create a myriad of line-work to build up tone. Hardground intaglio relies on the acid to deepen line-work or to darken tone. There is a fine line between building up line-work and still leaving enough hardground on the plate to ensure that the acid 'bites'. The use of pressure when drawing on a plate is not conducive to intaglio hardground. When too much ground is removed from the plate, the acid has no substance to adhere to, which in turn hinders the etching process. This gives insight to the implicit nature of the etching process. James and John relied on the conventions of drawing to create tone which became a constraint for both of them during the etching process.

Two lifelines were provided to the students to enable meaning-making. The first lifeline was provided by the lecturer. This learning opportunity showed that alternative methods are possible in order to solve problems. The second lifeline was realised by the students after the first print was produced and the modality markers became explicit. The inking and printing stage is internalised by most of the students because of their previous learning experiences in this regard. James and John embody tacit knowledge. The irony of this statement is not lost due to tacit knowledge being the catalyst that created the constraint in the first place and that they now relied on tacit knowledge yet again to rectify the situation. By examining the print and recognising the modality markers, they both opted to do selective wiping. The interest of the students is demonstrated by working around the constraints of hardground. They focussed on selected areas and wiped off less ink by lessening the pressure of their hands. In this case both wiped their backgrounds very gently, removing less ink than that of the foreground. Although the backgrounds were not intense black there is a vast difference between the first and the second print.

There is a strong relation between the modality markers and interest, depending on the context. Within the pedagogic context, the modality markers are a valuable assessment tool because students have a visual artefact to draw on, in their pursuit of the 'ideal' print. In addition, modality markers highlight the credibility and type of

print. Thus, modality markers can serve as semiotic resources within the workplace or gallery setting. Now that the students are familiar with intaglio hardground prints, they will know whether it is real or a digital reproduction. This is what Kress and van Leeuwen (2006) refer to when they argue that modality markers have truth value within a particular culture.

5.3. Interest as reflected through medium and materiality

The first print that Andile printed also influenced and motivated him to alter the semiotic resources to represent his interest. This is another example of how students work within and around the constraints of hardground intaglio. Before this discussion around Andile's interest continues, a description of the etchings is warranted. Andile provided three prints for analysis (fig. 5.4). These three prints differ from one another, but indicate the sequence of altering the materiality of the artefact to represent his interest.

All three etchings are printed from the same plate and therefore have the same image. The etchings represent a rose. All three etchings are printed in black ink on off-white archival paper. The rose (positive form) is rendered with contour lines and dark areas are built up through cross-hatching. The line-work is dynamic due to the variations in length and tone. The rose is more or less the same tone throughout the three etchings. Regarding the composition, the rosebud forms the focal point and is situated on the left side of the image. The framing of the image provides an embossed portrait format and the size of the embossed image is 100mm x 150mm. The archival paper is 200mm x 250mm, which provides a 5cm border around the embossed image.

The first etching portrays a background (negative space) consisting of a combination of long strokes in hatching and cross-hatching. The line-work in the background has similar tonal value to that of the rose. The external area surrounding the rose is highlighted. This is achieved by fading the background as it borders the rose. The fading is done through two methods. The first is to draw finer lines as one approaches the positive space (rose) and leaving the plate in the acid for less time. The second way of achieving the highlighted area is to draw the lines further apart. The highlighted area provides definition between the background and foreground.

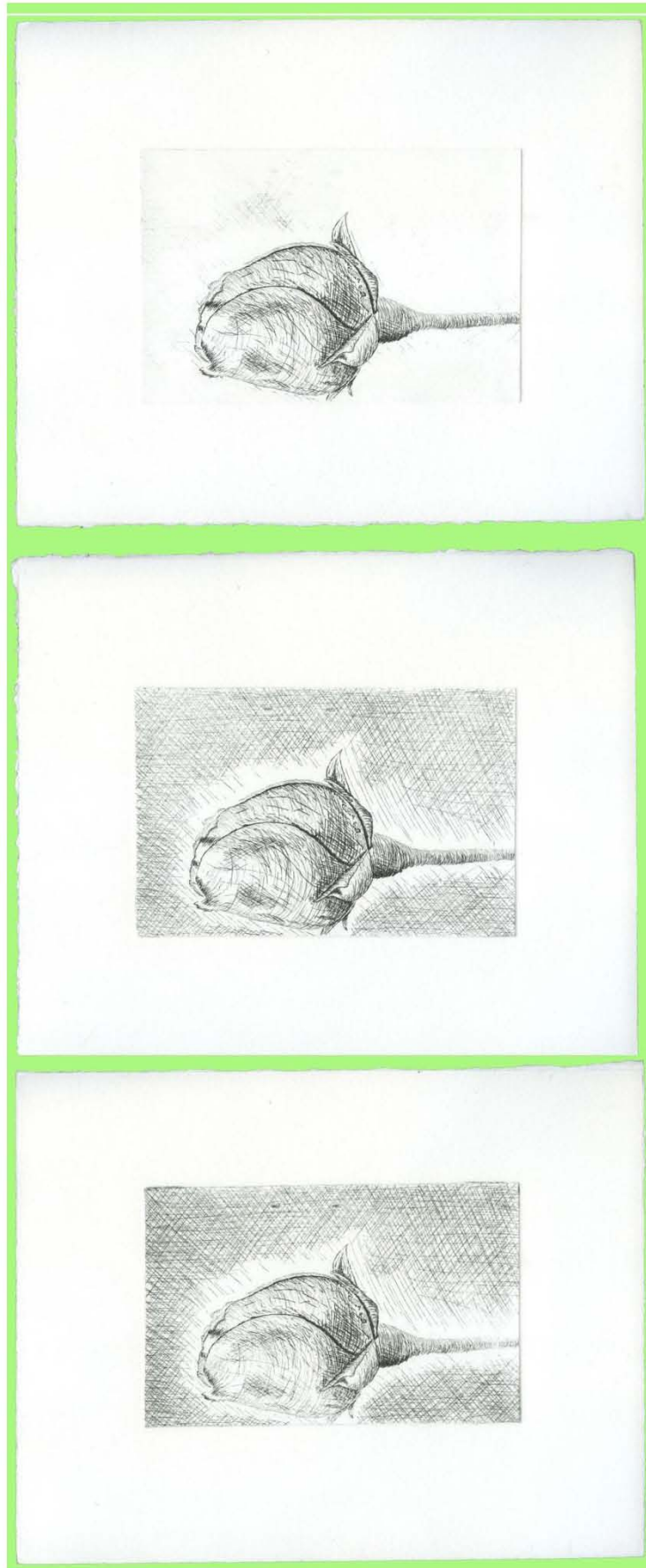


Fig. 5.4 – A sequence of altering an image by Andile

Although the image of the rose is consistent throughout the etchings, there is an altering of compositional elements throughout the etchings. The first etching's background shares the same tonal value as the rose and therefore the rose is not as prominent in the image. Andile did consider the focal point to some degree during the drawing/etching stage and this is evident in the highlighted area around the rose. The second print is similar to the first print, however there is a tonal difference between the background and the rose. This was achieved by over-wiping the background. He practised selective wiping. The third print's background is almost completely white with some cross-hatched ghost-lines to the left of the rosebud. The manner in which Andile achieved this needs further examination.

Andile was not happy with the selective wiping because he felt that it did not provide enough contrast between the background and the foreground. He went back to the studio the next day, although by this time the workshop had concluded. Andile 'inked-up' a plate and selectively wiped the background until he felt that enough ink was removed. Then he took a cloth and soaked it with turpentine and wiped away the rest of the background. He printed an etching with an almost clear background. He was satisfied with the result and printed another print which he handed in for evaluation.

The social practices of the student and the institution need some examination. Andile was feeling ill for most of the workshop and only attended a few demonstrations. Due to him not being there all the time, he missed vital messages that were communicated to the students. Due to lack of time, Andile changed the use of semiotic resources to represent his ideals. Although he understands that there is a difference between the sixty minute and five minute tone, he did not apply it. He rendered the whole image as one tone, not planning beforehand which areas will represent what tone. The students have a choice to collaborate with the technical assistant in planning the image in terms of temporal tones. Some students also opt to consult the technical assistant with regards to composition, however Andile did not. This shows the assumption that the lecturer/technical assistant is a communicative semiotic resource at all times during the process as false. Although a collaborative spirit is encouraged in the studio, the students do not always feel free to approach the lecturer to discuss the process. This highlights the power aspects within a pedagogic environment. When he was at the studio, he asked his peers for help.

Andile missed the one o'clock deadline and printed during lunch-time the next day. Thus, Andile printed without the presence of the lecturer or technical assistant and felt free to experiment/play. Initially, Andile relied on the materiality of the 'inked-up' plate by excessively wiping the background. He was only able to remove a certain amount of excess ink, using the traditional artefact (tissue paper). He was not pleased with the outcome as it did not represent his interest. He experimented with turpentine to remove the excess ink from the plate. This particular method of wiping the plate (using turpentine) is discouraged at this institution. The use of the turpentine allowed Andile to alter the materiality of the 'inked-up' plate which in turn altered the image of the print. The final print is the prototype that best represents Andile's interest. He alters the composition by removing the line-work in the background. This places high emphasis on the rose (see fig. 5.4). He chose the third print to represent his interest and handed it in for evaluation.

Andile relied on semiotic resources to work around the constraints of materiality (Gürşimşek, 2012). In this case, the etched image on the plate. Like James and John, he was not able to grasp the etching process due to lack of visual aids. However, due to the familiarity with the printing process, he was able to rely on the first and second print as assessment criteria to represent his interest. Andile was also not able to explicate the compositional criteria during the etching process. In other words, the contrast and emphasis which are but two aspects of the compositional criteria were not achieved during the etching process. This is due to the abstract nature of the of the intaglio process. Although composition was discussed during the planning stage of the image, Andile was not present during this stage and therefore omitted compositional elements of contrast and emphasis. Only when the first print is produced, Andile is able to exploit the materiality of the plate further (even after the etching process was complete). This led Andile to play with the artefacts within the printmaking studio. Turpentine is mostly used as a cleaning agent and not for artistic purposes relating to intaglio hardground at this institution, although turpentine is used by professional artists to explore different techniques. Through experimenting, Andile temporarily altered the materiality of the etched plate to permanently alter the image on the print. This case also relates back to Andrew's (2014) argument, that students should be given the time and space to explore and play.

5.4. A summary relating to the students' interest

The accounts described in this chapter highlight the interest of students by exploring how they use semiotic resources to work around and within the constraints of intaglio and the printmaking classroom. These constraints can be due to particular procedural features, internal/external social factors that impact on time as well as the fluctuation during meaning-making practices. Although these constraints are challenging, students knowingly and unknowingly rely on semiotic resources to further their interest. The dominant semiotic resources that feature in this chapter are time, modality markers, and medium and materiality. The students use these resources to work around and within the constraints of intaglio hardground.

The students that are discussed in this chapter recognised the constraints of the process and the context of the process. The constraints may differ for each student but the context remains similar. Sarah recognised the intricacy of the process and the influences of time, whereas Andile recognised the constraint of the materiality associated with the medium, in this case the etched plate. John and James recognised the constraints of the etching process, albeit too late. However, they tried to compensate during the printing process. The students discussed in this chapter were able to explore their interest by recognising the constraints and utilising the semiotic resources at their disposal.

Chapter 6: Findings and Implications for process-oriented practices

6.1. Overview of the thesis

Multimodal social semiotics offers a unique lens which enables me to answer the questions relating to the semiotic resources that students draw on and the interest that the students' display, during a process-driven discipline that is partial to conventions and constraints. Firstly, a metalanguage was established to explore these resources under four dominant themes namely: constraints and conventions of the hardground intaglio process, multimodal communication, materiality of medium and the interest of the students. The semiotic resources explored include modes, medium, modality markers, temporal aspects, composition and site of display. The nature of the intaglio hardground process is outlined by identifying the conventions and constraints and whether students draw on the semiotic resources to promote their interest.

This thesis emphasises the students' interest and their meaning-making practices during the process of printmaking. The students use modes and other semiotic resources at their disposal to produce signs. They do not produce mere copies or reproductions but engage in transformation of available semiotic resources. Thus the choices that students make have an impact on both how they go about the process of intaglio hardground and producing the final print. The conventions and constraints associated with this institution are socially constructed. The conventions and constraints associated with the intaglio hardground process are mostly due to its deterministic and time consuming nature. This thesis has shown that the students work within and around these constraints and conventions because the students "adapt and transform semiotic resources according to their interest and needs of the time and setting" (van Leeuwen, 2005: 19).

6.2. Findings related to this thesis

The thesis looked at individual students to see what resources they relied on to work within and around the constraints of the intaglio process. In other words, what interest they displayed during the workshop. Although each of these individual students drew on the whole range of available semiotic resources, each case foregrounded a semiotic resource that assisted them in working within and around the constraints of the intaglio process. Sarah foregrounded the temporal aspects relating to the intaglio hardground process, to work around the time constraints that were imposed on her due to personal circumstances outside the scope of the printmaking studio. James and John's interest was hindered by the fact that the act of drawing on paper and the act of drawing on a hardground plate entail two different types of meaning-making. The novelty of the hardground etching process was counterbalanced by the familiarity of the printing process. The modality markers of the intaglio print also served as an assessment tool and Andile, James and John relied on tacit meaning-making practices to work around the constraint of tone and contrast. Andile's interest was realised through altering the materiality of the plate which impacted on the composition of the print. This was achieved by exploring and playing with the available resources at hand. He relied on the materiality of the medium, as well as physical artefacts to work around the constraints of the permanent line-work that is etched into the plate.

The first question was answered by establishing a metalanguage that allowed me to explore the dominant semiotic resources within the printmaking studio. I operationalised the metalanguage by looking at practical examples of how the students navigated throughout the process to produce signs that represented their interest. What stood out in the findings was the fluctuation of the students pace and control within the printmaking studio. This had a direct impact on the students' interest which in turn had an impact on the choice of semiotic resources at the students' disposal. Some stages of the process were student-driven while at other times it was either teacher-driven or dominated by the deterministic nature of the intaglio hardground process. Familiarity of a particular stage was conducive towards a student-driven process which impacted on the pace. The degree of explicitness of the etching process also impacted on the choice of semiotic resources. As soon as

the etching process became explicit via the first print, the modality markers served as a vital semiotic resource that enabled students to represent their interest.

6.3. Implications for process-driven disciplines

Although the implications of this research are specifically related to printmaking pedagogy and in particular hardground intaglio at a particular institution, there are opportunities to explore the implications outside of this particular context. The two main implications entail a metalanguage unique to intaglio hardground and the second implication entails student interest. From a multimodal social semiotic perspective, the students can develop interest through exploring semiotic resources. The pedagogic practices of the institution also contribute in developing the students' interest. However, pedagogic practices relating to process-driven disciplines differ. The implications outside the scope of this research are briefly explored here.

6.3.1. Utilising a metalanguage of intaglio hardground

A descriptive and theorised context dependent metalanguage presides within a multimodal social semiotic framework (Unsworth, 2006). However, this metalanguage can only be useful if there is an understanding of this framework. A question relating to the usefulness of this metalanguage to practitioners is thus open to discussion. I contend that a metalanguage is useful because it provides concepts that can make the practitioner aware of the social implications within a pedagogic environment. It also provides focus and allows students to expand their repertoire of interest, even when they themselves do not use the metalanguage associated with the intaglio hardground process. Another point to be made is that there are several other printmaking processes within the field of printmaking. Intaglio hardground is one method of many other types of intaglio processes. The metalanguage associated with intaglio hardground has opened the door for expansion into other printmaking processes. This and other process-driven disciplines can add to the vast scope related to multimodal social semiotics by exploring the social nature of the process and its impact on the participants. Thus, to explore the pedagogic context and content of other process-driven disciplines can be made possible by developing an appropriate metalanguage.

6.3.2. Inculcating the artist's sensibility

I argue for the importance of valuing the process. I refer back to Andrew's (2014) notion of the "artist's sensibility". This notion encompasses an artist that investigates, improvises, reflects, plays, takes risks and shows awareness of the resources available to him/her. This is in contrast to the orthodox view surrounding education which can come across as "narrow and stultifying" (Andrew, 2014). The implication is that students recognise these constraints and use a variety of resources to counterbalance them (Jewitt and Oyama, 2001). In other words, instilling this notion of "artist's sensibility" has to start in the pedagogic environment. It is important for students to explore their own autonomy within the studio. The lecturer can discern when overt teaching is desirable and step aside, as students familiarise themselves with a particular process. This allows the students to develop interest and explore the resources at their disposal, which in turn fosters a student-driven environment. This can be linked to Andrew's argument relating to students getting opportunities to explore different choices that can impact on their interest.

6.3.3. Implications for assessment

Kress and van Leeuwen (1996, 2006) argue that the signs students produce are not replicas or copies of existing signs. In this context, signs are a representation of the process in the form of a hardground print. Assessment fosters the idea of producing a copy of the 'ideal', which hinders students from exploring and playing. Currently, students tend to produce for the sake of assessment because the curriculum fosters a culture of outcome driven products. The disregard for process is visible when only the end product counts towards assessment. The implication of reproduction rather than representation does not foster significant meaning-making practices. I argue for a curriculum that incorporates exploration through exploring the potential of the semiotic resources, a student can "gain ownership over certain types of visual resources" (Bjorkvall and Engblom, 2010:290). To recall the vernacular: "If one knows the rules one can break the rules." The students at this institution may not be completely familiar with the conventions (rules) related to intaglio hardground, but they exploited the available semiotic resources to alter the rules. Through exploiting the semiotic resources, they were able to develop and represent their interest. This is in line with Jewitt and Oyama's (2001) argument that on a micro level, social

semiotics is concerned with who sets the rules, and if and how these rules can be manipulated to serve one's interest. This thesis' intention is to reassure students that making mistakes, and exploring and playing with the medium is also part of meaning-making practices. This places the pedagogical emphasis back on the process rather than the outcome.

Bibliography

Aiello, G. 2006. Theoretical Advance in Critical Visual Analysis: Perception, Ideology, Mythologies and Social Semiotics. In *Journal of Visual Literacy*. 26 (2) 89-102.

Albers, P. and Harste, J.C. 2007. The Arts, New Literacies and Multimodality. In *English Education*, 40 (1) 6-20.

Archer, A. 2008. Cultural studies meets academic literacies: exploring students' resources through symbolic objects. *Teaching in Higher Education*. 13 (4) 383 – 394.

Archer, A. and Stent, S. 2011. Red socks and purple rain: the political uses of colour in late apartheid South Africa. In *Visual Communication*. 10 (2) 115 – 128.

Andrew, D. 2014. An aesthetic language for teaching and learning: multimodality and contemporary art practice. In A. Archer and D. Newfield (eds) *Multimodal approaches to research and pedagogy: Recognition, resources and access*. London and New York: Routledge. 174-191.

Bearne, E. 2003. Rethinking literacy: Communication, representation and text. In *Reading, literacy and language*. 98-103.

Bernstein, B. 2000. *The pedagogic device. Pedagogy, symbolic control and identity* (revised edition). Lanham: Rowman and Littlefield Publishers Inc.

Bernstein, B. 1990. *The structuring of pedagogic discourse: Class, codes and control*. Volume IV. London and New York: Routledge.

Bezemer, J. and Kress, G. 2008. Writing in multimodal texts. A social semiotic account of designs for learning. In *Written Communication*. 25 (2) 166 – 195.

Bezemer, J., Diamantopoulou, S., Jewitt, C., Kress, G, and Mavers, D. 2012. Using a Social Semiotic Approach to Multimodality: Researching Learning in Schools, Museums and Hospitals. In *National Centre for Research Methods Publication*. 01/12. 1-14.

Björkqvall, A. 2009. Practical function and meaning: a case study of Ikea tables. In C. Jewitt (Ed) *The Routledge Handbook of Multimodal Analysis*. Oxon: Routledge. 242-253.

Björkqvall, A and Engblom, C. 2010. Young children's exploration of semiotic resources during unofficial computer activities in the classroom. In *Early Childhood Literacy*. 10 (3) 271-293.

Björkqvall, A. and Karlsson, A.-M. 2011. The materiality of discourses and the semiotics of materials. A social perspective on the meaning potentials of written texts and furniture. In *Semiotica*. 187 (1) 141–165.

Bourdieu, P. 1991. *Language and Symbolic Power*. Cambridge, Massachusetts: Harvard University Press.

Chandler, D. 2007. *Semiotics: The Basics*. Oxon: Routledge.

Christie, F. 2007. Ongoing dialogue: Functional linguistic and Bernsteinian sociological perspectives on education in F. Christie and J.R. Martin (eds) *Language, Knowledge and Pedagogy: Functional Linguistic and Sociological perspectives*. London: Continuum.

Cohen, L., Manion, L. and Morrison, K. 2007. *Research methods in Education*. London and New York: Routledge.

Cook, S. W., and Tanenhaus, M. K. 2009. Embodied communication: Speakers' gestures affect listeners' actions. In *Cognition*, 113 (1) 98-104.

D'Arcy Hughes, A. and Vernon-Morris, H. (Eds) 2008. *The Printmaking Bible*. San Francisco: Chronicle Books.

Davis, Z. 2004. The debt to pleasure: The subject and knowledge in pedagogic discourse. In J. Muller, B. Davis and A. Morais (Eds). *Reading Bernstein, Researching Bernstein*. London and New York: RoutledgeFalmer. 44-57.

Della Porta, D. and Keating, M. (Eds.) 2008. *Approaches and methodologies in social sciences: A pluralist perspective*. Cambridge: Cambridge University Press.

Duncam, P. 2004. Visual Culture isn't just visual: Multiliteracies, Multimodality and Meaning. In *Studies in Art Education*, 45. 252-264.

Eggins, S. 2004. *An introduction to Systemic Functional Linguistics*. London: Continuum.

Emery, L. (ed.), 2002. *Teaching Art in a Postmodern World: theories, teacher reflections and interpretive frameworks*. Altona (Australia): Common Ground Publisher.

Evans, J., Morgan, C. and Tsatsaroni, A. 2006. Discursive positioning and emotion in school mathematics practices. In *Educational Studies in Mathematics*. 63. 209-226.

Fairclough, N. 1992. A Social Theory of Discourse. In *Discourse and Social Change*. Cambridge: Cambridge University Press. 62-100.

Freire, P. 1970. *Pedagogy of the Oppressed*. Ch. 2. Translated by M. Bergman Ramos. London: Penguin Books. 52-67.

- Gamble, J. 2001. Modelling the Invisible: the pedagogy of craft apprenticeship. *Studies in Continuing Education*. 23 (2) 185-200.
- Gamble, J. 2004. *Tacit Knowledge in Craft Pedagogy: A Sociological Approach*. Phd. Thesis. University of Cape Town. South Africa.
- Gamble, J. 2014. 'Approaching the sacred': directionality in the relation between curriculum and knowledge structure. In *British Journal of Sociology of Education*. 35 (1) 56-72.
- Gürşimşek, R.A. 2012. *Multimodal Semiotics and Collaborative Design: A social semiotic approach to the co-production of virtual places and artefacts in Second Life*. Phd Thesis. Roskilde University. Denmark.
- Halliday, M.A.K. 1993. Towards a Language-Based Theory of Learning. In *Linguistics and Education*. 5. 93-116.
- Halliday, M.A.K. 2007. Context of English. Webster, J.J. (Ed) *Language and Education*. London & New York: Continuum. 306-326.
- Halliday, M.A.K. 2009. Language as Social Semiotic: Towards a general sociolinguistic theory. In J.J. Webster (Ed) *Language and Education*. London and New York: Continuum.
- Halliday, M.A.K. and Hasan, R. 1989. *Language, context, and text: Aspects of language in a social-semiotic perspective*. Burwood: Deakin University.
- Hasan, R. 2004. The concept of semiotic mediation: Perspectives from Bernstein's sociology in J. Muller, B. Davies and A. Morais (Eds) *Reading Bernstein, Researching Bernstein*. London and New York: RoutledgeFalmer. 30-43
- Hoadley, U. 2006. Analysing pedagogy: The problem of framing. In *Journal of Education*. 40. 15-34.
- Hobbs, P and Rankin, E. (Eds) 1997. *Printmaking in a transforming South Africa*. Cape Town and Johannesburg: David Phillip.
- Hodge, R. and Kress, G. 1988. *Social Semiotics*. New York: Cornell University Press.
- Iedema, R.A.M. 2003. Multimodality, resemiotization: extending the analysis of discourse as multi-semiotic practice. In *Visual Communication*. 2 (1) 29-57.
- Ivinson, G. 2012. The body and pedagogy: beyond absent, moving bodies in pedagogic practice, In *British Journal of Sociology of Education*. 33 (4) 489-506.
- Jewitt, C. 2008. *The visual in learning and creativity: A review of the literature*. A report for Creative Partnership. Arts Council of England.

Jewitt, C. (Ed) 2009. *The Routledge Handbook of Multimodal Analysis*. Oxon: Oxford University Press.

Jewitt, C. and Oyama, R. 2001. Visual Meaning: a Social Semiotic Approach. In T. van Leeuwen and C. Jewitt (Eds) *A Handbook of Visual Analysis*. London: SAGE. 134-156.

Jones, R.H. 2009. Technology and sites of display. In C. Jewitt (Ed) *The Routledge Handbook of Multimodal Analysis*. Oxon: Routledge. 114-126.

Keane, W. 2003. Semiotics and the social analysis of material things. In *Language and Communication*. 23. 409–425.

Kress, G. 2000. Design and transformation: new theories of meaning. In B. Cope and M. Kalantzis (Eds) *Multiliteracies: Literacy learning and the design of social futures*. London: Routledge.

Kress, G. 2009. What is mode? In C. Jewitt (Ed) *The Routledge Handbook of Multimodal Analysis*. Oxon: Routledge. 54-67.

Kress, G. 2010. *Multimodality: A social semiotic approach to contemporary communication*. Oxon: Routledge.

Kress, G. and van Leeuwen, T. 1996 *Reading Images: The Grammar of Visual Design*. First Edition. Oxon: Routledge.

Kress, G. and Van Leeuwen, T. 2001. *Multimodal Discourse. The Modes and Media of Contemporary Communication*. London: Arnold.

Kress, G. and Van Leeuwen, T. 2002. Colour as a semiotic mode: Notes for a grammar of colour. In *Visual Communication*. 1 (3) 343 – 368.

Kress, G. and van Leeuwen, T. 2006. *Reading Images: The Grammar of Visual Design*. Second Edition. Oxon: Routledge.

Lave, J. and Wenger, E. 1991. Situated Learning: Legitimate peripheral participation. In J.S. Brown (Ed), *Learning in Doing: Social, Cognitive, and Computational Perspectives*. Cambridge: Cambridge University Press. 29-43, 61-117.

Lindstrand, F. 2008. Interview with Gunther Kress. In *Designs for Learning*. 1(2) 60-71.

Luke, A. 1996. Genres of power? Literacy education and the production of capital. In R. Hasan and G. Williams (eds) *Literacy in Society*. Harlow Essex: Addison Wesley Longman. 308-338.

Meggs, P.B. and Purvis, A.W. 2006. *Meggs' History of Graphic Design*. New Jersey: John Wiley & Sons, Inc.

Mick, D.G. 1986. Consumer research and Semiotics: Exploring the Morphology of Signs, Symbols and Significance. In *Journal of Consumer Research*. 13 (2) 196-213.

Mills, K.A. 2009. Multiliteracies: Interrogating competing discourses. In *Language and Education*. 23 (2) 103-116.

Mills, K.A. 2011. *The Multiliteracies Classroom*. Bristol: Multilingual Matters.

Morais, A.M. 2002. Basil Bernstein at the Micro Level of the Classroom. *British Journal of Sociology of Education*. 23. 559-569.

Morais, A., Fontinhas, F. and Neves, S. 1992. Recognition and Realisation Rules in Acquiring School Science: The Contribution of Pedagogy and Social Background of Students. In *British Journal of Sociology of Education*, 13 (2) 247-270.

Moore, R. 2013. *Basil Bernstein: The thinker and the field*. Oxon: Routledge.

Newfield, D. 2011. Multimodality and children's participation in classrooms: Instances of research. In *Perspectives in Education*, 29 (1) 27-35.

Newfield, D., Andrew, D., Stein, P and Maungedzo, R. 2003. No Number Can Describe How Good It Was: Assessment issues in the multimodal classroom, Assessment. In *Education: Principles, Policy and Practice*, 10 (1) 61-8.

New London Group.1996. A Pedagogy of Multiliteracies: Designing Social Futures. In *Harvard Educational Review*, 66 (1) 60-92.

Rose, D. 2006. Towards a reading based theory of teaching. 33rd International Systemic Functional Congress. Sao Paulo: Brazil. 36-77.

Salaam, S. 2012. A multimodal social semiotic approach to jewellery design pedagogy. Unpublished Master's Thesis. University of Cape Town.

Singh, P. 2002. Pedagogising knowledge: Bernstein's theory of the pedagogic device. In *British Journal of Sociology of Education*. 23 (4) 571-582.

Sporre, D.J. 1989. *A History of the Arts: Prehistory to Post-Modernism*. London: Bloomsbury Books.

Stein, P. 2000. Rethinking Resources in the ESL Classroom: Rethinking Resources: Multimodal Pedagogies in the ESL. In *TESOL Quarterly*. 34 (2) 333-336.

Tala, A. 2009. *Installations and Experimental Printmaking*. London: A & C Black Publishers Ltd.

Thompson, G. 2001. Interview with MAK Halliday, Cardiff, July 1998. *D.E.L.T.A.* 17(1) 131-153.

Tyler, W. 2004. Silent, Invisible, Total: Pedagogic discourse and the age of information. In J. Muller, B. Davis and A. Morais (Eds). *Reading Bernstein, Researching Bernstein*. London and New York: RoutledgeFalmer. 15-29.

Unsworth, L. 2006. Towards a metalanguage for multiliteracies education: Describing the meaning-making resources of language-image interaction. In *English Teaching: Practice and Critique*, 5 (1) 55-76.

Van Leeuwen, T. 2005. *Introducing Social Semiotics*. Oxon: Routledge.