Chapter 2
Sensing the Art Object

Abstract Having outlined the scope and terms of reference for this book in chapter one, in the second chapter of my essay I briefly review the work of Rosalind Krauss and Paul Crowther. Both of these scholars have addressed a similar series of questions and subject matter in their research, namely, both have written about how we perceive and understand three-dimensional art. In reviewing Crowther and Krauss' published work I attempt to illustrate the different perspectives each has taken in their research in this area. Krauss has considered the *expanded field* in which modernist three-dimensional artwork resides and of which it is an intimate part. She offers a Klein Group model to account for the structural composition of the three-dimensional artwork. Crowther on the other hand addresses the ontological nature of abstract three-dimensional art. He proposes eight distinct ontological elements in his theoretical depiction of this content domain. Both of these approaches are extremely germane to my research and I use the characteristics of Crowther and Krauss' research to set the scene for my own theorizing on this subject in the form of a structural mereological/ontological account, which I propose and discuss in subsequent chapters.

Keywords Rosalind Krauss · Paul Crowther · Klein group · Expanded field · Mereology · Ontology · Abstract art · Visual perception

2.1 Introduction

In this second chapter, I provide details of the work of two philosophers, each of whom has taken a distinctive approach in their attempts to better understand the act of perceiving in general and more specifically, they have written on how we perceive works of art. The two scholars whose work I consider are, Rosalind Krauss

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and Paul Crowther.[1] I could have made an argument for the selection of other authors to review. However both of the chosen writers have conducted research and out of their enquiries they have each developed a coherent model for the art perceptual process: my aim is also to develop such a model. As such this scholarship lends itself to being reviewed in my writing and forming a starting point in my model's development. I therefore briefly present a review of writing by Krauss and Crowther in order to set the scene for my own prognostications upon the experiential structure of perception as this applies to our understanding of three-dimensional abstract art.

Discussing and evaluating art whilst trying to bring greater levels of understanding and meaning to those who are looking at works of art is a task that many art critics and art theorists attempt to do in their writing. The process of art criticism has an ancient pedigree and has been practiced by philosophers and others from many different eras including such luminaries as Plato and Saint Augustine. However, it was not until the eighteenth century that art criticism emerged as a profession.[2] Art critics may also attempt to achieve a coherent balanced and reasonable critique of a given work. These endeavours often seek recourse to placing an artwork within a social, cultural, historical, economic or other context. Indeed, the writing of academic and professional theorist forms a tapestry of text that offers an exemplary understanding of the process of historical art creation.[3]

There have been many statements made about the role of the art critic and what critics should attempt to achieve in their writing and whether or not they are successful in meeting their aims. Typically, the art critic does not approach the artwork from a perspective of hands-on practice but rather they meet the art object or event as the master of art theory and of art history. They may impart passion in their writing about art by bringing their verve together with an understanding of technique and a wider sense of the art scene. Furthermore, the comparison of contemporary art works with older art enables the critic to proffer analytical rather than judgemental statements. However, the art critic can also be understood as part of the art-system (a system embedded within a broader social context) along with, other individuals, groups and institutions, such as: other artists, gallery owners and museum curators. Art critics can be identified as being that part of the art-system that bestows authenticity upon a piece of artwork: It can be claimed that it is the

[1]The two authors have both produced a great deal of writing that is relevant to the current essay and which I could have included in my writing. However, my choice will be extremely focused upon the topic of this book: abstract three-dimensional fine art. Therefore, I will concentrate exclusively upon the selected texts of: Krauss (1979, 1986) and Crowther (2007).

[2]It is not part of the remit of the present book to consider the history and practice of art criticism. However, other authors have performed these tasks such as: Feldman (1994) and Houston (2012).

[3]This is nowhere better illustrated than in Harrison and Woods three texts that together present important art writing that covers the era of 1648 up until 2000 (the three books each take one historical era: 1648–1815 (Harrison et al. 2001) 1815–1900 (Harrison et al. 1998) and 1900–2000 (Harrison and Wood 2002).

critic that makes a piece of an artist's work *art* and communicates this authenticity to the embodying social system. If the critic does indeed posses this power, it places him or her in a potentially uncomfortable dialogue with the living artist as the critic can confer aesthetical appreciation upon the artist.

One art critic who exemplifies this role, a role in which the critic communicates authenticity to the broader society, was José Ortega y Gasset (1883–1955). The art genre of modernism, is at the centre of my writing in this book and as an essayist, philosopher and a lover of modernism, Gasset wrote widely about this genre of art and about the broader category of non-representational art. Gasset[4] filled the role of the critic as a person who validates the work of art when he noted how most non-representational art lacked recognizable human form and went on in his essays to attempt to validate and make this new genre of art open to the understanding of the wider public.

2.2 Rosalind Krauss

Rosalind Krauss is an art critic and theorist working at Columbia University. Krauss went Wellesley College and later Harvard University's for her Ph.D. in the Department of Fine Arts. Here she wrote her dissertation on the work of David Smith publishing this as a book entitled Terminal Iron Works. Her relationship to the content of this book is especially pertinent as she is best known for her scholarship on twentieth-century art with particular reference to modernism and minimalism.

An illustration of her relevance is demonstrated in Krauss' writings about artists like: Donald Judd, Jackson Pollock, Giacometti, Rodin, Brancusi, Robert Morris, Cindy Sherman, Sol LeWitt, Richard Serra to name but a few.[5] Krauss has contributed essays to many prestigious journals and was associate editor of Artforum where she has employed the works of scholars not traditionally associated with the arts to inform understanding of modernist art production.[6] As well as writing about art she has also curated a large number art exhibitions at leading museums. Among her academic appointments have been those at: MIT; Princeton; CUNY and Columbia University. Additionally, Krauss has received numerous academic awards and plaudits.

[4]See for example: originally in Spanish as, "*La deshumanización del Arte e Ideas sobre la novela*" (1925) republished in English as, *The Dehumanisation of Art* (1968).

[5]In addition to authoring studies about individual artists, Krauss has also written about broader aspects of art practice, in for instance: Sense and Sensibility: Reflections on Post '60s Sculpture; Grids, You Say; and Sculpture in the Expanded Field.

[6]Examples of such theorists include: Jacques Derrida; Jacques Lacan; Jean-Francois Lyotard; Maurice Mareau-Ponty; Ferdinand de Saussure, and others.

After leaving Artforum Krauss co-founded October where she remains editor to this day: both journals provide a critical and theoretical outlook upon artwork from the same period covered in this book. Krauss' association with October is of particular significance as when it was developed, October placed the notions of the French post-structuralist philosophers and theorists central within its ethos.[7] Krauss has authored a number of articles and books that are of particular pertinence to my research, most notably, her collection of essays from 1985: *The Originality of the Avant-Garde and Other Modernist Myths*.

I also take an approach that is similar to Krauss as I draw upon many dimensions in the development of my model where she drew upon the historical and theoretical dimensions of art along with aspects of the artworks' content.[8] Furthermore, in her writing Krauss has addressed features that may be associated with the appreciation of modernist art such as the absence of apparent form, imitation, lampoon and mimicry and unconscious visual elements that may be associated with an artwork. Krauss' interpretations attempt to decode temporary and fleeting components of vision-based and corporal sensory experience whilst linguistically accounting for these.

As an art academic, Rosalind Krauss has proffered understandings of art through reference to external entities and phenomena. One of the constructs that Krauss has found recourse to on multiple occasions is a theoretical model that was developed in structuralist theory called the Klein group. Krauss's writing that employed the Klein group addresses both two-dimensional artwork in, *The Optical Unconscious* (Krauss 1994)[9] and three-dimensional art, originally in her article, *Structure in the Expanded Field* (Krauss 1979) which she then elaborates upon in her more recent chapter, *Fat Chance* (2010b). In the sections that follow I will review Krauss's writing in these main documents. In this writing Krauss addresses two related concepts from within modernist art, the: expanded field in sculpture; the figure–ground relationship from painting and drawing (concepts that I introduced in the previous chapter). I will now briefly articulate the content of these two concepts as Krauss understood these and adapted them within her Klein groups, as this will assist understanding of subsequent passages.

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[7]Writers in October included Roland Barthes and Michel Foucault and within the journal Krauss published scholarly articles on: deconstructionist theory; post-structuralist art theory; postmodernism; psychoanalysis; Feminism.

[8]Krauss' concern is broader than mine in that she has considered the emergence of photography as fine art as this developed at the same time and in a similar way to modernist painting. Within this context, Krauss also concentrates on the role of various aspects of fine art that act as signs to the work's location and significance in a social context.

[9]I devoted considerable time considering Krauss' understanding of the two-dimensional work of art in my earlier book (Hackett 2016). In this current text I will only briefly mention Krauss' theorizing as this applies to two-dimensional art-space as this enables me to introduce my writing on abstract three-dimensional art. The reader interested in two-dimensional forms of abstract art is guided to my earlier book.

		MEDIUM		
Person (x) perceives the abstract:		{painting}	artwork, in terms of its:	
		{drawing}		
		{other }		
FIGURE / GROUND		*NOT FIGURE / NOT-GROUND*		
{figure }	along with its:	{not figure }		qualities,
{ground}		{not ground}		
		RANGE		
as these structure perception of the artwork:		{less }	coherent.	
		{to }		
		{more}		

Fig. 2.1 Mapping sentence for Krauss' model for the perception of two-dimensional abstract art

As I progress through this book I will develop a series of mapping sentences for specific types of artwork. I proffer a mapping sentence below as a statement of the components of Krauss' model for two-dimensional art (a form of ontological account if you will). As this chapter progresses I will both expand understanding about her writing on this subject and transition into the subject matter of this book, three-dimensional abstract art, as Krauss wrote on this subject. Ontologies are concerned with the basics of existence and I use the term ontology as a specification of the basic units involved in the perception of art. Mapping sentences are ontological devices that I have used in earlier research as templates that have enabled greater understanding of our experiences of abstract art: I use mapping sentences as ontologies in order to guide my research into the content domain of art experience.[10]

Of the mapping sentences I have developed the one that is most pertinent to this current research is the mapping sentence I originated to qualitatively and philosophically explore painting and drawing that is non-literal or non-figurative in form (see, Hackett 2016).[11] In facet theory research, mapping sentences clearly specify the important components of an area of research along with the range over which observations or analyses will be made. In Fig. 2.1 I propose a mapping sentence for Krauss' Klein group for perceiving Two-dimensional abstract art. The mapping sentence focusses upon attempting to answer the question, how do we perceive this form of art image? It attempts to offer an answer by comprehensively and exhaustively specifying the elements of an abstract painting, drawing, etc., that an

[10]To attempt to develop knowledge in regard to how we understand the making and experiencing of artworks I have produced mapping sentences that have focussed upon abstract painting, art criticism and art education.

[11]I developed this mapping sentence through considering how I could bring these different mapping sentences together in a useful and valid manner.

artist may manipulate when creating the work and which the person perceiving the artwork may employ in their appreciation.

To briefly recap, *Figure–ground* is an explanatory term from within two-dimensional art theory in which the subject matter of a traditional painting or drawing is identified as the figure and the backdrop to the work as its ground. Typically, in traditional art the figure is just that, the figure of a person. However, the figure may be identified in a broader sense as an animal, a plant, a vase, a car, a train, a house, a lake and even as a geometric shape or other form that constitutes the foreground focus of an artwork. The ground is self-explanatory: it is the background or the supporting image (or neutrality) 'behind' a figure. The dynamic between figure and ground is of concern to all forms of two-dimensional art but this concern assumed an enormity with Modernist and other non-representational forms of art. The coming to prominence of issues associated with the figure–ground relationship in Modernist art was due to their often being no easily identifiable figure in an artwork of this genre.

Perhaps the most extreme example of the questioning of figure–ground relationships undertaken by an artist from this genre of painting is that by Ives Klein. In many of his paintings the canvasses are painted all over with an essentially undifferentiated single colour. This raises the question of what 'it' is a painting of, what exactly are we looking at and what is the figure, what is the ground, and do these terms even apply in this context? I will return to figure–ground relationships at many times during the course of this essay. Krauss used a Klein Group to model her understanding of two-dimensional art and she employed this theoretical structure to depict the relationship of figure to ground in abstract art. In the next section of this chapter, I introduce readers to the concepts inherent in the Klein group.

2.2.1 The Klein Group

Krauss drew inspiration for using a structuralist/structural model to depict the experiences associated with viewing art from the geometric structure developed in the late nineteenth century by Felix Klein called the Klein Group. Krauss states how through using the Klein Group she explicates the process of figure–ground perception and thus achieves understanding of the perception of modernist art by referencing understanding to the figure and ground relationships that are present in a piece of abstract art. Before I continue to elaborate upon Krauss' claims in respect to the utility of the Klein group in modelling experiences of abstract art, it is useful to have a fundamental understanding of the Klein Group itself. The Klein group, originates from within mathematics.[12] A description of the Klein group is that it is a: *graphical depiction of the cross-product arrangement of n variables each with z*

[12]As a mathematical concept the Klein group requires the understanding of complex mathematical terms, which Kraus does not describe or expand upon in her usage of the model.

components. In Krauss' model there are 2 variables each with 2 components and she arranges these pictorially within a Cayley table[13] which she terms the Klein Group.[14]

The Klein group exists under a variety of names each of which incorporates a subtle variation. For example, the Klein group is also known as the semiotic square or rectangle, the Greimas square or rectangle and the Klein four-group. The two-by-two chi square table is another not too distant relation. All of these 'squares' are tools that are used to diagrammatically represent the relationships between variables, semiotic signs, etc. Krauss places great emphasis on the structure and explanatory power of the Klein group and I will attempt to elucidate this influence through briefly considering these "squares". I commence by presenting the Greimas or semiotic square, which was developed from Aristotle's square of opposition by Algirdas Greimas in 1966 (Greimas 1984). Greimas originated his semiotic square in order to analyse relationships between semiotic signs in a way that would reveal meaning.

The fundamental idea behind the Greimas square is to extend an ontological system by classify a concept by oppositing polar opposites. For example: girl–boy, happy–sad. Taking the example of the oppositional concepts of boy and girl, these are labelled S1 and S2 respectively and two other concepts are then entered into the square as ∼S1 and ∼S2. These are contradictions respectively of S1 and S2 and are thus not-girl and not-boy. A series of relationships therefore exists between the four concepts that may be written as follows:

The original opposition: S1 and S2 (girl and boy).

Contradictions: S1 and ∼S1, S2 and ∼S2 (girl and not-girl, boy and not-boy).
Complimentarity: S1 and ∼S2, S2 and ∼S1 (girl and not-boy, boy and not-girl).

Arising out of the relationships within the semiotic square the following compound concepts include the following:

S1 and S2 (girl and boy = hermaphrodite).
Neither S1 or S2 (neither girl or boy = asexual).

Thus, the Greimas square may be summarized as being formed through the relationship between the opposition of two contrary terms along an axis 'S'. In this binary construction S1 is an assertion or positive construct whilst S2 is the opposing form of this construct. A second bi-polar opposition is present in the square formed along a separate axis '∼S'. Here ∼S1 and ∼S2 are respectively the negations of S1 and S2. ∼S1 is termed the complex term, and ∼S2 the neutral term. In the arrangement of these 4 terms in the square format each element is connected along each axis with its difference as defined by the content of the square and where the square represents an assembly of logical possibilities.

[13]The eponymous Cayley Table, developed by Arthur Cayley, is a depiction of a finite group of variables arranging in a square table that shows all possible products of the elements of the group.

[14]Kraus' Klein Group four model is the simplest format of presentation of group elements.

In practice it has been found that attempting to fit terms to the Greimas square is often not a simple task but is one that can provoke deeper thinking about the concept that is under enquiry; this is most definitely part of the function that Krauss sees the Klein group as fulfilling. There are other more complex interpretations and understandings present in the Greimas square that I will not delve into here as the above description serves to explain the basics of the square at a rudimentary level. The above description is also adequate to enable an appreciation of how Rosalind employed her, analogously structured Klein group.

The use of negative expressions to make a point is common place outside of the square structures noted above. For example, litotes are understatements that are figures of speech used to achieve rhetorical ends. The usual way litotes are formatted is as a double negative in which a meaning, pleasure for example, is not expressed but rather a negative phrased statement is negated. For instance: 'this is not unpleasant'. The deliberate emphasis of the understatement, including the use of intonation, is employed in a litote to make a point.[15] However, it is at least interesting to note that because of their imprecion double negative statements are weaker than simple positive statements. An example will illustrate this. If I state that *It's not the case that I am not ill* or I state *I am ill*, the former statement is weaker than the latter. This is because the latter requires the proof of my illness, whereas the former necessitates a proof that my being ill would not be contradictory to my current state. Moreover, the double negation is more open to confusion and misinterpretation.

I mentioned earlier that Rosalind Krauss has written extensively about the nature of figure–ground relationships in two-dimensional fine-artworks and that she has developed a graphical Klein group model to account for figure–ground perception. Krauss draws her Klein group model as a square "Hasse diagram"[16] and as with all instances of this graphic words are written at each corner to define the content-space captured by the diagram. Following the logic for the Gremais square the words Krauss placed at each corner were: ground; figure; not-figure; not-ground.[17] The model as proposed by Krauss systematically presents a limited number of pole-pairings each of which Krauss associates with a given resolution within artistic practices.[18]

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[15]The use of double negation also occurs in propositional logic, where double negative terms may be added without changing a propositions meaning. A biconditional statement is an equivalence relation as on any occasion in which "not, not A" ($\neg\neg A$) occurs in a well-formed formula, under classical logic double negation may be replaced with the simple positive term "A" without altering the truth or meaning of the well formed formula.

[16]At many points during this section of this book I use information on Hasse diagrams, partial ordering analysis, etc., taken and adapted from Guttman (1991).

[17]What Krauss means by these terms is as follows: Ground = a perspectival lattice; figure = perception; not-figure = reflection, frame; not-ground = field as figure, retinal surface.

[18]I interviewed Professor Krauss to explore her figure-ground understanding of the grid. She emphasized the importance in formulating her thoughts of post-modern philosophy and especially Levi-Strauss's essay on myth and she noted how myth is central to several Modernist painters. In the interview she stated her belief that the figure–ground/not figure–not ground binary distinction is an essential combination that "takes" the visual field "down to the bare bones". She acknowledged Mitchell's (1995) criticisms of her ideas regarding the "silence" that is present in a

Krauss draws lines with two-way arrowheads around the perimeter between the four elements and two similar lines are drawn within the square to connect these four poles. In an exclusive, orthogonal and serially ordered manner, the perimeter embodies figure versus ground relations and along with the internal dimensions (that allow for context and active, motivated perception) provides a complete or total account, according to Krauss, for all possible element relationships. Krauss claims that we perceive the visual field as figure and ground, but experience it holistically.[19] In slightly greater detail, the border of this diagram holds perceptual terms in mutual opposition (figure versus ground, etc.). Going around the square's perimeter it repeats the same binary oppositions, providing all possible figure–ground distinctions through a series of ordered transformations. However, the central crossover axes are mirrors of the same thing and the same as Structuralism's double negatives. These 'non' poles are the less absolute statements of fact within the system. However, Krauss claims that it is the complexity of the diagonal opposition that allows for the role of context and active, motivated perception. Modernism rejects the secondary role of ground as support for the figure in favour of the simultaneous perception of both. The field specifies its figure within a given context, shown by the central axes. Thus, Krauss says that the ground in Modernist painting may be used by the artist only as 'figure transformed', the 'not ground' has come to the works surface and is in a state of perfect consonance with the figure—the work takes in ground as figure.

Thus, Krauss maps the universe of visual perception through the distinction between figure–ground through holding the polar opposites of figure–ground constant within a four-pole mirror inversion, as a square bound together by a system of double-negatives and logic. By using this model, Krauss finds a way of understanding modernist logic, releasing the energy contained within their rationale: For her, the model contains an infinitely usable schema for understanding. Krauss describes the Klein group model as containing the following elements: ground = a

(Footnote 18 continued)

grid, a criticism with which I concur. She also said that her work was influenced by Fred Jameson's book "The Political Unconscious". She concluded by providing references to her more recent articles, work and thoughts.

[19]I provide greater detail about Krauss' Klein Group and figure–ground relationship in relationship with two-dimensional abstract art in Hackett (2016). The conversion of information we gather through our senses into thoughts seems important in Krauss' model. Krauss sees vision to be the ground whereas figure she claims to be constructed cognitively outside of ground through an active, motivated process. Through being conceptually stringent her Klein group, she states, offers an account all the associations between the concepts located at the poles of her diagram. Moreover, she claims that the Klein group makes visually apparent the rational construction of visual perception through showing on the upper and lower axes the differences between the two different forms of visual perception. She states that the upper axis embodies the theoretical difference between figure and ground and the lower axis questions figure/ground in Modernist artwork, not-figure versus not-ground as empirical (contextual/cognitive) visual experience. However, this appears to be a self-sustaining argument: She asserts that the model is total and rigorous in its statement due to the structure she uses to construct it and then claims its utility in answering the questions from which the model was formed.

perspectival lattice; figure = perception; not-ground = field as figure, retinal surface; not-figure = reflection, frame. Moreover, she says that the Klein group visually depicts the relationships between the terms at the poles and is itself bound by the same logic which completely structures the visual field. The frame explicates visually the dynamic of its logic. It shows the difference between the two different forms of vision in the upper and lower axes. The upper axis is the contrast between figure–ground. The lower is the reflexive questioning of figure–ground present in Modernist artwork. This is active perception, vision within a context, not-figure versus not-ground, vision within cognition: when one is both seeing and perceiving.

The Klein group represents the fundamentals of perception—the figure versus ground absolute and the fuzzier not-figure versus not-ground. The absolute poles allow perception to occur through the allowance of figure–ground separation. Krauss claims the not-figure and not-ground are the group's other poles in this statement of empirical reality which has found its representation in modernist art's character in the use of, "grids, the monochrome, the all-over painting, the color-field, the mise-en-abyme of classical collage, the nests of concentric squares or circles." (Krauss 1994, pp. 14–15). This negates, or at least challenges, figure ground reality through maintaining and questioning it at the same time. Not-ground is that place of empirical visual apprehension and not-figure is where vision is part of the person, is acted upon and incorporated within the body of personal experience, both forms and is formed by the perceptual schema, the endless triangle of Neisser's perceptual cycle. This is the axis that accounts for form, figure–ground.

Krauss attempts to precede the experience of vision by defining the precondition for visual experience as being the structure of the visual field. This structure cannot be the figure–ground itself, or any empirical 'ordering' of this primacy, as, she says, the visual field is the background to objects in our perception. Moreover, the structural qualities of vision, she says, are not behind or afterwards in vision because the figure–ground must be perceived simultaneously and become a form of cognition which must exist beyond the figure–ground distinction. For Krauss, figure is what we perceive as 'pure exteriority' and is differentiated from ground by the perceiver's active labours. The figure is immediately apparent through the viewer's, motivated presence and active overlaying of the retinal images he or she perceives.[20]

If Krauss' categories of figure, ground, not-figure, not-ground, adequately describe modernist art then the Klein group model, through its conceptually rigorous and exclusive account, explains the relations between the terms of its four poles. Krauss concludes that the model, through its finite pairings generates a predictable and fixed number of artistic practices. The model is absolute as is the art it accounts for. The model allows the questioning of modernist logic, the supposed completeness of visual experience, the optical logic of mainstream Modernism.

[20]When the frame acts as a figure, it exists through a subtractive serial logic, as outside and inside, "… the figure and the frame turning the painting into a map of logical relations and the topology of self containment. Whatever is 'in' the field is there because it is already contained 'by' the field, forecast, as it were, by its limits." (Krauss 1994, pp. 18–19, original emphasis). Such an image, as is the graph itself, is one of immediacy and self-complete enclosure.

In the preceding pages I have devoted some time to the consideration of Krauss' Klein group model of figure–ground relations. The extent of my coverage is for several reasons: Prmarily, it is to illustrate one manner in which a theoretical approach to understanding abstract art has been developed. My intention here is to tender the illustration of Krauss' intricate modelling to set the scene for my equally complex task of depicting the perception and understanding of abstract three-dimensional art. Furthermore, I would argue, that my coverage of Krauss' Klein group demonstrates the paucity of understanding that occurs when a specific aspect of the perception of the art image or object is isolated and proposed to account for the totality of the perceptual process.

In the section below I now turn to Rosalind Krauss' concept of sculpture in the expanded field. In a similar manner to the figure–ground account she proffered for experiencing two-dimensional art, Krauss employs a solitary construct in her attempt to explain and elucidate perception of three-dimensional abstract art.

2.2.2 Sculpture in the Expanded Field

This brings us to the other phrase that Krauss used in her writing, that of the *expanded field*. Krauss employed the terms figure–ground in reference to two-dimensional artworks, whereas she used the phrase, expanded field, exclusively in reference to three-dimensional art, which she offered as a descriptive term in both sculptural and architectural contexts. It appears that Rosalind Krauss originated the phrase, 'sculpture in the expanded field', in 1979 in reaction to the preceding two decades during which time traditional sculpture had been supplemented with other three-dimensional art forms such as: land art; installations; interventions; other performance related works; etc. As the breadth in inclusiveness of the variety regarding three-dimensional artworks increased, the term sculpture as it had traditional been employed and understood became inadequate and essentially lost its meaning and explanatory power. The concept of the expanded field as related to sculpture was vigorously adopted by the art world as this represented a dynamic theory, an inclusive and flexible description of three-dimensional artworks. In her writing Krauss presents a formal defense, explanation and justification for a new broad conceptualization of sculpture in general and site-specific earthworks in particular.

In her essay Sculpture in the Expanded Field the scene is set for understanding this term. Thus, Krauss puts the bounds upon her writing's content as being sculpture broadly conceived to take in the expanded sculpture or earthwork situated within location that includes space within the work. As I noted previously, many 'new' forms of three-dimensional artwork have, since the 1960s and the 1970s, come to be called sculpture. Krauss offers a loose-fitting definition of sculpture, a retrospective account, one that encompassed a great deal of what had come to be thought of as sculpture. Krauss considers the rather restrictive notion that sculpture

as usually understood is traditionally tied to place as monument and Krauss elaborates upon this in her later essay, *Fat Chance* (see below).[21]

In her writing about sculpture, very broadly defined and focusing upon land art, Rosalind Krauss employs diagrammatic representations of her thinking about three-dimensional art.[22] Initially, Krauss develops a simple diagram in which she locates any particular sculpture through its being located in a position being between the two poles of *not landscape* and *not architecture*. Subsequently, Krauss expands upon this elementary linearity. She positions this dimension as the bottom of a square structure (a Klein group) with the top line of the square running between the two pole of *landscape* and *architecture*. The top dimension she names the complex dimension and the lower she esoterically calls the neuter dimension, neuter as she conceives that this neuter dimension represents the binary opposition of negative poles.

The above described model from Krauss was developed by her in her writings during her era of structuralist understandings (see for example, Krauss 2010a) and it appears that she has never completely rejected or negated the notions that she proffered at this time. For instance, in the much later article 'Fat Chance' of 2004 (Krauss 2010b) Krauss still puts forward the Klein group model and suggests that this depiction is still able to account for much art and has the ability to achieve this in an explanatory way that develops comprehension of artwork. In Fat Chance, Krauss comments mainly upon Bruce Nauman's work and the art-historical era of the 1960s. She reflects upon how during this period art occupied a *discursive space*, by which I take her to mean that art was is discourse with a variety of spaces or environments (the social environment, political environment, economic environment, aesthetic environment, etc.), all varieties of environment within which an artwork was surrounded. She further forwards the notion that art is characterized by *pluralism* meaning that art at this time existed in a wide variety of different mediums and also that artists could chose which medium he or she may use for a specific work. To illustrate this point she offers as an example the work of Robert Morris in plywood, stone, felt, bronze and mirrors.

Fifty-years ago Krauss repudiate pluralism in artistic practice. She then argued that the history of art practice did not allow for pluralism and that artists at a given time were bound by that time. In her later essay, Krauss focuses upon a 2001 video installation by Morris, *mapping the studio*, and still proposing a structuralist argument, she continued by asserting how an artist's choice of possible practices, 'were only a function of the history and structural logic of a given form' (Krauss 2010b, p. 22).

[21]In this present section I will speak of the unique aspects of Krauss' initial paper. I leave discussion of her thinking that are similar with what she had to say later in *Fat Chance*, until I discuss this paper.

[22]As I have previously noted, Krauss employs a very similar diagrammatic representations in her expositions of two-dimensional art.

Krauss addressed the work of Bruce Nauman and writing on these works were the subject of an interview conducted by Simon (1989). Krauss notes how during this time Nauman was not only pluralistic in his artistic practice but also took great pride in claiming to be pluralistic. However, Krauss asserts that Nauman's work explored what made various mediums or technical supports unique, or what they were rather than engaging in a productive pluralism. She says that within his work, Nauman connects with and is absorbed by the fundamental nature of a medium: This, she says, is Nauman engaging in asking ontological questions. Sculpture, she says, was engaged in a quest to originate knowledge regarding how the fundamental qualities and attributes of sculptures' parts, and how sculpture as a whole existed. Thus, within structuralism Krauss was attempting to form a mereological account of sculpture[23] which, an account she proposed in, 'Sculpture in the Expanded Field' (Krauss 1979).

In this article Krauss starts by proposing that sculpture has always acted in the role of being a monument and identifying sites in some particular and significant manner; for example, as a location of burial or ceremony. In this guise, the sculptural monument has the semiotic role of demarcation, which takes one of two forms. The monument may achieve its task of signification through being within an architectural site or building or outside in the open-air. An example of a within building monument would be the tomb of the unknown-soldier in Westminster Abbey, London. The Cenotaph in London is an illustration of a similar commemorative construction in an outdoor setting. Continuing, Krauss claims the signified meaning of the constructed structure or monument is linked to its location by the pedestal, architectural support or base upon which it is mounted. The base she says securely fastens a work in a physical location whilst at the same time separating the sculpture from simply being the substance from which it is made.

Krauss reifies her structuralist tendencies in her writing by claiming that when she thought about monuments she was struck by their similarity to a double negative. At this point in Krauss's account, the language that Krauss uses requires a linguistic specialist to interpret.[24] Her description of the perceived double negative is she says formed by bringing together the material givens of a sculpture along with its neutralized dimensions. She qualifies this description of sculpture as not-architecture in combination with not-landscape. My understanding of what Krauss means in the last sentence is that a monument within a building is not-architecture whilst a monument outside a building is not-landscape.

Krauss expands upon the above somewhat rhetorical and tautologous description to include the concepts that form the positive poles of architecture and landscape. Having advanced this description of sculpture within location, Krauss develops a series of four linear dimensions in the format of a square with the positive concepts

[23]As we will see in a moment, Krauss enters into this exploration by proposing a mereological account not only of sculpture but also of two-dimensional artwork.

[24]This was apparent in her work on figure and ground.

of, architecture and landscape, and the negative concepts of not-architecture and not-landscape. Krauss then places one of the terms at each of the corners or poles of this two-dimensional square. In so doing Krauss claims to have formed another Klein group, this time for sculpture that is located within a expanded context. Klein groups, she says, are used within structuralist accounts in order to move beyond a bi-polar linear structure through the introduction of uncertainty by the inclusion of the logical opposites of the original positive bi-polar terms. This four-fold arrangement is, she says, more flexible and comprehensive when considering complex questions about the nature of expanded field sculpture where the four-pole structure provides an air of caution when theorists attempt to define and understanding sculpture. The complexity and flexibility that Krauss claims for the model, achieved in the same way as it is in the figure/ground model, is brought about through the six possible dimensions or bi-polar relationships that are extant within Krauss's Klein group (these dimensions are formed from all of the possible pair-wise combinations of the four poles).

In the 1960s, sculpture possessed the appearance of being laisez-faire in its pluralism and saw the dead and out-dated forms of sculpture transformed into land art and the earth works of artists such as Robert Smithson, the performance art of Yves Klein and Dino Buzzati and Daniel Buren, with Hans Haacke's, and others, institutional critique. Krauss applauds herself for recognizing and defining the limits of sculpture's possibilities in her proposed Klein group. She goes even further to say that an artist's choices are similarly limited and thoroughly accounted for within her Klein group and to support this vainglorious contention she presents artists and their works to exemplify the poles of her model.

Throughout the entirety of my presentation of Rosalind Krauss' Klein group model for understanding the creation and reception of sculpture in the expanded field, it has been immediately apparent that there are many potential inadequacies in her account of the perceptual process. A multitude of fundamental questions arise which cast doubt upon the veracity of her claims and render her Klein group impotent. *Not least of these caveats is the lack of good reason why sculpture should descriptively occupy just four polar positions and why these poles should be simple pair-wise contradictions of each other.* Krauss's position is explained to some extent by the fact that since the time of Krauss' initial writing in which she employed the Klein group (late nineteen seventies and early eighties) more sophisticated explanations and understandings have emerged than the simplistic model described by the structuralist depiction using polar opposites. However, this is not the case for her self-congratulatory review of her own work written in 2010.[25] Furthermore, her model is not the end of the story, as Krauss would have us believe, as I have proposed that it is possible to categorise art that has originated since the advent of

[25]Krauss cites Jameson's writing about postmodernism and says that video came to stand for itself. I assume Krauss singles out Jameson simply for the reason he uses a Klein group in his writing.

Modernism and to do so in such a way that provides us with greater understanding of that art rather than simple double negatives that offer few learning opportunities.[26]

In addition, the question may be asked as to whether Rosalind Krauss' Klein group depiction of perception in reference to three-dimensional abstract art, or sculpture in the expanded field, is little more than a vainglorious expiation on her part? This question draws our consideration to rest upon several issues. For instance, it requires us to question the utility of the use of double negation. Specifically, the question that we delve deeper into Rosalind Krauss' use of the double negative and her comments upon landscape/not-landscape and architecture/not architecture negations in what seems to me to be an inflated manner. Krauss' work also expresses a contentious point of view as perception of perspective has been considered by many to be anything but a time sequential series of rule-governed events (as Krauss sees this). Moreover, time differentials between aspects of perception are of such minute proportions as to suggest they may be experienced simultaneously. Examples of this can be seen in the works of the ancient metaphysicists who spoke about causal powers. However, for them, causation resides in the intimate relationship between what is seen and the person who is doing the seeing. On this understanding, the image causes the viewer to see the form or quantity and quality of an object. From the perspective of perceptual neuroscience, the concept of visual perception in general, and the perception of perspective in particular, may again be seen as requiring an intimate relationship between what is seen and the person doing the seeing.

Neuroscience has identified structures in the brain that selectively respond to aspects of the visual image, such as faces, lines, interacting lines, and many other forms. As a consequence of these, perception of visual perspective does not seem to be adequately explained by the notion of space sequential rules, although there are undoubtedly regularities in the perceptual process that approximate rules, (such as parallax), and which approximate a visual sequence especially when motion is added to the viewer's point of view. Notwithstanding this latter point, I contest that a more thorough and robust account for our understanding of what we see is provided by the amalgamation of perception within a categorical ontology of greater sophistication than the Klein group's simple negation. The last point leads me to review an alternate and more complex theoretical outlook on visual perception, that of Paul Crowther.

[26]In the notes on the book-jacket of Krauss' (2010) review of her art criticism, Perceptual Inventory, it states that the art critic's role is to constantly revise his or her ideas regarding contemporary art; its direction and its significance. These are fine and laudable words, which are not supported by Krauss's later writing. When commenting upon sculpture, Krauss demonstrates little growth in her thoughts over thirty years and is still propounding an overly simplistic model for perception and understanding. It is also somewhat confusing to discover that Rosalind Krauss also wrote about double negatives and sculptural space in her 1997 book *Passages*, in which this phrase was included in the title of the last chapter. However, this writing comes from an earlier era of Krauss' thought and in this text the double negative she speaks about is taken to have an entirely different meaning.

2.3 Paul Crowther

A professor of philosophy, Paul Crowther works at the National University of Ireland Galway and has written on subjects related to philosophy and the history of art. Crowther obtained his doctorate in philosophy at the University of Oxford where he also taught art history. Additionally, he has worked at the University of St Andrew's, the University of Central Lancashire and Jacobs University Bremen in Germany. His main areas of specialisation and expertise are in: metaphysics; visual culture; aesthetics; phenomenology and Kant.

In Defining Art: Creating the Canon (Crowther 2007) Paul Crowther offers a his assessment of the likely merit of an aesthetic orientation in the definition of art and the use of a philosophical approach to justify the values underlying the art canon. He asks questions such as what constitutes art, what is it that enables us to decide that one piece of art has more merit than another and what is it about an artwork that bestows it with value? The institutional definition of art (Dickie 1974, 2000, and for criticisms, support and modifications of the theory see: Bachrach 1977; Fokt 2013; Oppy 1991; Stecker 1986; Wollheim 1987) has provided an alternate answer to these queries from the positing of aesthetic form as an explanation. Crowther's normative model finds its strength through the development of a phenomenological perspective, in which he places emphasis upon the expression of rudimentary perceptual processes through the medium of visual art. Of particular interest to the current research is the fact that Crowther's model addresses abstract and conceptual fine art.

Crowther supports conventional notions and stresses representational or imitational qualities in the definition of art. However, he emphasizes characteristics such as the intangible connection between a piece's artistic worth and associations with the knowledge, imagination and understanding of a piece and its associated art-historical links, links that are typically not readily evident. Through this process, an artwork, he says, may be objectively characterised in terms of links to the canon. The position Crowther takes leads him to be wary of notions of aesthetics as being determinants of artistic value. Crowther also stresses the importance of the concept of style in his thinking about art where he sees the style of an image as being able to decode the artwork's thematic topic. Furthermore, if through historical comparison we find an item to have a style that is *original* then the piece may be accorded to have merit as art.

As the model I will develop is cognitive/perceptual in structure, Crowther's model of what constitutes art is particularly appropriate to the present research as his theory has its roots in cognitive understandings and art appreciative assessments associated with the creation of art works.

In *Defining Art*, *Creating the Canon*: *Artistic Value in an Era of Doubt*, Crowther (2007)

Crowther presents a collected series of essays as a single book in his attempt to fulfil the claims made in title of the book.[27] The chapter of most interest to the content of my book is Chap. 4, which contains Crowther's definition in the form of an ontological structure of how we experience abstract art. The chapter also expands upon his theory for three-dimensional abstract art experience, which he develops out of notions of the fundamental and in-built importance that exists in creating art images. As well as establishing his theoretical stance, in the book Crowther considers many other phenomenological aspects of art.

Crowther's writing addresses what he sees as the way in which concepts surrounding notions of the value of art have been treated with contempt over the preceding decades by global consumerism of the postmodern era. This, he says, has led to a reduction or deterioration in artistic value. A component of this degradation in artistic value has come about through the manner in which postmodernism has stressed the relativist position in according value to art and has affirmed egalitarian notions of the value of art. Human desires thus became shaped by the flux of intersecting social and economic fashions. Under such a value-based system, the importance of how the art object is created is relegated to being behind the ideas or impressions that result from the perception or experience of the art object or event.

Crowther (2007) believes that it is possible for a piece of artwork to possess an individual style in a objective sense, where such objectivity comes about through reference to the piece's art historical context. He proposes that a picture or image may acquire its value as art due to it possessing originality. If an artist's work possesses such originality of style, then this work he understands to become an ideal form or model of such work. Furthermore, an individual work of art is able to embody art related importance through its ability to enhance our art appreciative thoughts and feelings along with culturally developing the means to instantiate experiences within its idiom.[28]

By concentrating upon the image, Crowther facilitates the liveliness of art's aesthetic qualities. Furthermore, he asserts that art may be read as a mode of image making and he deliberates ways in which a viewer of an artwork joins with artistic meanings, aims and content. In so doing art can be thought of under notions of forming new ideas or concepts, mental creativity and resourcefulness.

It is perhaps not of direct relevance to this current essay, but it is of interest to note that the title of Crowther's (2007) book intimates his defining art and forming a new canon. However, Crowther applies his consideration of art to more traditional approaches such as (picture-based art, literature and music) and offers a mainly Western-art based perspective. He largely ignores what may be thought of alternative types of art such as digital art. The art related characteristics of performance and making run cardinally through Crowther's definition of the art experience and

[27]Crowther introduces and then discusses concepts such as: style; image, temporality; metaphysical depth; notions of the art canon; context; cognitive structure.

[28]Indeed, Crowther states that the rest of his book could be understood as an extension of the thinking of Kant. Like Kant, Crowther also argues that judgements of taste make a claim to objectivity.

he makes claims that the concept of art is a necessary phenomena required to account for the innovative uses of specific art mediums.

The fidelity of a person's assessment of the value of an artwork, is for Crowther, predicated upon the individual possessing the correct cerebral condition. This state he says develops from an understanding of how a particular artistic medium has previously been used, where this historical understanding allows us to assign a new artwork a relative and value-based position. Thus Crowther accords value on the basis of reference to the canon and assigns little value to an artwork constituted-upon whether an artwork is found to be beautiful or not. Of particular interest to my essay is the manner in which Crowther's definition attempts to free itself from the art market of the Western world. Crowther does this, as I have alluded to above, by suggesting art value to be aesthetic and that the artistic canon provides justification for this belief[29] and that notions of style constitute proxies for historical differences.

In my current research, Paul Crowther's writing has provided answers to questions such as of what are the ontological components of fine art? (see Chap. 4, Crowther 2007). In my analyses of two-dimensional art (Hackett 2016) I adapted Crowther's ontology to enable my investigation of the perception of paintings and drawings and in the section below I evaluate Crowther's ontology as a model that I may incorporate into an analysis of three-dimensional art. Crowther (2007) proposed contextual visual space as being a place where the phenomenological experience of art can exist. Contextual visual space, he says, is highly complex and is the point at which our instantaneous visual world becomes perceived and visually understood by us.

Crowther's concept of contextual visual space is of importance when considering the perception and understanding of three-dimensional art as Crowther states that it is through our occupancy of this space that we are able to comprehend the contextual length, breadth and depth of art objects.[30] Crowther elaborates upon this space by defining eight characteristics of an abstract artwork (in this book we are obviously concentrating on three-dimensional works: sculptures, installations, earthworks, etc.) that comprehensively structure contextual space.[31] His eight dimensions are:

1. resemblances to specific visual forms that arise though the beneficial bringing together of colours, shapes and textures (for example, seeing images in cloud patterns);

[29]Crowther offers a normative aesthetics based upon artists as the intrinsic creators of images that are referenced to the art historical differences that the artwork posses.

[30]If we did not possess contextual visual space Crowther envisions that we would perceive a flat, two-dimensional world.

[31]Crowther states that his eight dimensions appear to him to be a comprehensive structure for conceptual space whilst he allows for the possibility that these dimensions may be sub-divided and/or combined in a way that enables these new entities to be dimensions themselves.

2. the evocation of states of mind through gestural associations with visual forms (for instance, violent shapes, depressing colours);
3. usually invisible visual features of items, relations, states of affairs such as: very small surface features; internal configurations: fleeting atmospheric effects; unusual perspectives;
4. events, items, states of affairs that could possibly exist in perceptual and physical environments other than their usual ones;
5. destruction, deconstruction, reduction, reconstruction, variations of familiar events, items, states of affairs that results in a visual configuration;
6. visual marks or intimations of previous, future or counterfactual events, items, states of affairs;
7. spatial appearances structural features, such as colour, shape, volume, mass, texture, density, geometric structure, alterations in positions, either on their own or in combination;
8. imaginary and dream phenomena.

Crowther (2007) claims that the above eight dimensions comprehensively and exhaustively account for the content of contextual visual space and that this arrangement and the structured relationships between the eight elements enable abstract art to be completely apprehended, discerned and grasped. In this way, Crowther forwards an ontology for art experience.

In my earlier writing, I have summarised Crowther's ontology (Hackett 2016) in the following manner:

1. **Resemblances** creating resemblances through combination
2. **Gestural Associations** evocation through gestural associations with visual forms
3. **Revelations of** usually invisible visual features
4. **Novel Environments** existence as a product of usual environments
5. **Neoteric Configurations** reconfiguration of the familiar producing neoteric visual configurations
6. **Visual Suggestions** visual traces or suggestions
7. **Spatiality/Structure** structural features of spatial appearances
8. **Fantasy** imaginary and dream phenomena.

I present the above Crowther ontology in an abbreviated format so as to enable the reader to more easily appreciate how Crowther's dimensions form a complete set of categories, which, he says, when they are taken together, allow us to comprehend the variation within and between three-dimensional abstract pieces of art.

In the last few pages, I have made available brief details regarding the research of Paul Crowther. At this point of the book, I will not go into further details regarding his research or writing, as this will constitute the main theoretical framework for my own research. As such, I will turn to Crowther many times and I will include more from him at the appropriate places in the following chapters.

2.4 Conclusion

In this chapter, I have offered the work of two theoreticians, Rosalind Krauss and Paul Crowther, both of whom have suggested a model for the understanding of abstract art. Each model is very different in terms of its content and the aims that each author had for their theoretical structure. However, both Crowther and Krauss believe that consideration of their respective model allows the reader greater comprehension of how we view and understand abstract art. I question but do not specifically deny these claims. However, as noted, I believe there are inadequacies in their approaches and the knowledge development that each model facilitates.

Most importantly to my criticisms of Crowther's and Krauss' models[32] is the inadequacy of both to demonstrate ongoing reciprocal interactions or influences that must exist between different characteristics of such a complex experience as the experience involved when perceiving, understanding, appreciating, valuing, disliking, etc., an artwork.

In the following chapter, I emphasise the belief that interactions exist between Crowther's eight characteristics. I introduce facet theory and the mapping sentence as a possible research technique through which a far reaching and comprehensive understanding of abstract three-dimensional art may be developed. I employ facet theory and mapping sentences in my writing and research as this structural theory has the potential ability to embody and expiate the complexity of aesthetic experiences.

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[32]My critical comments also apply to other understandings and depictions of how observers experience fine artworks.

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