The Three Little Pigs: Circle, Triangle, Square

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[Ilustration / Ilustração]

Abstract

This article discusses an educational brief that covers graphic illustration, storytelling, and book design. The project was created by the authors for the discipline Theory of Design and Communication in the first year of a degree course in Design and Multimedia at the University of Coimbra, Portugal. It uses fairy tales as the basis for an exercise on the basic elements of visual communication. The brief requires the students to follow strict rules which limit them to using a graphic language consisting only of simple geometric forms, a limited palette of colours, and a specific number of pages. Accordingly, there are three main theoretical topics covered by the article: the relevance of 'design basics' for contemporary design education, which is an idea with roots in Bauhaus pedagogy, and as such is open to some debate; the function and purpose of restrictions in design, which is considered in relation both to 'real world' design problems and to creative work in general; and the choice of fairy tales as subject matter, which, it is argued, lend themselves particularly well to abstract problems due to their inherent simplicity, intelligibility, and familiarity. The student work that resulted from the brief is then described and compared in order to draw attention to points of interest that the project raised, and to show how the limited nature of the brief facilitated the apprehension of specific problems, thus guiding the students in the discovery of general principles of visual communication.

1. Introduction

This paper discusses an educational brief that covers graphic illustration, storytelling, and book design. It is a project for first year students and as such it focusses on fundamental aspects of visual communication that have potential for wide application, and it uses very specific constraints, which are intended to challenge the students to be creative within restrictions – a fundamental skill in itself. The project was planned by the authors or the discipline Theory of Design and Communication, part of the degree course in Design and Multimedia at the University of Coimbra, Portugal. Being that multimedia design is such a broad field, it is necessary to teach principles that can be applied to heterogeneous contexts, and to introduce the students to conceptual subjects such as narrative structure, which they will inevitably continue to grapple with throughout their development. The

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brief itself uses fairytales as subject matter and consists of a book project in which the story of a chosen tale must be told using a basic visual language of simple geometric shapes. This project is not quite an illustration brief, since it excludes many possibilities for developing rich and nuanced imagery, but it does have much in common with picture book work on a conceptual level, since it requires the planning and pacing sequences of images, considerations of the contrast between different page layouts and so on. The choice of fairytales as subject matter provides a familiar basis for the work and allows the students to approach what otherwise might be quite difficult problems, by dealing with a very straightforward goal.

This paper reports on the student work that resulted from the brief, which is analysed from various perspectives: common and exceptional responses; the quality and diversity of solutions; and the way the project effected dialogue in the classroom. Before going into detail on the brief itself however, there are three main subject areas that are introduced and explored, which form the background to the planning of the project. These are: the relevance of design basics for contemporary design education; the function and purpose of restrictions in design; and the use of fairy tales as subject matter, in a brief dealing with abstract visual principles.

2. The basics of design

The idea of teaching the basic principles of visual communication is open to some criticism, and it can be questioned whether this type approach is relevant for contemporary visual communication courses. This challenge is related to the association between the basics of design and 'design basics', the name given to many foundation courses since the mid 20th Century that are loosely based on Bauhaus pedagogy. Indeed, the idea that an abstract visual language can be applied to all areas of design and visual communication has its roots in the 'Vorkurs', the original foundation course at the Bauhaus created by Ittens and Gropius. Yet, that a universal basic visual language actually exists, or that it could be realistically applied in all circumstances are questionable, and some critical distance should be kept from this formalist position. Nevertheless, there is clearly an argument to be made for introducing students to basic visual principles. Wong for example argues that designers need to master a visual language before they are able to communicate a message or design a product and that this visual language is the basis of design creation [1]. Whether understood intuitively or consciously, this visual language should consist of principles, rules and concepts of visual organisation. There are several attempts to set out how these principles might be defined, as by Kidd [2] who breaks visual communication down into principles and oppositions or by Lupton & Phillips through their book, Graphic Design: The New Basics [3], although the later acknowledges that any attempt at producing a universal system of visual communication should be treated critically, and 'recognises a difference between description and interpretation, between a potentially universal language of making and the universality of meaning'. Despite this caveat, it is intended that providing

students with examples of fundamental principles in the construction of images should help them begin to develop their own visual repertoire and to become aware of the way images work at a formal level.

The roots of design basics

As already mentioned, design basics originates in the Bauhaus foundation course that was the cornerstone of its original curriculum and was intended to be relevant across all art and design fields. This course focused the student's attention on abstract visual relations and the manipulation and understanding of materials. Formal exercises were tempered by other much freer activities that aimed to develop students' sense impressions of the world around them through nature studies and new forms of life drawing[4].

The approach at the Bauhaus of attempting to get down to the absolute unquestionable elements of visual communication is related of course to the emerging epistemologies of the early 20th Century, with the developments of modernism and the attempts to rationalize design generally. Parallels can be noted in other fields, Russell and Frege's work on the 'principles' and 'foundations' of mathematics for example, or even — at the risk of making loose connections — Wittgenstein's Tractatus Logicus, all of which are works that take an axiomatic approach to their subject matter. From the various books that emerged from the Bauhaus, it is Kandinsky's Point and Line to Plane [5] that really attempts to break the visual down to it's most indivisible parts. Kandinsky saw his work on the basic graphic elements of painting as an investigation with a scientific character, and as such it was necessary to begin with fundamental elements, accordingly he calls the 'point' the 'proto-element' of painting, and builds from there: a point is set in motion to become a line, a line curves and meets itself to form a plane, and so on.

Kandinsky not only identified the basic visual elements as being, point, line and plane, but also drew comparisons with other fundamental elements: circle, square, and triangle as the primary forms; and yellow, red, and blue as the primary colours. If we consider Kandinsky's drawings of the choreography of Gret Palucca, we can see that a lyrical result is achievable within a visual language reduced to its barest elements.

Kandinsky's investigations have a poetic and at times metaphysical character, for example, a point in a picture must be shown by something visible, but it remains 'an invisible thing', and 'therefore, it must be defined as an incorporeal thing. Considered in terms of substance, it equals zero'. A point may be shown by a dot, which is not of course a point but a circle, but a point may also be implied by making two lines meet. To engage with design basics then is to question the very elements of which elements can be made and the nature of images themselves: fundamentally illusionary.

Gestalt psychology

The field that deals with how the human mind makes sense of images on a perceptual level is Gestalt psychology, a field which was founded by Max Wertheimer, initially to investigate the illusion of motion pictures, after he was intrigued by playing with a zoetrope [6]. The investigations of the

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Gestalt psychologists also included the perception of still images, particularly how the mind recognizes patterns in images and easily converts the two-dimensional picture plane to a three-dimensional image in the mind, understanding the relation of objects to each other in an imaginary space.

Kepes applied Gestalt theory to the cannon of graphic design and noted that 'the tendency to approximate in a two-dimensional relationship the totality of spatial experience' [7]. Arnheim took a similar approach, emphasised how, 'vision is not a mechanical recording of elements but rather the apprehension of significant structural patterns' [8]. Dondis elaborates these insights further, noting for example, how our interpretation of even the most abstract of imagery relates what we see to our own bodily experience. Therefore we see objects that are represented on the page as having weight and balance, and if an object appears to be tipping slightly to one side this will capture our attention, since in our perception this makes it seem as if it will fall [9]. Dondis reminds us that the process of looking at images and 'ordering, of intuitively recognising regularity or the lack of it, is an unconscious one, requiring no explanation or verbalisation'. This explanation is coherent with the idea that visual ideas do not always need to be explained directly to students, since the principles can be understood intuitively.

The teaching of Druckrey, another leading exponent of 'design basics', follows this idea. She argues for setting briefs that allow students to make their own discoveries, pointing out that 'a good student assignment, guides students through a number of important experiences' [10]. Likewise, Wong claims that principles are personal discoveries rather than universal laws, and therefore each design theorist may have a different set of discoveries and may describe them, accordingly, in a different way. Kelly takes a similar position, explaining that, 'understanding of visual properties cannot be verbally communicated to students. Students acquire understanding through experience, with the process being guided by teachers who understand process and criteria' [11]. The challenge for design educators then is not to explain the principles of two dimensional design, but to create situations in which the students can encounter and engage with visual relations themselves. Visual exercises should bridge the gap between the instinctive and the rational by testing principles through direct experience.

Basic design then, as with other competencies in creative fields, requires a substantial immersion in the subject matter so that students 'discover something new that cannot be found in any text book. Design work practiced in this way does not appear to aim at a result but rather at knowledge gained in the course of investigation and study' [12]. Visual systems can be understood analytically, but a certain depth of engagement is required. It has been suggested that for students to work in this area can also be relevant beyond visual communication and for the comprehension of more complex problems, 'a system, and especially a human or social system, is best understood from within, through a qualitative, phenomenological, approach. Basic design, if properly reconsidered, will be the best pedagogical tool for teaching such an approach. Insofar as a system is something like a complex living morphology, I believe that aesthetic education will be the best way to apprehend its dynamics' [13].

Typologies of design basics

There are as many different ways of breaking down visual language down as there are authors willing to attempt it. Kidd defines 19 parameters, while Lupton & Phillips outline 16, yet Resnick [14] is more concise defining only six elements and five principles totalling 11 parameters, the same number as defined by White [15], although they are not the same definitions since White includes colour, conspicuously absent in Resnick's list. Leborg meanwhile [16] defined many more fundamentals, themselves grouped into six categories: abstract objects, abstract structures, concrete objects, concrete structures, activities, and relations. Considering the above, we may conclude that design 'basics' are really not so basic at all and describing or defining them soon becomes a complicated enterprise. We will leave the reader therefore to refer to the sources above for several typologies that are much more intelligible than what we could achieve here. Instead let us turn to the criticisms of design basics.

Criticisms of design basics for visual disciplines

Some educators see basic design as the foundation of the visual disciplines and argue that such a course, 'should teach the students the key skills required for a designer, to train them in Gestaltung, in giving form, or better yet attributing a specific configuration to artefacts and objects of communication' [15]. While others have argued that basic design courses are misleading because they give the impression that design is purely a formal visual activity, divorced from content, and that the exercises they involve are too removed from actual professional practice. Davis, for example has pointed out that these courses are problematic because of their emphasis on visual elements over design processes and applications, thus neglecting context and audience [16]. Similarly, Lupton [17] has argued that teaching abstract principles, is a flawed approach because it prioritises perception over interpretation, making an artificial separation between the visual and the construction of meaning.

A response to these challenges would be 'that to teach basic design principles and professional practice in the same problem divides the objectives, and confuses students trying to grasp principles', as argued by Kelly [17]. This point of view implies that only once students have mastered an abstract visual language can they apply it in contexts with specific meanings – a conclusion that is somewhat questionable. Kelly did concede however that content could be introduced, 'near the end of the cumulative educational experience', and perhaps this compromise is most reasonable, although in the brief we present in this paper, content is required to give the students a purpose in exploring an abstract visual language, somewhat reversing Kelly's position.

The criticisms of teaching 'design basics' do not end with questions of content however, Davis made another, more subtle criticism: what is taught as the basics of design is not actually quite as neutral as it seems, due to the fact that these courses emphasise 'early twentieth-century European aesthetics' which are only presented as neutral, 'under the guise of "universal" form'. The counter argument is that the design basics are not intended to be an aesthetic, but rather a reduced visual language that is used to focus

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on abstract relations instead of aesthetic concerns. The conclusion that we can make from this brief comparison of ideas is that the principles of visual communication may well be useful subject matter for students in visual courses, but they should not be assumed to be neutral nor universally applicable. We would like to maintain that the subject has much of interest to offer practitioners of visual communication across various disciplines.

Without rules, there is no game

Kidd wrote that, 'the best design solutions are born out of necessity' and it was argued by Olpe that 'game rules are necessary so the experiment can lead to new knowledge and not lose itself in chaos'. There are several levels to the function and purpose of restrictions in design, which can be considered in relation both to 'real world' design problems and to creative work in general, this section discusses some of these to argue the case for planning a brief with strict constraints. Restricting students to a limited visual language is not intended to devalue richer and more illustrative types of image making, rather it is hoped that by working within the limitations, students will be forced to think more carefully about their compositions. The importance and potential of using restrictions in design projects and educational exercises is deserving of some elaboration, both as a general principle in the way that rules – self-imposed or otherwise – can inform the development of creative work and also, more specifically, how design itself is dependent on, and thrives within, restrictions. As Kelly defends, 'adhering to limitations is basic to all design solutions in or out of school'.

Restrictions do not necessarily prevent creativity, but rather give structure to an otherwise daunting and inhibitive problem. 'As every game must have rules to prevent its degenerating into triviality, equally, so must creative picture making be guided by rules' [18]. There are well-known examples of artists creating their own rules within which their work can then flourish: as Lars von Trier and Thomas Vinterberg did with the Dogme 95 manifesto, which forbid all kind of stylistic artifice in film making, pushing them to focus on the more essential aspects of story, script and performance, resulting in remarkable films such as Trier's Idiots and Vinterberg's Festen. This manifesto was a key influence for the musician Matthew Herbert to write a set of constraints of his own, [19] which defined the way he made some of his most extraordinary work, such as an album made only from the sounds of the life of a pig, including it's slaughter.

Other examples could include the work of the sculptor and conceptual artist Sol Le Witt who wrote short instructions for drawings that could result in complex murals; or the various lipograms, palindromes and Russian doll like narratives of the literary movement OuLiPo. Recently, a group of artists and designers started a weekly practice of collaborative drawing which resulted in the Conditional Design Manifesto and the Conditional Design Workbook [20], drawings are based on short sets of rules which often lead to complex results. Their manifesto maintains that 'Constraints sharpen the perspective on the process and stimulate play within the limitations'. Recent research [21] has shown that restrictions appear to improve creativity, even once they have been removed.

Learning through fairytales

We tell stories to ourselves and others to explain things more easily, and of course the fairytale represents a classic example of this behavior, since these stories often have an instructive aspect, aimed at teaching the child an important moral lesson. Curiously, it seems that fairytales can also help us to digest more complex subject matter. The story of The Tortoise and the Hare provides an example of this: a variation of it was used by the philosopher Zeno [22] to explain his paradox of motion, in which even Achilles could never catch up to a tortoise to whom he had given a head start, due to the infinite divisibility of space. Since the tortoise itself is moving, no matter how fast Achilles would run, once he had reached the position of the tortoise it would too have already moved on, since it was also moving forwards, and thus it would always remain in the lead. As with Pavlov and his dog, and Schrödinger and his cat, Zeno found that a difficult idea can be more easily understood through a fairytale. Other examples of fairytales being put to use to explain abstract principles can be pointed to such as Socrates and the Three Little Pigs [23] which retells the story to teach mathematical principles. At a push we could include Flatland in which an invented world of two dimensional creatures was used to simultaneously show the impossibility of the perception of higher dimensions and make a sharp critique on the sexism and class divisions of Victorian Britain. Fairy tales as subject matter then, we would argue, lend themselves particularly well to abstract problems due to their inherent simplicity, intelligibility, and familiarity.

There are several precedents for our brief, in that they tell stories specifically using geometric shapes and symbols. Bruno Munari contemplated making a story based only on symbols [24], but only went as far as writing a poem. In another instance, Triangle, by Mac Barnett and Jon Klassen, an anthropomorphised shape lives in a triangular house in a landscape formed of triangular rocks, he moves through a landscape of 'shapes with no names' to reach the home of a square who he proceeds to play a trick on.

The most direct influence on our ideas however was Warton Lavater's Le Petit Chaperon Rouge, which retells the classic fairytale using only painted dots. A key at the beginning of the book explains the system, and then it is up to the reader to interpret the images without the help of captions or explanations. By chance, we discovered another very closely related project, designed and illustrated by a student of Inge Druckrey, based on The Three Little Pigs. Druckrey describes it thus: 'A very favourite book on a lighter side, was done by a student who was unsure of his ability to illustrate a text, so I decided to limit him, he was only allowed to use geometric objects for his illustrations and only cut paper, and it turned out just wonderful' [25].

The project

The students were given one month (two hours of studio classes per week), to create a book based on a fairytale chosen from the following list: Little Red Riding Hood; The Three Little Pigs; The Ugly Duckling; and The Tortoise and the Hare. To tell the story they were allowed to choose one basic graphic

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element, which could be either: circle, square, equilateral triangle, star, cross, or straight line. The limited choice of shapes was intended to focus the work on structural relations rather than more superficial aspects. The limitation of equilateral triangle for example, meant that students could not use a wide variety of different triangles to make pictures of whatever they wanted. The limitation of single straight lines was also important in this respect, if lines could be curved or connected then suddenly almost any picture would be possible, clearly contradicting the efforts of the project. Text was only allowed for the cover, colophon and key. Any colour could be used, but only one plus black. The book had to be A5 format, consisting of 20 pages, including the cover, to be submitted in print and as a pdf.
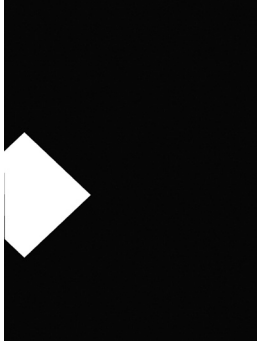
The constraints imposed by the brief led to some productive discussions in classes about what was acceptable. Several students realized that it was possible to achieve more variations of colours by using tints, while contrary to the desire of most students to add colours, one student took the opposite approach and used black and white only, creating contrast through changing the grain of grids of triangles in a resourceful piece. Further controversy emerged with discussions of what constituted a 'line' as a basic graphic element, leading to some lively discussions in class. The question is how to represent a line close up and from a distance, whether it should become thicker or not and at what point it should be considered a rectangle. An advantage of running a project that requires such a reduced visual language is that it made it very easy to discuss details in the designs. Another challenge to the rules of the brief was related to the format of the book, with several students using foldout versions or making the book landscape rather than the more conventional choice of portrait.

The Three Little Pigs

It is not surprising that most book designs for The Three Little Pigs used circles in red and pink shades to represent the pigs. Some students made the character design more difficult for themselves by attempting unnecessarily to distinguish between the three pigs using gradients or scale changes, which in most cases only complicated the images, although there was one very elegant solution to this problem, three pink circles with one, two, then three white dots reversed out of each one, thus leaving absolutely no room for confusion between the pigs. Others built up expressive characters through combining shapes. Difficulties for this story related to the repetition of events and characters and the rather complex image required to show the wolf entering the house through the chimney only to land in the cooking pot.

To show the difference between the three house, an elegant solution was to represent each with a single triangle, using a progressively denser grey to show the relative stability of the construction. In this book, the entire houses blew away in single pieces, while in another their destruction was shown simply by subtraction: each square disappeared in turn, revealing the pigs behind. Using squares to construct the houses proved to be a straightforward option, one student achieved the three types of house by using an increasingly fine grained grid of squares, although this book suffered from overly complicated drawings. Another student used equal sized squares to construct the three

houses, the difference between the buildings represented by construct-
ing walls either one, two, or three squares deep (fig. 1.). This book included
several other effective ideas, such as using squares rotated to stand on their
corners to make more dynamic looking
figures for each of the characters. The wolf
in this story is a white square occupying
its own black page that it enters from the
left and slowly moves closer to the facing
page of the pigs throughout the story. An
effective work by another student used a
large solid black square for the wolf, which
overpowered the pink squares of the pigs
both in scale and intensity. In one particular
spread this square is shown tilted on a white
background, in a composition reminiscent
of Malevich's most notorious painting.

**Fig. 1.** *The Three Little Pigs* using squares.

One of the very few projects that
made use of straight lines was for this story. The final object is a refined
exercise in applying fundamental graphic principles of pattern and texture,
particularly notable in the distinction of robustness made between the three
houses. This was achieved via the use of a row of dashed lines – to represent
the texture of a weaker wall, through a texture of alternating dashed and
solid lines, to a row of completely solid lines, representing the texture of a
wall with greater strength. Moreover, the very regularity of the rhythm of
the lines gives the constructions an artificial manufactured character, con-
stricting with the more individual and organic constructions that represent
the trees. A further advantage of using rows of lines for the houses was that
the empty spaces between the lines facilitated the possibility of seeing the
pigs inside without the need to revert to transparency.

Little Red Riding Hood

Like The Three Little Pigs, this story suggests a very straightforward way
to represent the characters – many students realized that a red triangle
pointing upwards made a good Little Red Riding Hood (LRRH) and a
black triangle pointing downwards or sideways was easily recognizable
as the wolf. Significant problems with this story were the way to represent
the journey through the forest and the moment when the wolf swallows
the grandmother. Attempts were made to show the well-known dialogue,
'but Grandma, what big EYES you have...' which was problematic at this
level of reduction. Successful solutions involved highlighting each charac-
teristic of the wolf in turn, making it's ears, then eyes, then teeth bigger.

The forest was represented in a series of different ways, from drawing
individual trees with many small triangles, to more organized approaches,
such as filling the whole page with a grid of triangles that made a dense
pattern in which space could be opened to represent the path or a clearing.
This particular book also used this pattern as a way of changing proxim-
ity to the action achieved through definite jumps in scale that were easily
understood. Another student used two stacks of large black triangles to

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frame LRRH's path through the forest in an ominous and claustrophobic composition, made more so on the facing page where this arrangement was repeated but with the addition of the black triangle of the wolf (fig. 2).
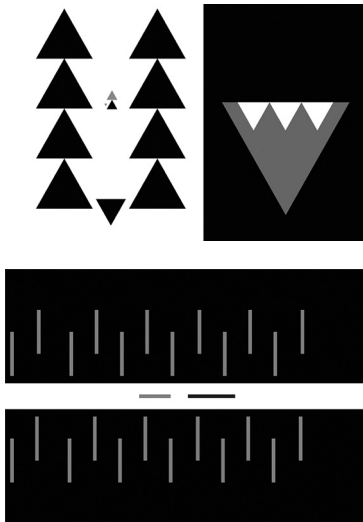
A strikingly different approach to the challenge provided by the journey through the forest came from a student who had chosen to use lines (fig. 3). This book was designed in a landscape format and the compositions were based around a central device of a long continuous line going through the middle of all of the pages in the book.

Fig. 2. Pages from one of the *Little Red Riding Hood* books using triangles only. The wolf is represented simply by an inverted black triangle (left). The well-known dialogue that includes the phrase, 'Oh Grandma but what big TEETH you have', represented by this extreme close up of the wolf's mouth, illustrated with only four triangles (right).

Fig. 3. Page from *Little Red Riding Hood*. The white line through the middle is the path.
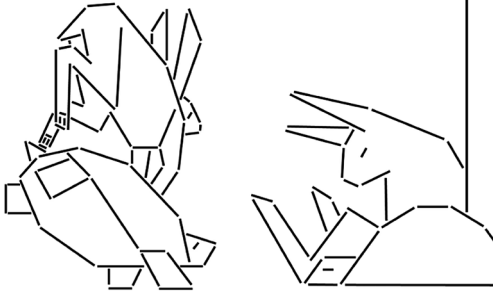
The Tortoise and the Hare

Although the story of the Tortoise and the Hare is a morality tale, the formal problems that it presents are quite unrelated to this theme, the main aspects that the students had to cope with was how to represent the space and time of the race. The was a general approach of using what seems an inevitable strategy, namely that the beginning of the book is the start line and the end is the finish line, with the characters relative position changing on each spread. It should be noted however that this is far from the only way that a race could be represented, other possibilities include changes of scale and view point, or even showing the events in a non linear order. Nevertheless, this seemingly straight-forward approach led to quite diverse results. Several students adapted the book format to better suit the representation of the route of the race. One student turned the book into a fold out poster for example, attempting to use the large area that this solution provided as a representation of the whole landscape. Another student made the book as a long strip with a concertina fold printed on both sides, the key moment when the Hare rests under the tree is placed at the point when the strip is turned over, linking the format and the narrative structure by making a literal as well as metaphorical turning point. This same book included several notable features such as a change of proximity at this crucial central moment, showing the two characters close up, and an innovative approach to using line as the graphic element. On the inside pages the lines are short and thick to allow for drawing trees and the characters with just two or three strokes, while on the front and back cover a different illustration style was used, still only with lines but in much more pictorial detail, allowing sufficient complexity to depict the Hare jumping over the Tortoise on the front cover and them both sleeping on the back (fig. 4).

A lebre e a tartaruga

Fig. 4. Front and back covers of *The Tortoise and the Hare*

Other books dealt with the idea of motion in different, almost cinematic ways. A deceptively simple solution was to use a single tree that slowly moves across the spreads as we progress through the book, giving the impression of a slow pan across a sparse landscape throughout the duration of the race. Using the device made it possible for the activity of the two characters to be clearly communicated by their positions on each page relative to the tree. A clever solution was to show the race from the front, so that two small squares show the characters in the distance, and by making these shapes larger through consecutive pages it is clear that one is getting nearer much faster, until of course the other catches up and moves in front of it, eventually filling the last page of the book as Tortoise reaches the finish line.

The Ugly Duckling

Through working with each of these stories as source material it became apparent that each of them has certain essential moments and features

Fig. 5. A design for *The Ugly Duckling* that utilized an isometric grid.

that define them as material for illustration and for a book. Like The Tortoise and the Hare, The Ugly Duckling required the articulation of space, so that the protagonists journey can be understood. A satisfying solution to this was created by one student who used a full bleed isometric grid to fill the picture plane and had the triangular characters move around always closely guided by this structure, giving a distinct sense of a logically coherent triangular world (fig. 5).

In the case of the Ugly Duckling, however, the essential idea is not so much space as that of self-awareness and growth, first through difference, then through the construction of identity, and finally through acceptance in a group or community. Importantly then, students had to find a way to distinguish the Ugly Duckling from the others, which was tackled in several ways: using a different colour (which was the case in all of the projects); and strategies such as rotating the shape; or making it larger than the others. In one book the Ugly Duckling slowly grows another triangle which becomes its head, giving it a more bird like shape. Perhaps the most satisfying solution to this problem came from a student who used a vertical line to represent the ugly ducking and horizontal lines to represent the swans, the moment of transformation occurs when the bird sees its own reflection at a 90 degree angle, thus making the transformation into a swan. This same book addressed another

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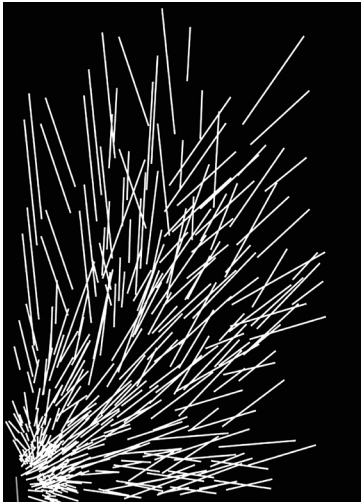
essential moment – when the Ugly Duckling is rejected and feels absolutely alone – in an intense page design filled with a confusion of lines arranged at different angles but all directed towards the Ugly Duckling (fig. 6), which is then followed by two consecutive spreads in which the protagonist is isolated on a page with a black background while the duck family and the swans occupy separate white pages. This book design is an excellent example of a student using the bare elements allowed in the project to construct expressive and dramatic sequences.

Fig. 6. An expressive page communicates the emotional state of *The Ugly Duckling*.

Conclusion

The work completed by the students demonstrate inventive and conceptually economic solutions. The project described led to the production of many interesting student projects which appear to reflect a good level of engagement with the subject matter. The students' work demonstrate the ways in which they were able to explore the possibilities of sequencing abstract images to create meaning and to exploit the possibilities of these sequences to create dramatic results, using clearly articulated narrative structure and by identifying crucial moments within the stories. As shown in the analysis of the work produced in the project, the students were able to use the principles of visual communication in various effective ways. There were common tropes, such as pink dots for The Three Little Pigs, but at the same time there were many examples of students challenging the brief and exploiting or bending rules to make their finished books. It seems that the constraints and rules imposed by the brief encouraged creativity and provided stimulating challenges for the students.

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