



¹Stephen Scrivener: Artist Theorist

I understand now that desirable surprise is a crucial aspect of practice; you do something and that produces an unintended outcome, but you can find it appealing and you can just go with it

Stephen Scrivener studied Fine Art at Leicester Polytechnic (now De Montfort University) from 1969 to 1972. In 1972 he joined the Experimental Department at the Slade School of Fine Art, London, directed by the systems artist, Malcolm Hughes. He went on to complete a PhD in Computer Science at Loughborough University and worked as a lecturer and researcher in various university departments in that discipline. He moved from computing back to art and writes on the theory and practice of artistic research. There are two main parts to his creative practice: making artworks and writing articles. His work has taken place in parallel with holding a number of academic research positions².

Stephen's early artistic career began with a recognised natural ability to draw and paint. But being good at art was not enough to satisfy his desire for a deeper understanding: why his work had quality was a mystery that he felt bound to unravel and this ultimately gave rise to an interest in 'systems', something that held strong currency in the place he went to study. He combined a systems approach with digital art practice but discovered over time that the research he did in parallel was difficult to reconcile with his art practice. This led him on a path towards reassessing the way he practised and more general reflections on the creative process. As the interview reveals he has come to reject his earlier approach to creative work, principally because the systems approach art did not work. The appeal of a systems approach was the promise of having a tool for analysis to aid his search for a rational explanation of his art process and its outcomes. In this way he hoped to understand why his artwork was improving, and to generate reasoned explanations for his judgments and decision making. However, this he now says proved to be illusory. Instead, he came to realise that the interaction between making and thinking can lead to the emergence of outcomes that cannot be described 'rationally', that is in the ordinary sense of explaining how decisions are taken and judgements made. He differentiates between reflections (cognitive reasoning processes) and aesthetic responses (experiential effects/impacts).

For Stephen, doing research as a practitioner encouraged him to develop a more systematic working practice but the traditional model of research did not deliver the kind of results he had anticipated. The research he did provided him with an appreciation of ways of achieving new knowledge but this was a different to making art and subsequently was reassessed when he moved back into art and artistic research. As a theorist, Stephen has contributed to practice-based research discourse and in particular, the role of the artefact in knowledge³. His observations about the importance of Donald Schön's concepts of desirable and undesirable surprise and role in achieving new knowledge are interesting and valuable to the ongoing discussion.

Stephen discusses this theory and his creative practice below. He has previously explained the evolution of his thinking on surprise in the context of changes to UK policy on art, design and research⁴.

Q. How important is creative work to you?

S. If you talk about it in terms of the amount I do it is not important, but if you talk about it in terms of motivation, then it is important, but also my writing is important. The two things go together really. I would not identify myself with any job but jobs have actually occupied most of my time. In practice there is always an intention to actually produce an outcome. At

different times the outcome is clearer than at other times. I will explain that a bit. I have always been interested in the process. When I started I had not really shown any interest in art at school but when I moved to my parents' house from London, which was in the countryside, with little to do in a small market town called Banbury, and I started to go to evening classes. I had already started to draw, mainly copying from Renaissance drawing books and so on. And it turned out I was quite good at it, quite good at drawing, quite good at painting and my tutors encouraged me to go on and do a pre-diploma then do a graduate programme at that time a Diploma in Art and Design (Dip. AD). I was good at it but I did not understand why I was good at it. I was not satisfied with the fact that the work was improving and was being admired, and I could see it was qualitatively better but I did not understand why. When I went to do my degree at Leicester I met people interested in experimental art like Gavin Bryars, who were already using systems of some kind. For me systems were ways of having something that could be analysed.

Q. What sort of system had you in mind at the time?

S. I started to play around with natural systems: light, making fairly complex regular mobiles, and also wave motion, with my degree pieces involving waves in pools of water. The light experiments didn't work because I did not understand about creativity or about how we actually achieve things in the world. I didn't understand certain aspects, which I have come to understand much later.

Q. Why didn't it work - the light experiments?

S. Because I did not understand about creativity. Or about how we actually achieve things in the world. I didn't understand certain aspects which I have come to understand much later. It is connected with Schon. Not so much the research I did as a computer scientist although that gave me an appreciation of different way you could come to understand things which really helped when I moved back into art and design. However, when I commenced my PhD in a computer science department after Masters study at the Slade, I found that I was not able to combine my practice with doing research...

Q. What was missing then in that process that could not help you understand?

S. Because although you set up a system, when you actually look at it carefully you can't actually rationalise the decisions that have been made. To have an appreciation of what the nature of the experiment is. How you have understood the problem. How you have set up a move to resolve the problem and then how to actually judge the move that actually to resolves the problem. Although I had worked within a systematic mode when you actually looked at what you had done in detail you could not produce the kind of rational explanation you expect of a research project. You could not present as being- 'I know in advance what I want to do and on the basis of what I hope to achieve, I would make these steps... I am now making these steps... Having made these steps does this do what I would expect?

Q: So the idea of the problem emerging from the making did not occur to you as another way?

S. That was the bit I found difficult personally. It is probably why I found it difficult to accept that ultimately there is a big, big irrational or unjustifiable element of almost all productive activity even science and the scientists try to exclude it out but nevertheless it plays a crucial part. The interesting thing is that Schon noted that new knowledge normally comes into the frame when practitioners make a move that surprises them. He identified two ways in which the moves are surprising- what he called desirable and undesirable surprise. Undesirable surprise is the one he thinks you have to attend to... because what he is saying is that you thought that what you did would produce an anticipated result... you did what you intended but did not get what you expected, therefore your ideas are incomplete in some way. Accordingly, you should attend to the problem so as to come up with a theory as to why your ideas are incomplete... and then apply that understanding in your next move etc. He said that you don't need to reflect on desirable surprise (he was right... because practice is guided by

the logic of affirmation...even though you have been surprised, you can just move on because you find the outcome of your action desirable. I understand now that desirable surprise is a crucial aspect of practice ... you do something and that produces an unintended outcome, but you can like it, you can find it appealing and you can just go with it, follow it. When I am writing articles, I find that this happens an enormous amount...it happens a lot that the idea emerges- the satisfaction in something emerges from the process...and you just follow that; you don't know what you are following but you like it and your intuition or your hunch tells you this is worth following. I have only recently understood this. I was not prepared to let it be (earlier on). What it means is that when you accept an outcome that registers desirable surprise you are actually moving forward without knowledge - weirdly. You don't know where you are going, you are just moving forward.

Q. Is it a different kind of knowledge?

S. If you take a surprise as being a mismatch between what we experience and what we know, from a pragmatist perspective, what that means is there is a mismatch between the world and what you know... so there is something in the world or in your ideas ...and it does not fit so there is something you do not know.

Q. Schon distinguishes between reflection in action and reflection on action. Are you conscious of reflecting in action- or do you do both?

S. I think it works pretty much in the way Schon describes it- the words in action and on. The on-action part – you can do it sitting here when you are not actually making something, when you are not engaged in making art. When you are making art it is generally speaking reflection in action - you actually stop the activity and stand back...and ask what have I been doing? When producing something, if things are not going the way you want them to go then you may have to stop and think. I think I liked the idea of using systems because with a system it is all reflection on action - you just turn the system on and only reflect on its outcomes when it has run its course.

What is interesting is when I write, my ideas move on all the time...I did this presentation at Ravensbourne and suddenly I understood what I had been working on for the last 15 years. I just did not know it. The writing moved me forward. I don't know how the writing moved me forward but it moved my ideas forward. I am now trying to re-apply that experience in my creative work and be more accepting of the unexplained really.

I now see the process as being a combination of two things. I recognise the problem-solving thing, the Dewey thing, Schonian thing- and I understand that when you are dealing with a problem it is about trying to understand the nature of problem, come up with a way of solving it, then you keep trying and then you know something and then you move on because when you hit a similar situation that rule will be applicable and you will apply it ... it will be applicable in that situation. Dewey talks about habit. We learn things but once learnt most of our doing occurs habitually- we only learn when we get surprises.

But I think that creativity is not operating by habit but disrupting habit and encouraging these... in other words stimulating surprises. What differentiates the ordinary practitioner from the creative practitioner is maybe that they are more unhappy with just repeating the same thing over and over again and they are looking for ways of disrupting, surprising themselves...so there is then the surprising element. But you've got to have the two responses to surprise. If you only focus on the surprises that are problems then basically what you are saying is I've got this idea but it does not work. Enhancing it is one way of learning but it means that all the time you are worrying about knowing what you are doing all the time. Dewey expressed this kind of surprise in relatively negative terms as 'felt difficulty'...something queer, strange. And also Schon does the same, calling it 'undesirable'. But the surprises that please rather than displease you also have the potential to disrupt habit.

Q Neither of these two people was actually a creative artist in the same sense you are. To have combining academic theoretical work with artistic creative work is a different kind of perspective on how you move forward in your thinking and in your actions.

S. It is but I suppose it is only by thinking about it that I've got a certain feel for that process a view about it. Only by being like Schon and Dewey. Otherwise I would not have recognised it. This is my view but I could be quite wrong about it. You often think you have come up with a solution to something but when you work it further you have actually got it wrong.

I think that Schon picked up on the two kinds of responses to surprise but he did not recognise the significance maybe of the 'desirable' surprise- because that is, you know there is something here that you don't understand, you know that because you are surprised, but looking at it, it pleases you, so you move forward with it. So you are actually moving in the dark. What it means is that you could produce something at the end and you could be surprised by what you have done but you think how did I do that?

Q. How does an idea emerge? What is the seed of a new idea in your experience?

S. I am talking about two ways in which the seed of an idea arises: one aspect is a new idea arises because there is a problem so you are doing something (whether unconscious or you deliberately set up an experiment and what you expect to happen does not happen as you expected... so now you have to think about why it does not work and you may come up with an idea then, an idea that it does not work because of this... A simple example I use in my lectures is the street timer (street crossing time indicators). They were suddenly in the street. I knew immediately how to deal with them but not how they worked. They surprised me. You can deal with them from experience (Timers in the kitchen) but I did not have a theory of the timers. First, I noticed that they came on at 10 and then I had a theory ...and then I noticed they did not all start at 10 and then I had a new idea well maybe it is connected with the width of the street. Well I know it has been designed so I could actually ask somebody but if it was a natural phenomenon you'd understand that in the world... that is how things come up.

The other way that ideas come up is you make something that embodies knowledge but because you've made it by just following your feelings you don't know what knowledge is embodied in it but it will surprise you. In other words, you can stimulate new ideas by creating things that generate surprises.

Q. I am getting a sense that the thinking and the theory has, to some extent, taken over or at least dominated a lot of your creative thinking- the artistic side. Am I wrong in saying that?

S. Yes (you are wrong) You would not have been when I was making my computer art, that is to say I was working from ideas but now I work much more with material and in a much more accepting way of an idea that pleases me.

Q. Can you say more about that- working with material?

S. A range of things I've done some recent work painting in oils and watercolour. Painting on old photographic images... these images appeal to me for some reason; it is partly connected with projects we were doing at Chelsea. Now I have been working with this for some time. An idea will come up about how I might re-use that image and work with it. These ideas that are emerging I am much more tolerant of - I am not deciding well I don't know why that idea emerged I don't know where it came from, I don't know where it will take me. I am more tolerant of that.

Q. Do you write creatively?

S I don't write creatively really in the sense that I don't produce what we would normally regard as creative writing. But I would say writing theoretical work is creative. There is definitely rhetoric in it. Maybe as a theorist you would not want to admit it but I am aware

that how you appeal to people, or how your ideas appeal to people is almost as important as what you are saying. Some philosophers for example write in a much more poetic way than others- that is creative I think...we can make these distinctions and say that someone is doing a drama documentary and is designed to appeal to feelings rather than the intellect.

The work is always a response to what I am experiencing at the end of the day. You cannot separate the two from my point of view. It is just a question of how you want to communicate if you like or express or whatever you like to call it what it is you are interested in. My writing is only the way it because of the experiences I have had. I do not believe that what drives almost any scientist or anyone, comes down purely to the treatment of abstract ideas. Scientists do a particular science because of something in their own experience. Their own experience enters into the ideas and into how they form and communicate their ideas

Q. Isn't there a distinction between the creative response to something and the habitual response to something?

S. The creative response is in two directions: I would say that problem solving is creative - maybe some people would not want to say that. That's creative in its own right. You have to be creative, you will probably have to revise your own methods etc., etc. I would say the response to the problem side is creative but it is this other side when you don't respond to it as a problem and you just go with it and move it forward. So, you have had the surprise, this is the 'shock' so when Woolf talks about the shock and negative and positive maybe she meaning that you can treat it as a problem and take a more positive view of it and instead of analysing it and treating it as a problem you go with where it tells you to go so if you are a writer this experience tells you to make it into a novel. You reconfigure it and express it and that is often an explanation of expression - it is an experience reconfigured and re-presented. The article I mentioned was one of those where it took my thinking forward, not necessarily in a different direction but with an addition to what I had been thinking about in a way I could not have anticipated.

What I am saying I suppose is that you follow what's in front of you, you follow the material if you like. There is a kind of interaction going on all the time between your ideas and the material or whatever you like to call it. When you follow that without reflecting on it, without analysing it but following it with surprise all the time you are recognising it, you are kind of being 'shocked' but you are not reflecting on that shock but just allowing it to go on. You actually then produce something that you don't know. I am not describing reflection in action because what I am saying is you *don't* reflect in action on those occasions, you moved forward. You are being surprised by it but your response is an aesthetic response not a rational response.

Q. Does reflection in action have to be rational?

S. It does because reflection in action has to be cognitive – it is reflecting on what you have done. You did something, you got this, it's not really what you wanted, why is it not what you wanted? That's what I mean by reflection in action.

*Q. What is the distinction between the **in** and **on** action?*

S. Generally speaking the in action is happening in the process, so when I put my water colour down, the red is too thick, why is it too thick? What do I do about it? I take it off. How am I going to deal with this? I remove it quickly clean my brush, dry it, pick up water on there, take the water off. I am thinking about what I am doing- that's reflection in action. I am solving the problem, I'm coming up with a solution to it. That's reflection in action and I am thinking about it. When I am working really freely I am not thinking about anything. I am operating in habit; my skill comes into play. I can put the thing down and I carefully control it and hardly think about it at all. When it does not go as I actually want it, why isn't it working, I have to think about it to do these others things, sometimes I have to work out an entirely new way, jump up get a piece of tissue and try dabbing that, does that work? Does that take it off?

So that is reflection-in action. When I have finished and put it up on the wall, then I start to look at it and think “oh that doesn’t really work- that’s reflection on action.

Q. When it comes to the reflection in action, do you think that is mostly stimulated by something going wrong?

S. Yes, I do. I think the reflection is a certain kind of response to surprise. It’s a certain response to surprise that says ‘I’ve got to understand why this is there. The other response is an aesthetic response and it says ‘I like what’s there and I’m going to go with what’s there. So you don’t think about it. You just carry on! It’s not reflection at all. It’s something else altogether. You would like to think it’s not so much an aesthetic response but a kind of rational response. It’s kind of saying it’s too thick and now it’s right. That right, that judgement of right, it is either because it is what you expected or because you are satisfied. At the end of the day it is going to come down to satisfaction so there is a feeling element in all of it. So there’s another reason for saying it is rarely the case that we fully rationalise any kind of process.

It is either because it is what you expected or because you are satisfied. At the end of the day it is going to come down to satisfaction so there is a feeling element in all of it. So there’s another reason for saying it is rarely the case that we fully rationalise any kind of process. But what I feel is that the surprises are really important but there is a way of actually dealing with surprise or responding to surprise that does not involve reflection at all. It is simply saying ‘I like that’. You recognise in some sense that this is weird if you see what I mean, strange, unusual a little bit surprising but your response isn’t negative to it, your response is positive. I think that what happens is that once we have got it, and we like it, we’ve actually done and it’s there in front of us, it may be a real surprise- your painting or your artwork has gone in an entirely different direction. I think we almost always reflect on action after that. We try to understand what it is about this, why is it different?

I think most artists do that because otherwise you will just be repeating yourself. Artists are satisfied and dissatisfied. One of the features of creative people is that if you keep repeating the same thing over and over again it gets very boring and you don’t want to do it. So they don’t want to be regular practitioners. A lot of them do it and they come out of it later when they can and free themselves up. I don’t think I’ve really explained it very well. I think what is important about creativity is you can go along with something you don’t actually understand and just go with it.

Q. When you are working with your artwork, the painting, the visual art, do you have any other way of reflecting where you write things down about the work.

S. I very rarely write things down about the work. I used to do that a lot but I don’t know and I don’t really like doing it either. I think when I got into the more experimental work I wrote down everything. I kept journals. It was quite scientific in lots of ways. I made all these journals. I keep a kind of journal now but it is not systematic and I go back to it occasionally... but not very often.

Q. I am also interested in what mechanisms people use to aid them in reflection on their creative work. So, if you do a piece of art, years later do you go back and think ‘How did that get going? Where did that come from?’

S. Yes, I think that people do that as artists but I don’t think –weirdly- I don’t look at work very often and think oh I can see a connection between what I was doing now and what I was doing then, but I’ll do that with ideas. I’ll write a paper and think that is very original and then I look back at a paper I had written 15 years ago and the idea was there. I had forgotten – the idea had just sat there percolating away.

(More recently (post interview) I’ve been recognising that my approach to art projects is connected with strategies I employed in the past.)

Q. Are your works of the past in themselves a stimulus to reflection?

S. Past works can be a stimulus to reflection. There was that period when it was all very reflective and I thought about everything. Now I think about it much less and I worry much less about looking at past work and trying to make sense of it. When my work is going in a certain direction at a certain point I will try and settle myself with it, try and to be comfortable with it, if you see what I mean. But once I've got comfortable with it I do want to I understand how it came about or what it means.

Q. What for you would be recognition of success in a work? You are satisfied? Successful? How do you recognise that?

S. There are always intentions in what you are trying to achieve, so you look to see if those intentions are actually met, but they don't seem to cover everything that's in the work, if that makes sense. I think the judgement is less about whether the work is a success and is much more ...it's much more ...does this work take me forward? I think one thing I was always getting away from was that notion of 'Is the work a success?' That figures a lot because the reason why I was dissatisfied with my painting getting better and better was that I felt I was just repeating what other artists had already done. So my judgements about liking the work or not were judgements based on past experience. And I wanted to escape from that. I wanted to present myself with surprises, things that required me to think about what I was doing and maybe move on. I was looking really to create surprises for myself and I did do that. But I don't think I understood that's what I was doing. I was actually trying to devise a method that would create surprises for *me* which would mean I would have to understand why. So there was an understanding element with it...understanding something new. I used to analyse other artists, makes sense of their work, trying work out what you think they were doing, what it means, what is original in it and so on. Without consciously saying well I am going to do that, you absorb that understanding and it begins to operate in the work you actually do.

Q. Was there a particular point in your artistic career when you recognized that? When that change took place?

S. Not exactly. But it was just that people were so complimentary about the work! I don't know why but I felt I was doing what they want. So, there must have been something in me that said, and also that whole period was...it is much easier being a practitioner now because there was then because there was this notion of progress and it influenced so much, how you actually perceived it. You didn't feel that you could just re-use the past. You felt you had an obligation to be moving things on. So, if somebody's telling you they like things all the time...it's much better to get somebody saying aaahh I don't know what I think about that.

Q. Did you feel that as a young artist? As part of the culture of the time?

You look back on what's happened and you think oh gosh Picasso surprised them all, look what Mondrian did. He surprised them and ooh look what he did, he or she surprised them so you saw that there was this constant shock disrupting people's expectations. How did Malevich? How did people come up with that, stick it on the wall? It's incredible - Cezanne - how did he come up with this and how did people make sense of it? I knew that it was about creating surprises and I assumed that if I used some other system, that's not the system of art, it will make forms that distanced me from those tacit habits, knowledge and became more objective.

But what I found in the end what one has to say that it is very difficult to get to those surprises by this kind of construction of precise processes. It is quite difficult and if they happen its accidental. And actually, you want to create an environment where they are more likely to arise. That's what you are trying to do as a creative artist, trying to create a practice that will keep refreshing you, keep generating surprises. But what I am also saying is that to keep that practice going, if you do too much reflection you are just going to get stuck with your past knowledge.

I see reflection as a rational process. I see the other as not rational, as aesthetic. I see it as a component of research. I would say that the book I am going to write is going to be called *The Aesthetics of Research* and I won't be talking about the science of research in great detail. But what I would like to suggest is that all human activity has an irrational component in it. It is not too original a thing to say because Popper has said something like "I don't know how people come up with an idea but if you want my opinion, I don't think it can ever be rationalised".

This is what I mean when I said 'post hoc'. I am not treating it in a negative way but what I am saying is 'you don't know what you have done until you have done it and when you have got the thing in front of you that surprises you, you then have to understand it. In a certain sense if you treat everything as a problem then you have got these little problems you solve and at the end of the day you have got something that you understand, because you have solved all these little problems. But if you follow a process that takes you somewhere because you like it, you like it, you like it.. because your aesthetic response is...because it is appealing, it is just pulling you forward then you have built up something that has quite a lot that you just don't understand and then when you have actually got it then you will actually reflect on it. So I think if you are to characterise the two processes, the one has a lot of reflection in action; the other has virtually no reflection *in* action but has much more reflection *on* action afterwards.

Q. Is characterising the nature of reflection in relation to creative processes a different thing to characterising it in terms of professional practice?

S. Schon was primarily interested in the practitioner and the practitioner actually repeating habitual activity. Becoming a better professional, a better lawyer, and repeating and to a certain extent you are a service, a service industry, responding to needs and so and trying to improve things. I would say that the creative artist comes much closer to the scientist because even science is just beginning to understand that there is a significant element of science or scientific practice that is essentially about generating surprises, not doing experiments. And they are only really beginning to do that. I think that in that sense scientists are creative- they just don't talk about their creativity. And they pretend that it can be hermetically sealed off from the rational part of what they do, the experimentations. I don't even think it can be sealed off from that part because there are lots of decisions they make that they just choose the simplest of competing hypotheses - It's saying choose it because its simpler and the simple is pleasing.

There is no activity you can participate in where your past life doesn't figure in some way. So if you have been frustrated by something or had an awful experience that might actually figure in this supposedly rational logical process. But nobody wants to admit it. When I did my PhD what happened? I got a result that surprised and pleased me - and then I worked back to establish grounds for that result. The work itself is prospective and making sense of it is retrospective. So I much more interested in the *prospective* part of the process than the retrospective. It is under-valued, as is how we build environments that enable people to go with what is happening and even when it's surprising not to be disturbed by it. ...
If an idea comes to me...well I dreamt an artwork and I wrote the idea down. I would probably have rejected the idea in the past because it was just a dream and why do it. But then I am thinking about a lot of things and nothing is arbitrary—this idea might be quite important so I might follow it.

That's the path I am on at the moment which means I'd moved on - although a lot of my stuff is digital it's not programmatic in the sense my work used to be.

¹ Photograph by Gavin Freeborn

² <http://computer-arts-society.com/stephen-scrivener>

³ Scrivener, S. (2002) The art object does not embody a form of knowledge. Working Papers in Art and Design 2 https://www.herts.ac.uk/__data/assets/pdf_file/0008/12311/WPIAAD_vol2_scrivener.pdf

⁴ Scrivener, S. (2013). Towards a Practice of Novel Epistemic Artefacts. In: *Experimental Systems: Future Knowledge in Artistic Research*. Orpheus Institute. Leuven University Press, Leuven, pp. 135-150.