Chapter 4

The sketch and the feel-system

Introductory

This chapter on the sketch and the feel-system provides a link between the time honoured, more rule bound, academic approach (outlined in Chapter 2) and the newer, more open-ended and personal Modernist ones (introduced in Chapter 3, and to be explored in the remainder of PART 2). The subject also provides a convenient opportunity to define and explain the importance of the "feel-system", which not only governs our capacity for sensing linear and spatial relationships but also links this essential aspect of drawing to personal response and the emotions.

Definitions

Anyone trying to deduce the meaning of the words "*sketch*" and "*study*" from the titles given to drawings in art galleries and reproductions of them in books, might be forgiven for concluding that they are interchangeable. However, in these pages each is given a distinct definition based on their very different roles in the *academic method*. Thus although both are used to describe stages in the preparation of a finished product, they differ fundamentally in terms of their function. Thus, the "*sketch*" is: "*a drawing made from the imagination with a view to working out how the elements required by a predetermined idea can be fitted together in a final work*"; and, the "*study"* is *"a drawing from observation whose primary purpose is to discover and characterize the unvarying uniqueness of appearances.* In the context of the former, the accuracy aspiration is of no particular value whereas, in that of the latter, it is crucial.

The same is true of a second function of the *study*, namely as a tool to be used in the search for new "*laws of nature*" (invariants of appearances). Here too little progress could be made without accuracy.

Figure 1 : An elaborate sketch by Leonardo da Vinci

Figure 2 : Two sketches by Michelangelo relating to the same subject matter.

Figure 3 : A sketch by Rembrandt

Figures 1-3 reproduce sketches by Leonardo da Vinci, Michelangelo and Rembrandt. In them we find three of the acknowledged *Old Masters* experimenting with ideas in the hope that they will prove to be of use in a final product. Although all three drawings are distinctly "*sketchy*" in appearance, they also show

that the artists concerned were capable of producing plausible renderings of figures and objects without direct reference of the external world. *Figure 2* shows Michelangelo refining ideas by means of two attempts at the same subject. According to the scientific research which gives this book its uniqueness, the ability to achieve this level of realism would not have been due to an innate gift, but to the fruit of a lifetime of using drawing as a tool for researching the nature of appearances. In other words, to a lifetime of making "*studies*".

But there is much more to these sketches than their degree of realism. Another characteristic which they have in common is *the freedom, the variety and the individuality of the mark-making*, a fact that brings us to one of the core proposals of this book. All three artists were famous for the quality of their studies and it was these that provided them with knowledge that reveals itself in their sketches. The habit of making studies can perform the same service for us all. Using them as a means of revealing the uniqueness of appearances has the potential for benefiting all aspects of drawing skills.

It hardly needs saying that the disciplined looking is necessary for making accurate *studies,* but it is perhaps less appreciated that it also prepares artists for making more accurate drawings from memory.[1] It also paves the way for increases both in information pickup and line-output speed, and can do so without sacrificing veridicality. That this is the case gives a degree of plausibility to Delacroix's aphorism that "*any artist worth his salt should be able to complete a drawing of a man falling from a sixth floor window before he hits the ground.*" More about *fast drawing* later, particularly in *Chapter 8.*

The Modernist artists' use of the sketch

It might seem even less obvious that accuracy is a precondition of the creative use of *distortion and abstraction.* However, as pointed out in the last chapter, logic says that this must be the case, since neither of these words has meaning except in the context of the something that is being *distorted* or *abstracted*. No wonder Matisse made a point of producing careful drawings before he set about the distortions and abstractions for which he is famous. Although I have not seen the careful and detailed *study* that no-doubt preceded the two sketches reproduced in *Figure 4*, knowledge of the artist's working practice makes it almost certain that there must have been one.

1 See the drawing lesson described in PART 3 and Horace Lecoq Boisbaudran, "*The Training of the Memory in Art*", 1864.

Matisse was like his academic predecessors in the sense that he always aimed to start with an "*idea*". However, for him this had to be more than just the subject-matter of an image. Rather he sought to find a unique integration of image and pictorial dynamics through processes of *abstraction*, *distortion* and *invention*. As just intimated, a preliminary step was to make a rigorous study of an attention-capturing scene (often a woman he enjoyed looking at). He hoped that in the process painterly ideas would be suggested that he could explore by means of sketches of the kind reproduced in *Figure 4*. Matisse is reputed to have made and later burnt an enormous number of these, often extremely scribbly, productions. Fortunately, being interested in the analysis of *process* and in the possibilities of *mark-making*, he preserved a lot as well. On occasion, he even signed them.

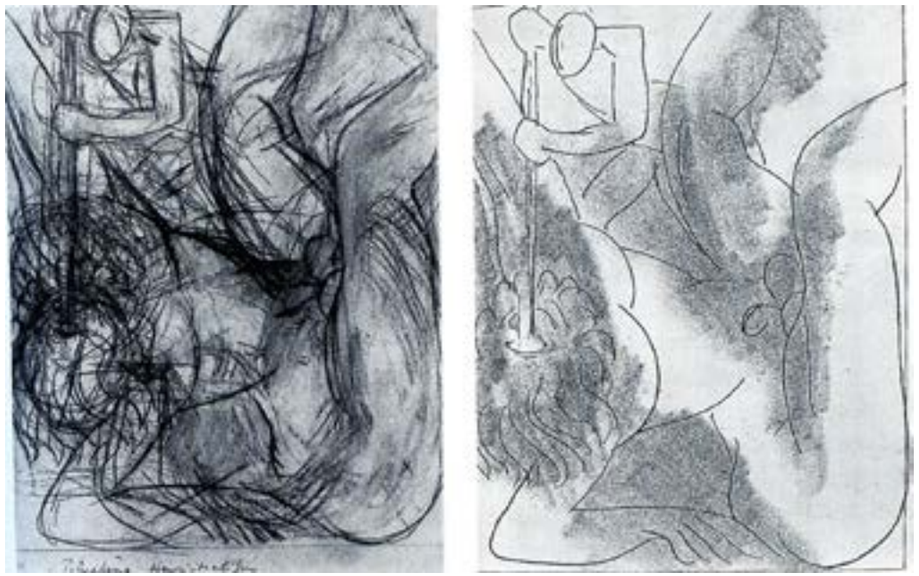

Figure 4 : Two sketches developing the same subject by Matisse.

Hybrid drawings

Some people might not be happy with the foregoing definitions of "*sketch*" and "*study*", which it has to be admitted oversimplifies the situation, not least because drawings can, and frequently do, combine elements of both. For example,

it is a widespread practice to *rough out* a figure, object or scene as a means of creating a foundation upon which is superimposed a more accurate rendering of it. The outcome can only be described as a combination of the sketch and study. This common way of doing things is difficult to illustrate because the study obscures the sketch. Also, many artists like to make a detailed *study* of a part of a scene and then *sketch in* the rest. Degas drawing of a woman towelling herself down after a bath *Figure 5* gives an examples of this kind of hybrid.

Figure 6 : Degas - a study/sketch combination.

But does the occurrence of hybrids undermine the usefulness of my definitions of *sketch* and *study*? Not in my view, since everything that I have written about the two of them separately is relevant to them in combination. Artists who have made many information-revealing *studies* will be in a position to produce more coherent *sketches* than those who have not. The extent of their advantage will depend at least to some extent on the degree of thoroughness with which

they have approached their analysis. As was clearly the case for Leonardo, Michelangelo and Rembrandt, a history of rigorous study is the best preparation for making worthwhile *sketches*, whether their value is judged in terms of credibility, suggestiveness, quality of mark-making or any combination of the three. We will return to the advantages of rigorous analysis in *Chapter 8* which argues that it provides an excellent preparation for "*fast drawing*" and "*personal expression*".

The sketch as an artwork

Figure 7 : Toulouse-Lautrec - a signed study/sketch combination.

One consequence of the changing attitude to the *sketch* was that, instead of being considered merely as a preparation for something else, it came to be seen as having potential value as an artwork in its own right. The most radical pioneer of this new possibility was Henri Toulouse-Lautrec. To my knowledge, he was the first artist to sign his *sketches*. An example is illustrated in *Figure 7*, which portrays his friend and gallery-man Maurice Joyant.

Later, signing sketches became common practice for many artists including Matisse and Picasso, both great admirers of the work of Toulouse-Lautrec. Nowadays, the value given to the free and varied mark-making that characterises the *sketch* has to some extent undermined the status of the *study*. Accuracy is too often decried as being incompatible with personal expression and creativity. While this can be the case, it is far from necessarily so. Obtaining it as a result of using drawing as a *tool for exploring appearances,* reliably forces an expansion of visual awareness and, thereby, paves the way for ventures into new territories, as those explored by Michelangelo, Leonardo da Vinci, Toulouse-Lautrec, Matisse and many others.

The sketch and the imagination

A main benefit of the sketch is its ability to stimulate the imagination. To give an idea of how it does so, we can start with Leonardo da Vinci telling us how he got inspiration from imaginary faces that he saw emerging from the textures and shapes created by water stains on the mud facades of houses. Somehow his eye/brain was constructing these from cues that certainly cannot have had much in common with actual human faces. Indeed, Leonardo's interest in them was that they suggested possibilities that he could not have imagined otherwise. Maybe his drawings of grotesque heads illustrated in *Figure 9* had their origin in such water stains.

But Leonardo could have created his own water stain patterns on a piece of paper and treated them as the first move in making a sketch of grotesque heads. Alexander Cozens famously did something similar when starting his watercolour landscapes. He dripped paint here and there on wet paper and used the fuzzy forms that emerged to stimulate his imagination when making compositions of trees, hills and clouds. Whether these should be called "*sketches*" is not a matter of importance. The purpose here is simply to illustrate one amongst a multitude of ways that clusters of marks can be used to stimulate the imagination. Another would be the famous Rorschach inkblot test.

Figure 9 : Leonardo da Vinci - Grotesque heads.

Unless experienced at doing so, as have been many book illustrators, artists are likely to have difficulty in producing veridical drawings from imagination. If you the reader are not already good at it, give it a try and see how you get on. I predict that you will find the task extremely challenging and I would be surprised if, in the process of building up the image, you did not find yourself faced with a sequence of questions about how to proceed. If you persevere and answer each question with a stab at your best guess, each of the lines you draw will constitute a proposition to your *recognition memory* which has quite different capacities to

those of your *recall memory*. Happily for artists, amongst these are attracting attention to errors and suggesting alternatives to try out.

Artists with more experience can also benefit from using trial and error when drawing familiar objects from the imagination and for the same reasons. The difference is that they:

- Produce drawings that start at a higher level of plausibility.
- Are sensitive to smaller errors.
- Are better placed to suggest alternatives.

Figure 2 provides an example of these factors at work in a number of related sketches by one of the most knowledgeable artists in history. That Michelangelo felt it necessary to repeat the same scene several times means either that he saw a need for revision or that he was interested in testing alternatives.

The same benefit can accrue when drawing a person that is sitting in front of you from memory. Try giving yourself five minutes to look at her/him doing your best to memorise what she/he looks like in as much detail as possible. Now look away from your model and try to produce a drawing from memory. You will almost certainly find that you have forgotten a great deal. However every time you hesitate as to where to go next you are in a position to try alternatives and see how they are received by your recognition memory. If this does not produce a satisfactory outcome, do not despair for in the process of failing you have been supplying yourself with questions concerning relationships that you had previously overlooked. These will help you improve your performance when you return to drawing from observation.

In summary, whatever the level of your knowledge, the process of trial, followed by error correction that characterises the sketch, will not only bring about improvement in the short term but also provide questions that will change the way you analyse objects in the future.

THE FEEL-SYSTEM

The reason that this book is called "*Drawing with Feeling*" is that its central messages concerns what I call "*feel-system*" and its potential for helping us produce accurate or, more importantly, expressive drawings. Accordingly it is important that I am as clear as possible as to what I mean by the conjunction of words "*drawing*" and "*feeling*".

The nature of feeling

The verb "*to feel*" can be used in the context of a wide gamut of human experience from scarcely perceptible sensations to full blown emotions.

Thus, at one end of the continuum we have *physical sensations*. For example, when we lightly touch first one surface and then another, we can "*feel"* or "*sense*" which of them is *harder, softer, smoother, rougher,* etc.. Or, when we attempt to make a line drawing of an object from observation we "*feel"* or "*sense*" that, relative to the corresponding stretch of the contour of the object we are depicting, the line we have just produced is *too short, too long, too vertical, too horizontal, too near or too far from another feature,* etc.. In this use, the verb "*to feel*" is close to being interchangeable with the verb "*to sense*".

At the other end of the continuum we have *personal feelings and emotions*. For example, when we meet a person or look at a painting, we can feel *attracted, repelled, interested, indifferent*, etc.. In this use, the word "*feel*" is no longer equivalent to "*sense*". Thus, we say "*I feel angry*" but not "*I sense angry*". In general, we "*feel"* emotions. We do not "*sense"* them.

But although taking these two limiting cases takes us an important step towards our definition, it does not provide the answer we want. Simple dictionary type definitions invariably obscure complexities and, in doing so, can muddy the issue. In the case of "*sensing*" the hardness of the surface of an object, the experience will be different if it is *familiar* or *unfamiliar*. If the former, the touch may do no more than confirm expectations, if the latter, it will be accompanied by the extra degree of alertness that goes along with new experiences.

But this is not the end of the subtleties of meaning. As well as confirming expectations, familiarity triggers links and associations with past experience. For example, the surface might:

- Belong to a rare, beautiful or valuable object.
- Have emotion-engendering links with a loved one or with a significant episode, etc..
- Be perceived as beautiful or ugly in its own right.

Whichever is the case, the feeling aspect of the act of touching will be influenced. In other words, it will be nuanced with emotion.

When producing a line in the course of drawing from observation, the realisation that it is the wrong length, wrong orientation or wrong position relative

to other lines is likely to awaken the emotions associated with making mistakes. These are likely to be different for those:

- Who, despair at yet another example of what they see as a shameful shortcoming in their capacity for eye/hand coordination.
- Who have an impatient teacher looking critically at their work.
- Who have taken to heart the time honoured saying that "*we only learn from our mistakes*" and, accordingly, and rightly, see all mistakes in a positive light, as providers of learning opportunities.

But mistakes are not the only source of emotional responses. Just as the experience of touching a surface may be influenced by emotion-rich associations and connotations triggered by the object to which the surface belongs, so line production might be affected by emotions relating to the subject matter being drawn. Only a person as atypical as Cézanne would claim to feel the same when drawing an apple or a woman.

In summary, no matter how simple the sensation it will be elaborated by a complex of factors relating the past experience of the individual concerned.

The *"feel-system"* in action

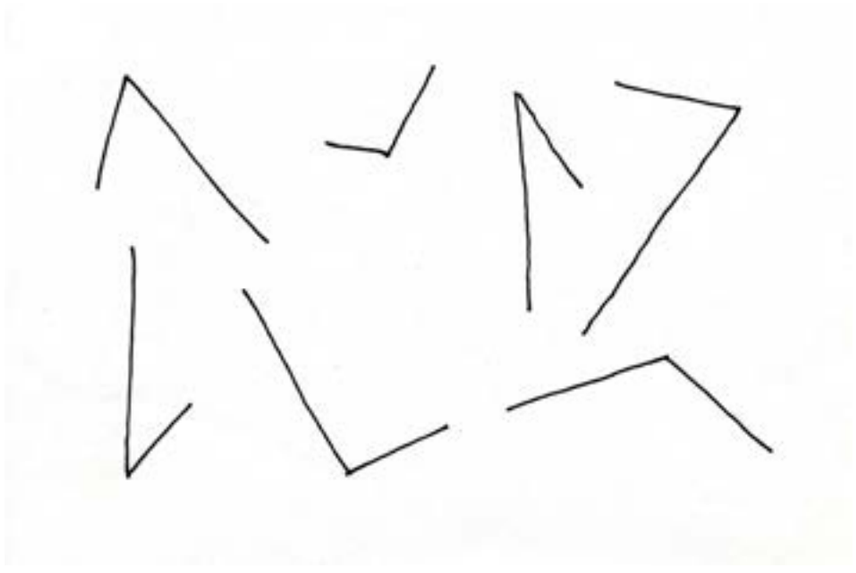

Figure 8: Pairs of straight lines

While keeping in mind these ideas about the range and complexity of possible ramifications of the word "*feeling*", we can now turn to a discussion of how these might be applied to drawing from observation.

Let us start by shutting our eyes and imagining ourselves holding a pencil ready for drawing on an imaginary sheet of paper. Even with our eyes shut we will find it easy to follow the instructions below. For each instruction start by imagining drawing a vertical straight line of a certain length in the air in front of you.

- Extend the line by its full length.
- Extend the line by half its length.
- Extend the line by twice its length.
- From the endpoint of the line draw another line at 45° to it.
- Repeat the last exercise two further times, first with the second line at 90° and then one at 135°.
- Draw a straight line then draw a semicircle which starts at one end of it and finishes at the other.
- Now draw a second curve with the same starting and finishing points, but now only half as high as the first one.

If we now open our eyes, we will find just how well our *feel-system* has performed. It is unlikely that all the outcomes will be spot on, but they will probably be near enough to show that the feel-system can do quite well on its own.

Now let us do another exercise that shows us the strengths and weaknesses of the *feel-system*. *Figure 8* provides a number of examples of simple line relationships. The task is to reproduce each of these separately following the same four steps, namely: (1) analyse, (2) shut your eyes, (3) draw and (4) open your eyes. The last step will enable you to see how well or badly your *feel-systems* has been able to follow instructions given by your *visual analytic system*. It will be surprising if the results are accurate. Does this mean we cannot trust the *feel-system*? Not at all. It means that it needs training.

Benefits of training the *feel-system*

A useful way of introducing the subject of training the *feel-system* involves

a detour into general theory.

In 1948 Norbert Weiner published a book called "*Cybernetics: Or Control and Communication in the Animal and the Machine*" which revolutionised ideas about building machines capable of adapting to changing circumstances. In it he emphasised the necessity of *feedback,* asserting that *w*ithout it learning, whether by animals or machines, cannot take place. It was Weiner himself that coined the word "*cybernetics*". It derives from the Greek work meaning *"steer*": To explain its relevance to the ideas he was presenting, he used the analogy of a boat being steered across the sea towards a target location. Let us suppose that:

- The target is a landing place on a small island.
- The boat is being propelled forward at a constant speed by an outboard motor.
- Its direction can be controlled by means of a rudder.

If the boat is to be kept on course for its target, its direction will need frequent adjustments since it will be being constantly pushed off course by a combination of current, wind and lapses of the helmsman's concentration. If the helmsman sees that the prow of the boat has veered to the right of his objective (the *feedback*), he pulls the rudder handle to the right, a manoeuvre which brings the prow leftward. If this action causes it to undershoot or overshoot the desired direction (both errors providing *feedback*), the helmsman adjusts the rudder accordingly, until the prow is once more facing the landing place. Eventually, due to a combination of the forward thrust provided by the motor and the adjustments of direction made by the steersman, the boat arrives at its intended destination.

With these ideas in mind let us make a comparison between controlling a car approaching a road junction with guiding the tip of a pencil when joining two lines. If we are driving a car at a steady speed and we become aware that we are approaching a T-junction, we start to reduce our speed. If we reduce speed too rapidly, we waste time. If we fail to slow down quickly enough, we overshoot the stop line. Ideally we should avoid both these contingencies. In the interests of doing so we adopt a strategy of reducing speed by means of incremental adjustments, each involving estimates by the *eye/brain* of current speed and the distance to the stop line. As the junction approaches these become progressively smaller and more and more precise.

Alan Wing, a researcher at the *Applied Psychology Unit, Cambridge*, monitored the acceleration and speed of a pen when joining two dots with a straight

line. What he found was that by far the greatest proportion of the line was produced relatively rapidly and at a fairly constant speed. However, as the pencil tip approached its goal, it decelerated, not smoothly but in a series of ever smaller adjustments. What he concluded was that these were guided by *feedback* deriving from knowledge of the current *speed of line-production* and eye/brain estimates of the *remaining distance* to be travelled. In other words he found that the situation is essentially the same as that of the car approaching a junction.

So can knowledge of the deceleration characteristics of cars approaching junctions help us with training our *feel-system* in ways that improve our drawing skills? The answer is "*Yes*, *in several ways*". The key to how, lies in the use of *feedback*. But what kind *feedback*? That depends on the drawing strategy we adopt. Is our objective to:

- Produce lines separately, *one at a time*, getting each right before moving onto the next line and treating that in the same way?

Or is it to:

- Learn to represent sequences of *relativities* while continuously looking at the model, a process that is not so far removed from following instructions with our eyes shut?

Both strategies have much in common: Both require the use of the *feel-system* to guide eye/hand coordination*;* Both depend on feedback for homing in on accuracy; and both can help aspiring artists to achieve high levels of accuracy. However, there are also significant differences between them. With respect to the ideas in this book, the most important difference is that while the first strategy involves proceeding one line at a time and using comparative looking to provide feedback, the second is based on the sensing of relativities and cannot make progress without feedback from the *feel-system*.

The feel-system and efficiency

In terms of its value to the artists, the *one at a time* strategy is easier to learn but less efficient in the long run. To explain why this is the case, the analogy of learning to drive a car will help. When we start our driving lesson we have not yet had the opportunity to learn how to use our eyes to monitor progress when travelling at fast speeds. For the time being our *analytic-looking system* is all we have at our disposal. This will serve us well enough at slow speeds. At these, we can monitor the road immediately ahead of us effectively. However, when we

accelerate to a speed at which the texture of the road ahead becomes a blur, the system breaks down: We lose our sense of being in control and may well experience panic. However if, despite these worrying signs, we persevere, we gradually find ourselves able to look further and further ahead of us without anxiety. Evidently, a mysterious transformation has taken place. The car is now being guided along the road by some extremely reliable subconscious process. Even better, we now realise that our conscious mind has become free to respond to unpredictable contingencies such as bends in the road, T-junctions, other cars, cyclists or children running out in front of us.[2] Experience soon makes it clear how much more efficient and less scary it is to share the responsibility between conscious and subconscious eye/brain systems.

Though different in detail the message is much the same when we come to drawing from observation. As with learning to drive, in the early stages of training for drawing from observation, we need targeted analytic-looking strategies to provide the necessary feedback. However, once the transfer has been made from a strategy of treating each line independently to one that concentrates on sensing the relativities between them, the advantages of adopting the latter strategy will become obvious. If we can learn to leave the bulk of the drawing task to the *feel-system* with its formidable capacity for sensing relativities, we will not only make progress with respect to our capacity for characterising of the object or scene we are drawing, but also we will also find ourselves becoming both more in touch with our personal responses and better able to reflect them in our mark-making. As a consequence, the process of drawing will become a much richer experience.

How to train the *feel-system*

The purpose of *PART 3* is to provide a detailed, step by step account of the method of training the *feel-system* that I have adopted for my own teaching of drawing from observation. It is by no means the only possibility, but I am confident of it being hard to find another that can produce such satisfactory results

2 J.J. Gibson conceived matters in terms of "*flow fields*". He plausibly suggests that the eye/brain can compute information on the basis of the continuous transformations in shape and/or the layout of texture that are generated by the movement of the eyes through their environment. If these occur too rapidly the eye/brain, not being able to integrate the information, cannot use it and, consequently, loses control. Gibson is renowned for having saved many Second World War aircraft from crashing and, consequently, many human lives, by recommending that bright yellow lines be drawn on the landing strip to provide texture that would be remain visible and, therefore usable by pilots coming in to land at rapid approach speeds.

in so short a time.[3] The purpose of the remainder of *PART 2* is to prepare for this drawing lesson, by showing how all the instructions and explanations in it relate to and build on traditional teaching methods. As a part of this preparation, it is worth saying something about an unavoidable difficulty faced by people wishing to train the *feel-system* in the context of drawing from observation. The problem relates to the intrinsic nature of *feedback*. To explain how, let us make a further comparison between learning to drive a car and learning to draw. As should be clear by now, neither is possible without *feedback*. In the case of learning to drive one source of the required information is the changing relationship between the car's bonnet and the side of the road. As in the case of the boat approaching a landing place, this is immediately evident and can be directly and easily corrected. It is an ideal learning situation.

Training the *feel-system* for drawing from observation differs from these examples in that it involves the additional step of making a comparison between model and copy. This complicates matters because this cannot be done unless a characterization of the one is held in memory while turning attention to the other. To understand the nature of the problem this causes, I suggest returning to *Figure 8* and repeating the same exercise as before but with one small difference. This time, after getting a feel for the relativities and drawing the first line, stop and, with your eyes still closed, count slowly to ten. Now draw the second line. In all probability you will have lost or at least corrupted the memory of the feeling for the length and orientation of the first line. Now repeat the same exercise but, instead of counting, move your pencil tip a short distance up and down in the direction of the proposed second line three times before drawing it.[4] Once again the *feel- system*'s memory of the first line will have been destroyed or corrupted. If so it will be of doubtful usefulness when drawing the second line.

This brings us to one of the most important points in this book. Being deprived of the feel-system's memory does not mean that you cannot draw the second line more accurately than before. Comparative looking on its own provides the information that it should have been longer or shorter, more vertical or more horizontal and, roughly speaking, by how much. This information is enough to enable an improved performance. At any stage, more comparative looking can be used to decide whether accuracy has been achieved and, if not, in which direction

3 See quote from Horace Lecoq Boisbaudran at the outset of this book.

4 Many less confident students make many scratchy up and down movements in the course of drawing a line to join two points. This makes their task more difficult because it automatically blocks access to information in short-term visual memory that could have helped them.

to alter the offending line. The result will be an organised and viable approach to achieving high levels of accuracy.[5]

The disadvantage of proceeding in this manner is that the desirable outcome has been achieved at a cost. No use has been made of the knowledge stored in the *feel-system* relating to the length and orientation of the first line. As a consequence, the *eye/brain* is deprived of the feedback required for estimating the relativities between the line being drawn and its predecessor. If the only aim is *accuracy* this does not matter, but if it is *personal expression*, it matters a great deal. The situation has much in common with that of driving a car using the analytic-looking system alone: doing so would enable you to reach your destination but you would have to go much more slowly and your mind would not be free to enjoy the ride.

THE FEEL-SYSTEM AND THE SKETCH

To complete this chapter, let us return to our definition of a sketch as a "*drawing made from the imagination with a view to working out how the elements required by an idea can be fitted together in a final work"*. The process of doing so requires working out the best scale for the elements that have to be put together and establishing the spatial relations between them. In addition, as seems evident in the drawings reproduced in *Figures 1-4*, the *sketch* provides opportunities for exploring ideas about the their character, whether they be people, animals, plants or inanimate objects. This requires a great deal of feeling one's way, sensing relationships, imagining emotional states and testing alternatives. At times the outcome might look much like scribbling, as in the sketch by Matisse (*Figure 4*), or, at others, it might have much in common with a drawing from observation, as in the one by Leonardo (*Figure 1*), but in all cases, the *feel-system* is being used to guide the drawing instrument in an exploration of different pictorial possibilities. Whatever its motivation or its outcomes, it always engenders either a feel-good or a feel-bad factor, and its next move will be influenced accordingly.

Scribbling

The *purposive, idea-related scribbling* that is of the essence of the sketch has considerable benefits for those who wish to train their *feel-system*. Since there

5 It was the basis of the method advocated by Lecoq Boisbaudran in "*The Training of the Memory in Art*", 1864, which clearly worked perfectly well.

is no model to worry about, it is possible simultaneously to sense the movement of the arm and hand as they guide the drawing instrument across the paper and to watch the lines as they emerge. It is of the essence of both these processes that they provide a stream of feedback that is as immediate and as informative as that made available to the helmsman by the shifting relationship between the prow of his boat and whatever target he is aiming at. As the sketch develops, alternative versions can be superimposed or juxtaposed with a view to giving immediate feedback as to which offers the best in terms of feel-good factor.

A further benefit of the scribbling element of sketching is well worth a mention although, in this case, it will be more effective if freed from the encumbrance of image-making. As will be argued in *Chapter 8*, it provides an excellent way of "*freeing up*" in preparation for a session of drawing from observation. It can be particularly effective if done in an organised fashion, such that the lines produced are of a variety of lengths, orientations, curvatures and positions on the page. Used in this way, it performs an analogous function to that of the warming up of a footballer, when he runs up and down at the side of the pitch as a preparation for replacing another player.

Implications

The first part of this chapter confronts the issue of ambiguities in the meaning of the words "sketch" and the "study" and stipulates some definitions derived from their roles in the academic tradition. These assert that:

- *The sketch is for exploring relationships between the different elements that are to be included in the final work, and relies for its execution on memories of what things look like.*
- *The study is a tool for finding out about the particularities of appearance and enables seeing unfamiliar objects more accurately and familiar ones in new ways.*

However the coming of Modernism in the last part of the 19th Century complicated the situation and the basic definitions needed to be extended to include two other possibilities. There are:

- *Hybrids of sketch and study*
- *The possibility of using the sketch as a means of developing ideas from scratch, as opposed to the Renaissance practice of using them within predetermined conceptual frameworks.*

The remainder of the chapter deals with the "feel-system". This word combination refers to the neurophysiological basis for the gamut of experience that stretches from the subtlest of sensations to the most potent of emotions. The fact these extremes are interconnected in the brain means that every sensation is influenced to a greater or lesser degree by past feelings whether:

- *Positive, negative, strong or weak.*
- *Genetically incubated or culturally influenced.*

Because of the complexity of these influences, every line drawn has the certainty of a degree of uniqueness albeit at times imperceptible. To maximise the creative and expressive opportunities provided, it helps to put the fullest possible trust in the feel-system and its link to the individuality of each one of us.

A major purpose of this book is to help readers to integrate the activity of the feel-system and the analytic-looking system in ways that open as many doors as possible to personal creativity. A necessary part of the process of achieving this fusion of feeling and analysis is the training of the analytic-looking system to increase its efficiency with respect to information pick-up. The second is to provide opportunities for the feel-system to learn that it can guide accurate mark-making while using a minimum of comparisons between model and copy using the analytic-looking system. A great deal more detail about these matters will follow, particularly in Chapter 6 and in PART 3.