Northumbria Research Link

(Fullmetal) alchemy: The monstrosity of reading words and pictures in shonen manga
Lesley Anne Gallacher

Textual Monsters

> Monsters no longer swarm in religious imagery, but in science fiction and children's books. They are not identified—and this must be progress of a kind—with prodigious births, sports of nature, exotic marvels. They have taken up their dwelling inside the minds of people instead, and this poses new problems as to their control. [1]

In his work on the philosophy of horror, Noel Carroll defines two types of monster: 'fusion creatures' or hybridized composites of heterogeneous elements, such as the chimera or the basilisk; and 'fission creatures', the heterogeneous elements of which occupy the same body but are not temporarily continuous (werewolves, for example, are both human and wolf, but not simultaneously) [2]. In either case, monsters are excessive. As 'denizens of the borderland' they represent the extremities of transgression and indicate the limits of the order of things. While monsters may be grotesque, dangerous, and/or impure, this is not what makes them monstrous; their monstrosity derives from their *improbability*. Monsters breach the accepted norms of ontological propriety and do not fit the possibilities conceived within normal science. As a result, in some branches of evolutionary biology unprecedented mutations are termed 'hopeful monsters' in that they may herald an entire population of a species to come, which is not yet namable [3].

For Carroll, only 'horrific' monsters can be improbable. The monsters that inhabit mythologies, folk and fairy tales are neither unnatural or surprising because they can be fully accommodated within the cosmology in which they occur; horrific monsters are 'extraordinary character[s] in our ordinary world, while fairy tale or mythological monsters are simply 'ordinary creature[s] in an extraordinary world [4]. Monsters surprise and scare us when they encroach upon our 'ordinary' world; they are creatures with which we are not (pre-)prepared to engage, and whose existence we could not have anticipated [5]. The etymology of the word monster suggests exactly this. It comes to English from the Latin *monstrum*. *Monstrum*, in turn, is derived from a corruption of *moneo* by *monstrare*. This links 'advice', 'reminder' or 'warning' with 'showing' [6]. As such, monsters reveal something. To meet a monster is to encounter something surprising in the world; it is to discover the world is not as 'ordinary' or 'familiar' as it might have seemed:

> 'If we pay attention to them, monsters do have something to reveal. They show us the reality of the impossible or the things we label impossible; they point out that the world we think we live in, and the world we actually inhabit, may not be the same place at all. [7]

Monsters expose the difficulty of distinguishing between the 'real' and the 'imagined'. Writing about cinema, Gilles Deleuze argues that the imaginary is a poor concept. The imaginary is not unreal; rather, the concept of the imaginary refers to the difficulty in distinguishing between the real and unreal. While the two do remain distinct in the imagination, the distinction itself continually shifts around. As such, Deleuze insists that it is more useful to think of the imaginary as a set of exchanges between the actual and the virtual (both of which constitute the real). As creatures of the imagination, monsters are unexpected, and often unwelcome, migrants from the virtual [8]. Thought of in this way,

monsters allow us to glimpse the ungraspable [9]. They reveal the processuality of the world, which is always-already becoming-otherwise. In this sense, monsters are not defined by the extent to which they fit into the world; the world is itself monstrous [10]. The monsters that populate myths and fairy tales are no different to the art-horror monsters described by Noel Carroll. They are not 'ordinary' and their worlds are no less enchanted than ours. It is simply that the strange worlds of myth and fairy tale are better able to offer hospitality to monsters because they are not expected to conform to the deadened and disenchanted visions of modern life that cause Jane Bennett such dismay [11].

The worlds of and in *shonen* manga Japanese comics intended primarily for an audience of teenage boys) can prove similarly hospitable to monsters. In particular, fantasy action/adventure *shonen* manga series are often densely populated with monsters. *Fullmetal Alchemist* is a popular manga series by a female *mangaka* (manga creator), Hiromu Arakawa, which was serialised in *Monthly Shonen Gangan* magazine from 2002 to 2010. The series is set in a fictional universe, which is loosely based on Europe during the industrial revolution. The heroes in the series have become both less and more than fully human in form as a result of their strange alchemic powers. As young children, the protagonists, Ed and Al Elric, damaged their bodies in an ill-fated alchemic attempt to resurrect their dead mother. Al lost his body entirely. To save his younger brother's life, Ed alchemically attached Al's disembodied soul to a suit of armour, which serves as his body throughout the series. Ed did not come out of this alchemic disaster unscathed either; he lost his leg and arm, which have been replaced with biomechanical protheses known as 'automail'. As a result, Ed's body has become a monstrous combination of human flesh and machine, while Al exists only as an animated armour casing. At fifteen, Ed decided to become a State Alchemist—to put his pseudo-scientific and semi-magical alchemy at the service of the military—in order to gain access to resources that might enable him to restore his and his brother's bodies. As a State Alchemist he is known as the 'Fullmetal Alchemist'.

The Elric brother's monstrosity, and that of many of the characters they meet in the course of their adventures, is a driving force for the events in the series, but it does not seem out of place within the context of their manga world. Monstrosity is not simply an issue of plot, theme or characterisation in *Fullmetal Alchemist*; it is also a matter of form. *Fullmetal Alchemist* is a composite texts made up of words and pictures, which are arranged in panels, word balloons and gutters on the page. As such, *Fullmetal Alchemist*—and, indeed, manga more generally—can be considered to be at least as monstrous as any of the characters within it. To read *Fullmetal Alchemist*, readers must offer some hospitality to monsters; indeed they must be willing to summon them and bring them forth by assembling the disparate and seemingly incompossible elements the encounter on the page. In this paper, I want to read through a short section of *Fullmetal Alchemist* in which the Elric brothers make the horrific discovery that Shou Tucker has attempted to advance his military career by making a talking chimera (a monstrous, composite beast) by fusing his daughter and the family dog. I argue that it is not simply the alchemy *in* the story that produces this monster; the story is itself monstrous because it emerges from an impossible transformation of words and pictures dispersed in panels separated by gutters. To understand how readers assemble the story from the disseminated fragments they encounter on the page, I draw upon ideas from various different disciplines in order to develop Eric Livingston's notion of reading as an *alchemic* process from which the text emerges [12]. I use the term alchemy here, rather than
'imagination' or 'imaginative production' because I want to emphasise the transformation that reading produces in the text itself (rather than in the reader). In doing so, I hope to

contribute to ongoing debates within cultural geography about issues of representation, and particularly the role of the visual in relation to other forms of representation [13]. The paper also connects with attempts by other geographers to think through the performativity of reading [14] and of reading comics in particular [15].

Reading Fullmetal Alchemist

I want to begin by reading through a few pages from early in the series—chapter five, in fact—which I will return to throughout the paper. In this chapter, Ed and Al visit Shou Tucker—the 'Sewing-Life Alchemist'—hoping to learn something useful from his research. Tucker is a biological alchemist, and an expert in chimera: monstrous composite beasts. In these pages, the boys return to Tucker's house for a second day's study.

Pages 26–27

Looking at Figure 1, the first panel is only partially framed and shows only dark clouds and a rumbling onomatopoeia. In the next panel we see Ed looking up at the sky and remarking that it's going to rain, while Al rings the doorbell. We know that this is the Tucker house because we saw Roy Mustang ring the same doorbell when he took them to the house the previous day. Having received no answer, Al opens the door slightly and calls out to Tucker, who should be expecting him. There is nothing inherently unusual about these events, but the scene feels ominous. This is partly because the onomatopoeia—rumbling thunder, creaking doors, hushed corridors—and the dark shadows create a foreboding atmosphere. As 'ordinary' (as opposed to 'scholarly') readers, encountering these pages within our reading of the chapter in its entirety, we also contrast this with the welcome the boys received the previous day when they arrived at a busy—and messy—family home, complete with a dog and boisterous toddler. Today the house is eerily still. The boys search the seemingly empty house, calling out to Tucker and his daughter, Nina, as they do so. Eventually, they glimpse Tucker through a doorway. He is kneeling in a darkened room and seems somewhat distracted, but he greets the boys and shows them his newest creation, which is hidden in the—very dark—shadows next to him.

Pages 28–29

Turning the page (Figure 2), we discover that Tucker has created a talking chimera, which doesn't look enormously delighted in its existence. Tucker demonstrates its abilities by introducing Ed, who is amazed and comes in for a closer look. The chimera continues to repeat Ed's name while Tucker explains his luck in producing the chimera just in time for his annual assessment, poor performance in which will lead to the loss of his State Alchemist license —and the generous research funding and lifestyle that goes with it. The chimera moves from repeating, 'Edward', to call Ed, 'Big...bruh...ther'. Ed reacts with shock, which is emphasised by the whiteness of his widened eyes against the grainy screentone laid over him. It is common for younger Japanese children to refer to older boys as 'big brother'[16], whether they are related or not. The previous day, Tucker's—now absent—preschool-aged daughter, Nina, has been addressing both Ed and Al in this way.

Pages 30–31

Over the page (Figure 3), Ed examines the chimera gently while he interrogates Tucker in a

series of panels that get progressively taller as they switch between Ed and Tucker until the final panel bleeds off the bottom of the page. Ed establishes that Tucker got his State Alchemist license two years previously by making his first talking chimera; earlier in the chapter , we learned that all that unhappy creature said was, 'I want to die'. At the same time—two years ago —Tucker's wife left him and his daughter. With this timeline established, Ed wants to ask one final question: he wants to know where Nina and Alexander, the Tucker's dog, are. Ed is angry, and Tucker responds despondently that he hates perceptive brats like Ed. From the narrow panel squeezed between the panels containing Ed and Tucker, it might appear that Al shares Ed's anger since he has a strange glow in his, eyeless, eyeholes. But Al is not as perceptive as his brother.

Pages 32–33

On the next page (Figure 4), Ed pushes Tucker against the wall. Al is shocked at this outburst. As he holds Tucker against the wall, Ed explains that Tucker made the talking chimera, on which his State Alchemist career is based, by human experimentation: he used his wife in the first instance, and now he has turned his daughter and dog into a chimera. It is only at this point that Al realises what has happened, although he is not enraged like his more hotheaded older brother. The confrontation continues over the next few pages and, by the end of the chapter, Tucker has been stripped of his State Alchemy license and the wretched Nina-Alexander chimera has been put out of its misery by the mysterious new 'villain' of the series.

Words and pictures

Words and pictures are often taken to belong to completely different spheres of representation, with no common ground between the two. To take a famous example of such thinking, Gotthold Ephraim Lessing argued that the purity of painting and poetry should never be compromised [17]. As a pure art of language, poetry is necessarily extended in time, for words can only be spoken sequentially; painting is a pure art of vision, the elements of which are arranged side-by-side. Painting, therefore, belongs to space. To mix poetry and painting—language and vision, words and pictures, time and space—is to produce 'freakish' writing, the consequences of which must necessarily be monstrous. To weaken the boundaries between different realms of representation is to compromise the integrity of them all. Manga series like *Fullmetal Alchemist* (and comics more generally) are monstrous because they insist on doing just this. They fall awkwardly between the literary and visual arts, such that looking at them seems to be neither reading nor viewing, but some problematic composite of the two. They are often understood as fundamentally deficient, precisely for this 'failure to be either a real text or just a proper image' [18]. They pose a problem in their refusal, or perhaps their inability, to choose [19].

The seemingly unbridgeable gap between words and pictures has consequences far beyond the organisation of the field of representation. The distinction between the categories of representation associated with 'showing' and 'telling' is mobilised in a vast array of dualisms: the visual and verbal, texts and images, words and pictures, and so on. This poses something of a terminological problem in that the words placed on the same side of the 'and' in each case (visual, images, pictures) are not exactly interchangeable, although they are sometimes used as such. One issue with the term 'image', in particular, is that it seems to fall on both sides of the so-called divide; imagery is an art of both language and vision. Rather than seeking to solve this terminological problem, I have mixed up the various terms somewhat

in this paper (as have many of the authors I cite within it). This should be taken as a failure of the paper, or even laziness on my part. This terminological messiness is indicative of the willful disorderliness of representation itself, and the necessary failure of any project seeking to purify and organise it.

William Mitchell argues that the differences between modes of representation are manifested in the problems reconciling a culture of reading with a culture of spectatorship. He wants to shift the terms of the debate to focus, not on the difference between forms, but on the ways in which words and pictures are used and related to each other.

> The real question to ask when presented with … image-text relations is not, 'what is the difference (or similarity) between the words and the images?', but, 'what difference do the differences (and similarities) make?'. That is, why does it matter how words and images are juxtaposed, blended, or separated? [20]

In what follows, I want to think through some of the different ways in which words and pictures can be combined to produce texts—which will involve a number of detours into various different kinds of writing—before returning to my reading of *Fullmetal Alchemist.*

Gillian Rose is interested in the different uses of images in social science writing [21]. She identifies two possible ways in which social scientists can relate (written) texts and (pictorial) images in order to produce social scientific accounts: images can be used to *support* texts, or they can be used to *supplement* them. When images are used to support texts, they facilitate the research process rather than produce the academic account itself. For example, researchers often work with photographs, sometimes in conjunction with participants, in order to draw out evidence or information with which they hope to answer a set of research questions. The photographs are instrumental in carrying out the research, but they are superseded by the written academic account derived from or inspired by them. They enable researchers to access knowledge about the world, but they do not communicate that knowledge in and of themselves. At the end of the research process, it is the wordy text that must account for the research findings.

This may seem to have very little to do with reading *Fullmetal Alchemist.* However, if we understand the *story* as eluding the images with which it is told [22], we might think of that story as wordy entity resulting from reading, or looking at, a manga series. That is, the reader might be considered to construct a (verbal) narrative from the textual elements (both words and pictures) with which they were presented, and that this forms the entirety of the story. Indeed, it could be said that I did just this when I 'read' *Fullmetal Alchemist* in the previous section; I produced the (verbal) story (which I then typed out) from the pictures and words presented on the page. Yet this written account is inadequate in various ways. Comparing my version with the images of the comic pages themselves (in Figures 1 to 4), it is obvious that there is much more to the story than is contained in my written account. This would be true no matter how much detail I put into my 'story' because the pictures add something of their own to it, which *cannot be adequately substituted in words.*

Returning to the practices of social science writing, Rose explains that pictures add something to a research account when they are employed as a *supplement* to words. The pictures exceed the written report in various ways and they can be allowed to show themselves on, more or less, their own terms. She identifies two particular kinds of supplemental relationship between word and picture in social science writing: 'specified generalisation' and 'texture'. Perhaps most traditionally, pictures in social science texts are used to lend veracity to an account by 'specifying the generalisations' made in the text.

Pictures are deployed as 'figures' and tied to the text through the captions attached to them. Indeed, all of the figures in this paper perform this kind of supplementary function in relation to the written account of the practices of reading *Fullmetal Alchemist*, even if my captions do little to explain them. Eric Livingston argues that captioning reveals the work involved in producing 'instructed readings' of this kind. For example, he explains that photographs displayed in introductory sociology textbooks are necessarily divorced from their context and also lack obvious thematic content; they display only the 'sheer presence' of a scene. On their own, they say nothing intelligibly *sociological*. Through captioning— adding a line or two of text below, or otherwise next to, the picture—a photograph can be offered to the reader as an illustration of a specific social phenomena. The caption offers a description that is 'plausible but not transparent' from the photograph itself [23]. In this way, captioned photographs teach students to see the world in terms of sociological analysis.

> In sociology, students must be trained to view the familiar, ordinary world of everyday action as providing indicators of the structures of action that lie beneath it. The captions use the natural analysability of action—the possible ways in which photographs could be seen—and distort and transform it, making the photographs into evidence for interpretations of them. Their authority comes to live within the objectivity of the social phenomena that the photographs are intended to illustrate, and in our ability to see photographs as possible illustrations of those phenomena. [24]

Used in this way, pictures supplement a text but they are not able to provide an account in and of themselves. Used 'texturally', pictures gain considerably more autonomy in producing the social science account itself, at least, in part. They do something that the words do not, and perhaps cannot. For example, John Wylie's 'Smoothlands' presents fragments of the experience of landscape in both written text and photographs [25]. The photographs are scattered throughout the text, and they interrupt its flow, just as the text interrupts theirs. These photographs are not 'figures'—readers' attention is not directed towards the appropriate photograph when he or she reaches the relevant section of text—but evoke something *in themselves* that the written account lacks, or at least approaches differently.

Both of these concepts might be appropriate, to differing degrees, in understanding the relationships between words and pictures in *Fullmetal Alchemist*. While they are not captioned' in any recognisable way, the pictures might be said to specify the generalisations of the written text, however minimal that text is. For example, the first panel of page 26 in the section I 'read' earlier (Figure 1) shows a 'rumbling' onomatopoeia: 'GRM RM RMB'. Many things or events can produce this kind of rumbling sound: it could be traffic noise, a rockfall, someone's stomach, or something else entirely. However, the onomatopoeia is juxtaposed with a picture of dark clouds in the panel. By relating the the picture to the onomatopoeic 'word' [26], readers are able to interpret it as the rumbling of thunder. This reading is confirmed in the following panel where Ed looks up towards this sky and comments that it is going to rain. While it is possible to interpret some interactions between word and picture in *Fullmetal Alchemist* in this way, the autonomy given to images in telling the story make 'texture' a more useful notion in explaining the relationship between them. The story is told as much—if not more so—in pictures as it is in words. The two perform different functions, but the tale is told them between them both. In this way, the relationship can be said to be somewhat less 'supplemental' than it is 'symbiotic'.

Illustration

The comics artist Will Eisner makes a distinction between *visuals* and *illustrations* [27]. Visuals are somewhat autonomous; they can replace a written text to varying degrees. Illustrations remain tied to a written text and can only reinforce and repeat that text. However, the addition of pictures to a text is a process in which neither the text nor the pictures are passive, and from which neither can emerge unaltered. William Moebius explains that children's picturebooks are more than albums of pictures, or texts with some pictures thrown in. Picturebooks present a more integral relationship between word and picture, such that readers experience them as a 'total design'. The pictures and text in a picturebook probably can stand in isolation to some extent, but the story is certainly diminished for it.

> The story in the child's picturebook … unfolds for us just now, a variety-show of images and texts. We anticipate the next while looking at the one before, we laugh now that we see a character that we had not noticed before, we let our eyes wander off a familiar character's face to a puzzling word on the page and back again. Unlike the framed settings of a Biblical text of a Raphael or Rembrandt, the pictures in a picturebook cannot hang by themselves; picturebook texts do not fare well when they are extracted and anthologised in various bibles of children's literature. Each works with the other in a bound sequence of images/text, inseparable in our reading experience one from the other … In the picturebook, we read images and text together as the mutually complementary story of a consciousness, of Lyle the Crocodile's ways of being, his growing and suffering in the world. [28]

William Mitchell is interested in considering the specific constellations of pictures and text that are mobilised in particular media, and in specific works. The obvious starting point for such investigations may appear to be those media—such as, film, television and manga—in which the relation of image and word is already posed as a problem. However, for Mitchell, the problem does not simply arise between different forms of representation, nor does it trouble only those that would insist on amalgamating them; the issue is unavoidably present within representation itself. Put simply, all arts are 'composite' and all media are 'mixed'. There is no purity to be found in representational practice, however much 'modernity' might have tried to convince itself otherwise. The practice of writing itself deconstructs the possibility of pure representation, either verbal or visual. In its graphic form, writing is more than a supplement to speech; it is an inseparable stitching of the visual and the verbal. As an art of both language and vision, writing is 'the imagetext incarnate' [29]. Similarly, the visual burrows inside the verbal through the imagery conjured up in words through all manner of ekphrastic strategies[30].

Mitchell identifies three broad ways of conceiving of the relationship between the visual and the verbal: 'imagetext', 'image-text' and 'image/text'. In 'imagetexts', words and pictures are combined to produce a composite, synthetic whole. For example, David Carrier argues that comics (including manga) are not a hybrid medium; they are a composite art [31]. Successful comics seamlessly combine the visual and the verbal. It is in this sense that Carrier positions the word balloon (or speech bubble) as their defining characteristic: comics are a narrative sequence with speech balloons. In the speech bubble, the (verbal) word is made image, but the word balloon itself is always as conventional as the letters and punctuation marks it

contains. These balloons blur the word/image binary because they are neither within the picture space, nor are they external to it. Thus, word balloons are always 'imagetexts'.

Thierry Groensteen argues that comics form a system based on the relational play of a plurality of interdependent images, which are both separated by and over-determined by their coexistence on the page [32]. These images are arranged spatio-topologically in panels on an individual page, and across pages. Word balloons create a network within this spatio-topological apparatus, which allows comics to simultaneously mobilise the verbal and the visual. While the layout of the page is important in comics, it remains inert in isolation from the relations to which it is submitted in the process of reading that comic, which Groensteen terms *arthrology* [33]. To emphasise the relation—and, indeed, the very relate-ability—of words and pictures within a medium in this way is to understand a work as an 'image-text'.

Yet, these relationships always are somewhat uneasy. For Groensteen the problems of 'depth' in the relationship between the comics panel and the word balloon reveal unreconcilable tensions between 'textuality' and 'pictoriality'. The pictures belong to the panel, and the 'image zone' created by it; the word balloon creates a 'textual zone' that floats over the panel and obscures part of the image. The pictures rely on perspectival codes and the practices of staging planes in order to create an illusion of three-dimensionality. The word balloon, as a textual zone, asserts the flatness of the writing surface and, in so-doing, betrays the illusion of depth in the pictorial zone of the panel beneath it. The word balloon can never be fully accommodated within the pictorial panel, but it cannot be entirely autonomous either. The bubble, and the words it contains, is a visual approximation of those uttered and/or heard within the panel. The utterance belongs to the panel, even if it seems to assert a surface from which the picture pulls away. The balloon and the picture, therefore, cannot belong to different planes; they are always complementary pieces of a puzzle arrayed on the surface of the panel, however problematic their assemblage may be. For example, these tensions are obvious in the relationship between the speech balloon on the left-hand side and the picture in the fourth panel in Figure 1. Arakawa has achieved an illusion of depth in the image, but the speech bubble remains resolutely flat. Nonetheless, she has tried to indicate the direction of the sound 'backwards' towards Al within the image by curving its tail.

In this way, word balloons reveal a disjuncture within representation itself. Frank Cioffi argues that the problematic gap between the visual and the verbal is always-already at work in comics [34]. He argues that some comics—such as Art Spiegelman's much celebrated *Maus* [35]—are particularly successful because they are able to productively exploit the dissonances between words and pictures, and to make effective use of the impossibility of perceiving the two simultaneously and identically. This rupture in representation is the problem posed by 'image/text' relations. And the important thing in 'image/text' relation—for Mitchell at least—is the maintenance of their radical incommensurability. That is, the possibility of their being both relation and non-relation between the visual and the verbal in a work36. The monstrosity of *Fullmetal Alchemist* arises from the incommensurability of words and pictures. Yet, to read *Fullmetal Alchemist*, readers must begin to domesticate these monsters even as they summon them forth; they must make use of the tensions between the words and pictures to find and produce the story in the elements they encounter on the page.

Writing about children's picturebooks, Perry Nodelman argues that there is necessarily a degree of irony in the relationship between words and pictures. However closely matched

they may seem, they can never be fully congruent37. In children's picturebooks, the two interact in complex and dynamic ways, such that the story is told in neither one nor the other, but by both simultaneously. The text and illustrations do not, and cannot, simply mirror one another (although neither can they easily stand apart). This is, in part, because of the different valences of the words and pictures, as Christina Desai explains:

> The art is an integral part of the story without which much of the meaning and mood would be missing. Whether the plot of the story could be understood without the illustrations is an irrelevant question, since the illustrations do have an impact in either case. [38]

Words and pictures come together to tell the story—each contributes something of its own. As such, the practice of illustration is not simply additive, and never redundant; the practice of adding pictures to a written text transforms both pictures and text and results in a story that cannot be reduced to any of its constituent parts. Desai explains something of this effect through the relationships between word and picture in Allen Say's illustrated novel, *El Chino* [39]. The novel relates what might, at first, seem to be an 'ordinary' sports story about a boy who takes up bullfighting. The text closely follows the classic structure of its genre: despite an initial lack of ability, the main character perseveres and overcomes obstacles to become proficient in a sport and, eventually, he is able to compete and win. But *El Chino* is not a 'generic' sports story (although it would not necessarily be a failure if it were) because it is transformed by its illustrations. The words and pictures are closely complementary, but their juxtaposition utterly changes the character of the story. While the text seems to relate a straightforward action tale, which employs a minimum of poetic device, the illustrations enable the protagonist's emotional transformation to become the central theme of the story. The text drives the plot forward; the illustrations slow down the action and create a mood of introspection. In serving these different functions, the interaction between words and pictures make *El Chino* both an action tale and a character study simultaneously.

The illustrated story exceeds both the written text and the pictures through which it is told and must, therefore, always be monstrous. Yet, it is by virtue of their monstrosity that picturebooks might be said to present a 'poetry' of word and picture, which communicates something of that which lies beyond the reach of either words or pictures. For Moebius, such poetic qualities can enable children's picturebooks to far more profound than might be expected: 'the best picturebooks can and do portray the intangible and invisible…ideas that escape easy definition in picture or words' [40]. Desai explains how, in *El Chino*, Allen Say uses words and pictures to say something more than either could alone, and to enable the story to succeed in more than one genre simultaneously. This is the 'magic' of a well-crafted picturebook, an unarticulated—and inarticulatable—force through which word and pictures combine to become something other than they could be alone. But, like any good magic trick, it obscures and misdirects its own workings in order to succeed at all [41].

Panels and gutters

Of course, while both picturebooks and manga combine words and pictures, there are many notable differences between the two. One difference is to be found in the structural organisation of manga (and comics more generally) into panels, which are usually separated by gutters. Thierry Groensteen regards the panel as the smallest unit in the system of comics. This does not mean, however, that the panel is the least unit of signification in

comics; the panel may be broken up into the different informational elements it contains, but it cannot be reduced. Framed and isolated by empty space, the panels in *Fullmetal Alchemist* are contained by and take part in the sequential continuum of the manga. The panels—as discretely packaged pictures, or combinations of pictures and words—share space on the page before they enter into any other relationship. As such, the system of comics, as it is described by Groensteen, is always primarily spatio-topological [42]. *Fullmetal Alchemist* is composed of multiple panels arranged on the page. The story emerges from the relations between, and within, the panels, which Groensteen terms 'arthrology'. For Groensteen, the function of separation—what would be referred to in cinema as 'the cut' [43]—is crucial to the system of comics: '[t]he spatio-topia, let us not forget, is a part and a condition of arthrology: one could not connect the visual utterances if they were not distinct'[44].

The comics artist and theorist, Scott McCloud explains that the gutter—the empty space that separates the panels on the page—'plays host to much of the magic and mystery that are at the very heart of comics' [45]. This is because the gutters participate as much in the work of conjunction and relation (the arthrology) as they do in the processes of scattering and distribution. In this way, the gutter can be understood as the site of semantic articulation in comics. In presupposing that there is meaning to be found within a comic, readers search for ways in which the isolated panels relate to each other. In so-doing, they *produce* meaning and come to believe that it exists in the text itself. Groensteen argues that the comics panel is fragmentary but always caught up in a system of proliferation; the panel can only ever be rendered meaningful as a component in a larger apparatus because it can never, in itself, produce the totality of an utterance [46].

To read *Fullmetal Alchemist*, readers need to produce a range of relations—both proximal and distal, linear and non-linear—between the various elements on the page: the words and pictures, panels and gutters. For example, the first panel on page 26 (in Figure 1) contains, or fails to fully contain, a picture of dark clouds and some free floating letters. These letters are an onomatopoeia—'GRM RM RMB'—a rumbling sound. Readers are able to identify this as a meterological rumbling because they are able to relate the onomatopoeia to the dark clouds with which it is juxtaposed in the panel. This is further confirmed in the foreground of the next panel, where we see Ed looking upwards. The rumbling onomatopoeia is repeated in this panel, just above his head. A speech bubble floats above the onomatopoeia and it's tail points down towards Ed. The bubble contains the text, 'It's gonna rain for sure today'. Linking these elements together, we are able to read this as Ed's reaction to seeing the dark clouds in the sky above him, and hearing the rumbling of thunder.

In the background of this second panel, we find Ed's brother, Al, standing in front of a door, holding on to a chain that is hanging from a bell. We know that Al is ringing the doorbell because an onomatopoeic 'ding ding' has been placed next to the bell. Small lines have also been placed either side of the bell to indicate objective motion in the still image: the bell is moving from side to side. We can identify this doorway as the Tucker's front door by relating it back to the second panel of page 12 of the chapter, where we saw Roy Mustang standing in front of the same doorway and ringing the same doorbell (drawn from almost exactly the same angle) when he brought the boys to the house the previous day. We are also able to identify Ed and Al as the protagonists of the series from having seen them in repeated panels within this chapter, and perhaps in other chapters in the series.
In the next panel, we look out at Al from inside the house as he holds the door open. The

onomatopoeia in the top left-hand corner of the panel indicates that the door has creaked as it opened. The two speech bubbles, each with a tail directed towards Als, contain the text, 'Hello… Mr Tucker? It's us again.' The next panel 'pulls away' to provide a longer view of the corridor with Al silhouetted in the doorway. The onomatopoeic 'hush…' emphasises the stillness of the dark, empty corridor. Al was expecting an answer but the house appears to be deserted. On the left-hand side of the panel there is a speech balloon containing the text, 'Huh?', the tail of which appears to point 'back' towards Al in the 'depths' of the image. From this we know that Al is surprised to find the house empty. The three panels here—showing Al ringing the doorbell, calling through the open door, and then puzzling over the lack of response—are not sufficient to explain Al's confusion. And they certainly don't explain why the boys go on to search the house in the next panel.

It is not unusual to call at a house only to discover that the inhabitants have gone out. The usual course of action in such circumstances would be to come back again later, or perhaps to leave a note. However, on page twenty-one of the chapter, it was established that the boys would be returning to the house today and that the Tucker's were expecting them, even looking forward to their visit. This is why Al did not expect to find the house empty. Indeed, he expected the kind of welcome they received the previous day (on pages twelve to thirteen), when Ed was pounced upon by the family dog, Alexander, as Nina and Tucker ran to greet their visitors at the door. Today, the house seems very different from the chaotic family home the boys arrived at the previous day. An ominous mood is created through the contrast between the house as it was presented on the earlier pages and the eerie stillness extended across all of the panels in this spread, with their dark shadows, grainy screentones, and creepy sound effects.

Monstrous texts

To read *Fullmetal Alchemist*, then is to bridge the gutters and to make connections between the words and pictures and the fragmented and dispersed panels on the page. the story emerges from the efforts of readers who must produce this network of relations, which yield a (story) 'world' that cannot be reduced to any or all of the panels from which it appears to be composed. In this way, to read *Fullmetal Alchemist* is to perform a kind of magic, which Eric Livingston refers to as an 'alchemy' [47]. His use of the term alchemy is somewhat strange, and he never fully explains it. Alchemy is commonly understood as a primitive and semi-mystical version of chemistry. However, this evolutionary notion obscures the ways in which the two differ in type. Brian Massumi explains that alchemy is a 'qualitative science of impossible transformation', while chemistry, and physics, are 'quantitative sciences of elemental causes' [48]. As an alchemy, the practices of reading manga transmute the fragmented text—the words and pictures arranged on a page—in order to produce something meaningful (the story).

Yet, Livingston explains that the reading—or the story, as that which is read—is not literally in the text, but neither is it not in the text [49]. Texts only come to exist as meaningful objects in and through the practices of reading. The read-text emerges from the alchemic practices of reading; the elements of a text—words and pictures, which are themselves nothing more than splashes of ink on a page—are transformed such that they seem meaningful in and of themselves. Through reading, written texts cease to be 'fragile things'—'made up of nothing stronger or more lasting than twenty-six letters and a handful of punctuation marks', as Neil Gaiman reminds us [50]—and hold together as stories in their

own right. The coherence of a text is always equivalent to the coherence and continuity of reading's work. But this coherence, and seeming self-sufficiency, are only ever retrospective.

Much the same can be said about the scattered words and pictures arranged on the manga page. The elements from which they are constituted may differ somewhat, but comics texts are no less 'fragile' than those conveyed entirely in writing. In an argument that is striking similar to Livingston's, Moebius argues that the associations between words and pictures do not reside in the texts themselves, but arise in the active imagination of the reader. He describes this as a kind of 'plate tectonics', in which words and pictures remain distinguishable as they scrape and slide against each other. This causes 'semic slippage' between the two—as well among the pictures and, indeed, among the words themselves. The alchemy of reading manga produces a monster in that it necessarily relates and assembles the words and pictures dispersed on the page itself to produce a story that seems to have been there all along. It is not only Ed Elric that has a discovery to make in these pages of *Fullmetal Alchemist*; we (as readers) dicovered—and, indeed, produced—the text within the elements presented to us. In this way, to read *Fullmetal Alchemist* is not to interpret it, but to *experiment* with it. Shou Tucker is not the only one making monsters here.

Indeed, to read *Fullmetal Alchemist*, we must offer some hospitality to monsters—we must assemble the disparate and seemingly incompossible elements found on the page—but that is not to say that we can, or should allow the monster to run amok. Derrida explains that to welcome a monster is, inevitably, to recognise it as a monster. In doing so, one must become accustomed to it—and to have it do the same to you. The act of recognition necessarily legitimates and normalizes the monster and, eventually, masters and tames it. The manga page, then, charges its readers 'to welcome the monstrous arrivant, to welcome, that is, to accord hospitality to that which is absolutely foreign or strange, but also, one must add, to try to domesticate it, that is, to make it part of the household and have it assume new habits, to make us assume new habits' [51].

To live with, and to welcome, monsters is to believe in an enlivened world capable of surprise and to allow oneself to be enchanted 'by the extraordinary that lives amid the familiar and the everyday' [52]. For surprise is nothing more than a miss in habitual reception—it is a simple lack of recognition [53]. The act of affording hospitality to monsters is important because in doing so, one is able to welcome the future *as future*. It is to accept the world as more than a set of pre-calculated possibilities to be managed, but as brimming with potential, unforseen and unforseeable. This is to embrace the future as monstrous:

> The future is necessarily monstrous: the figure of the future, that is, that which can only be surprising, that for which we are not prepared, you see, is heralded by species of monsters. A future that would not be monstrous would not be a future; it would already be a predictable, calculable and programmable tomorrow. [54]

In its monstrosity, *Fullmetal Alchemist* is constitutionally open-ended. This may have seemed obvious during its serialisation, when each month would bring a new installment. Yet, even when this serialisation came to an end and there was no more textual material to be assembled into the story, the work of reading is never really finished. Although it may seem to be a stable material 'thing' (ink on pages, collected into volumes bound as books), Stanley Fish insists that all literature is a 'kinetic art'. For this reason it does not lend itself to static

interpretation. He argues that critics and theorists should attend to the practices of reading and interpretation through which the text is actualised, rather than analysing the static shape of the printed page and idealising the assumed reader who can meet the demands of the text. He explains that meaning cannot be understood as an entity contained in the formal patterns of the text prior to and independent of the activities of readers. For Fish, meaning is always an *event* created in and through the practices of reading. Conceived of in this way, *Fullmetal Alchemist* can neither stand still nor can it allow its readers to do so.

> The objectivity of the text is an illusion and, more over, a dangerous illusion, because it is so physically convincing. The illusion is one of self-sufficiency and completeness. A line of print or a page is so obviously *there*—it can be handled, photographed, or put away—that it seems to be the sole repository of whatever value and meaning we associate with it…This is of course the unspoken assumption behind the word 'content'. The line or page or book *contains*—everything. [55]

Fullmetal Alchemist does not feature a pre-given reality (to be recovered by a sufficiently competent reader); the action of reading effects a somewhat mysterious transformation of the pre-given material on the page—an impossible, and monstrous, transformation [56]. Meaning is never a (pre-)definable entity belonging to a text, but an event—a dynamic happening [57]. In this way, the alchemy of reading is always an impossible transformation, rather than an 'equivalent exchange'. In the *Fullmetal Alchemist* story, the alchemic 'law' of equivalent exchange is articulated almost as a version of the scientific principle of the conservation of mass. It is said to be the fundamental principle underlying all alchemic reactions. However, through his adventures, Ed Elric discovers that alchemy does not operate according to this principle in the way he'd always been led to believe; its impossible transformations are never as calculable as he'd hoped. Similarly, the monstrous story produced through the alchemy of reading *Fullmetal Alchemist* necessarily exceeds the elements of the text, even if it is never entirely estranged from them. This is the case, even though, upon reading, the story-world seems to belong to those splashes on ink (the words and pictures, panels and gutters) on the page that we encounter as the text of *Fullmetal Alchemist*.

1. M. Warner, *No go the bogeyman: scaring, lulling and making mock* (London, Vintage, 2000), p. 258.
2. N. Carroll, *The philosophy of horror or paradoxes of the heart* (London, Routledge, 1990).
3. C.N. Milburn, Monsters in Eden: Darwin and Derrida, *MLN* 118:3 (2003), p. 603.
4. Carroll, *The philosophy of horror*, p. 19.
5. J. Derrida, Passages: from traumatism to promise, in E. Weber, ed., *Points…: interviews, 1974–1994* (Stanford, Stanford University Press, 1995), p. 386.
6. M. Warner, *Six myths of our time: little angels, little monsters, beautiful beasts, and more* (New York, Vintage Books, 1996).
7. J.M. Greer, *Monsters: an investigator's guide to magical beings* (St Paul, Llewellyn Press, 2001), pp. 3–4.
8. G. Deleuze, *Negotiations: 1972–1990* (New York, Columbia University Press, 1995).
9. J-D. Dewsbury, Performativity and the event: enacting a philosophy of difference, *Environment and planning D: society and space* 18 (2000), pp. 473–496.
10. B. Massumi, *Parables for the virtual: movement, affect, sensation* (Durham, Duke University Press, 2002), p. 233.

11. J. Bennett, *The enchantment of modern life: attachments, crossings, and ethics* (Princeton, Princeton University Press, 2001).

12. E. Livingston. *An anthropology of reading* (Bloomington and Indianapolis, Indiana University Press, 1995).

13. See, for example, the papers in the 'Intervation Roundtable: Geographical Knowledge and Visual Practices' section of *Antipode* 35:2 (2003).

14. See, S. Hones, Text as it happens: literary geography, *Geography Compass* 2:5 (2008), pp. 1301-1317; J.L. Romanillos, 'Outside it is snowing': experience and finitude in the nonrepresentational landscapes of Alain Robbe-Grillet, *Environment and planning D: society and space* 25 (2008), pp. 795-822.

15. For example, M. Doel and D.B. Clarke, The artistry of cities: Chris Ware's comic strips, in T Beyes, S.T. Krempl, and A. Deuflhard eds, *Parcitypate: art and urban space* (Zurich, Verlag Niggli AG); J. Dittmer, Comic book visualities: a methodological manifesto on geography, montage and narration, *Transactions of the Institute of British Geographers* 35:2 (2010), pp. 222-236.

16. お兄さん (*onii-san*) or お兄ちゃん (*onii-chan*) depending upon the level of familiarity shared.

17. G. Lessing, *Laocoon: or, the limits of poetry and painting* (London, Ridgeway, 1836).

18. D. Carrier, *The aesthetics of comics* (University Park, University of Pennsylvania Press, 2000), pp.68-69.

19. Jared Gardiner argues that comics are unable, and perhaps unwilling, to choose between more than just word and picture. They also insist on mixing past and future, and presence and absence. 'Archives, collectors and the new media work of comics', *MFS: Modern Fiction Studies* 52 (2006), pp.787-805.

20. W.J.T. Mitchell, *Picture theory: essays on visual and verbal representation* (Chicago, University of Chicago Press, 1994), p.91.

21. G.Rose. *Visual methodologies,* Second edition (London, SAGE, 2007).

22. T. Groensteen, *The System of comics* (Jackson, University of Mississippi Press, 2007), p.9.

23. Livingston. *An anthropology of reading*, p.80.

24. *ibid*, p.81.

25. J. Wylie, 'Smoothlands: fragments/landscapes/fragments', *Cultural Geographies* 13 (2006), pp. 458-465.

26. 'GRM RM RMB' is not really a word in the traditional sense; it is a written approximation of the sound made rather than a completely arbitrary rendition of the idea of that sound. The word 'rumble' is itself onomatopoeic, whereas the word 'thunder' is not.

27. W. Eisner, *Comics and sequential art: the principles and practice of the world's most popular art form*, Second edition (Parasmus, Poorhouse Press, 1990).

28. W. Moebius, 'Introduction to picturebook codes', *Word and Image* 2(2) (1986), p.141.

29. Mitchell, *Picture theory*.

30. Mitchell devotes a whole chapter of *Picture Theory* to ekphrasis, and the different ways in which the seemingly impossible practice of rendering the visual verbally is both welcomed and feared.

31. Carrier (*Aesthetics*) understands the rapprochement of word and picture as essentially narratological; words and images are united in the service of the story, which he conceives of only in narrative terms. This serves to reduce the category of 'story' and the experience of reading a comic, in all manner of unhelpful ways.

32. Groensteen, *System of comics*.

33. Groensteen acquires this terms via the Greek word *arthron*, which translates as 'articulation'.

34. F.L. Cioffi, 'Disturbing comics: the disjunction of word and image in the comics of Andrzej Mleczko, Ben Katchor, R. Crumb and Art Spiegelman', in R. Varnum and C.T. Gibbons eds. *The language of comics: word and image* (Jackson, University of Mississippi Press, 2001), pp.97-122.
35. A. Spiegelman, *Maus: a survivor's tale* (New York, Pantheon, 1996).
36. Mitchell. *Picture theory*.
37. P. Nodelman, *Words about pictures: the narrative art of children's picture books (*Athens, University of Georgia Press, 1988).
38. C. Desai, 'Weaving words and pictures: Allen Say and the art of illustration', *The Lion and the Unicorn* 28, (2004) p.409.
39. A. Say, *El chino* (Boston, Houghton Mifflin, 1990).
40. Moebius, 'Picturebook codes', p.146.
41. Livingston. *An anthropology of reading.*
42. Bart Beaty and Nick Nguyen's translation of *The system of comics* refers to the arrangement of comics pages—the *spatiotopie* in Groensteen's French—as 'spatio-topical' throughout. Spatiotopological is closer to Groensteen's meaning, however, in that he wishes to stress that the spatial positioning of panels on the physical page such that they enable particular kinds of relations to emerge. As such, the spatio-topia does not map a topography, but a topology; what matters is the relations that can emerge between the panels, not their situation as such.
43. For a discussion of the separative function of the cut and the development of montage in film, see M. Doel and D.B. Clarke, Afterimages, *Environment and Planning D: Society and Space* 25 (2007).
44. Groensteen, *System of comics*, p.45.
45. S. McCloud, *Understanding comics: the invisible art* (New York, Harper, 1993), p.66.
46. Groensteen, *System of comics*.
47. *ibid*.
48. Massumi, *Parables*, p.112.
49. E. Livingston, The textuality of pleasure, *New Literary History* 37(3) (2006).
50. N. Gaiman, *Fragile Things* (London, Headline Review, 2007), p. 26.
51. Derrida, *Passages*, p.387.
52. Bennett, *Enchantment,* p. 4
53. Massumi, *Parables,* pp. 220-221.
54. Derrida, *Passages*, p. 387.
55. S. Fish, *Is there a text in this class? The authority of interpretive communities* (Cambridge, Harvard Univerity Press. 1980), p. 43.
56. W. Iser, *Prospecting: from reader response to literary anthropology* (Baltimore, JHU Press, 1993), p. 258.
57 W. Iser, *The Act of Reading: A Theory of Aesthetic Response* (Baltimore, The Johns Hopkins University Press, 1978), p.22.