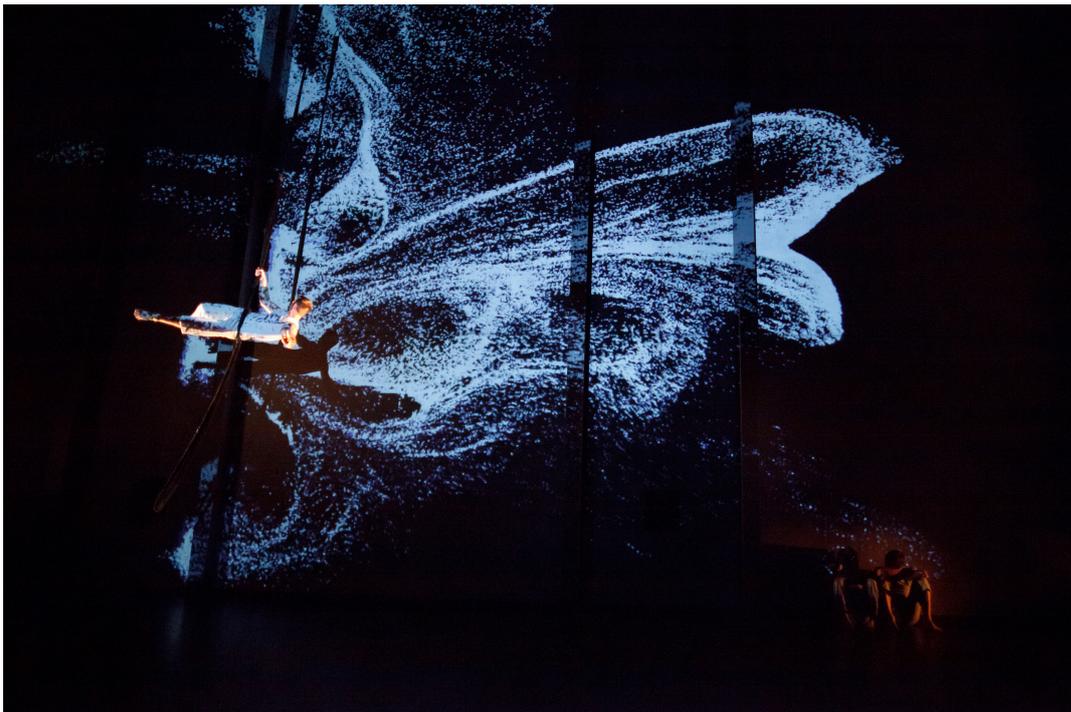




## Andrew Johnston: Interaction Designer and Performer

*I suspect that everyone engages in reflection-in and reflection-on practice continually in all aspects of life. In the work I do there is continual movement between reflecting on the immediate situation - engaging in the 'reflective conversation' with materials and situations and placing what we are doing in a larger context - 'reflecting-on-action'.*

Andrew Johnston is an interaction designer, musical performer and researcher <sup>1</sup>. His creative focus is on designing systems for exploratory approaches to interaction, and the experiences and practices of the people who use them. He works with artists, theatre professionals and technologists to create public performances in parallel with developing innovative interactive systems for dramatic experiences. The process of creating these works involves exploring the interactive possibilities between live performer and digital technologies. He has worked with colleague Andrew Bluff on Stalker Theatre performances: *Encoded*, and *Creature: Dot and the Kangaroo*, directed by David Clarkson as described further in Part 4 ahead. The collaborative team work required for public performances with radically new forms of technology presents challenges to individual creative practice. The stimulus for that individual practice comes largely from the interactions with the team <sup>2</sup>. His observations indicate how for him, the variants of reflection in and on practice are fundamental to the many dimensions of creative reflective practice. These variants happen throughout the creative process as *reflection in the making moment*, *reflection at a distance* and *reflection on surprise*. His reflective practice is informed throughout by research.



**Figure 1 Aerialist Rick Everett performs in 'Encoded'. Photo: Matthew Syres**

In his interview, Andrew talks about his reflective creative practice and collaborative work with Stalker Theatre Company.

## Interview

*Q: Can you say something about your current creative work?*

A: Right now, it is mostly interactive systems that performers interact with, dance with, and the system produces animations in response to their movements. It is team work, in that we are working with the director, choreographers, performers, musicians and production crew. Right now, the current work is more about using the existing systems we have already got and customising them for a particular project. So we have these interactive fluid simulation systems for example and over the years we have added more and more stuff to them. We've got these 'big instruments' that we are deploying in different ways, exploring different approaches, projecting on different surfaces, using different screens, using different ways of tracking performance movement, working with musicians so that sound might interact with the fluid simulation rather than movements, etc. A lot of the work is finding new things to do with this instrument we've created and customising it to make those things possible.

*Q: How does the requirement for a new feature emerge? How does that happen?*

A: We are collaborating with this theatre company and the current project is a kids' show, and the requirements for the software are driven by this creative challenge. The show is going to be based on this kids' story called 'Dot and the Kangaroo'. It's for kids and it's a narrative show so all these kinds of constraints drive what we do... we want the performance to be cutting edge...

*Q: What does it mean to be cutting edge in this context?*

A: Using interactive technologies in new ways. Interactive technologies in themselves are still quite new in the broad history of performance practice. The cutting-edge bit comes in with not just the technology but really how the technology is changing practice. So, we are asking: 'can we change the practice using this technology?' And there is a dialogue going on there. We can see what they [artists] are trying to do with it which we hadn't anticipated they would do, and because of that we change the software or pursue a new avenue.

*Q: Are you looking for inspiration-consciously - as a modus operandi?*

A: Yes, totally. You are always looking at new things that are coming up- YouTube videos you see; performances, conferences where you see some amazing new work... We go to a lot of live shows, performances and so on.

*Q: Do you see software writing as a creative process?*

A: Yes. It's a different kind of creative process though... Usually I have a clear goal. So I want to do this masking thing, for example - so I want to put a white circle over the top of a starry background and see the stars revealed through that white circle. And I might do that in a creative way. I might say, 'Well I've found a new way of making a circle.' It is creative but in a different way to visualising interactions and imagining someone moving in front of the system and what it looks like afterwards. That's really a more open creative process I think. In this process you are finding the creative 'problems' or constraints for yourself - the goals are more open to being changed.

*Q: Is it possible to think that once you have done your program design and you've worked out what's going to happen, is that always constantly analytical or methodical with you. Or do you sometimes find you let it go and you write things- does it write it for you?*

A: To me it's a completely different mode of thinking. There's the problem-solving way-I'm writing code and I need it to do this. And I guess... well you've programmed before and you know you try this and this and sometimes it doesn't work. Sometimes, you can just solve it and everything's fine and sometimes it's quite tricky and it's not working the way you want and you need to put it aside, go do something else and come back to it. So, it's more of a problem-solving kind of way of thinking about things.

*Q: Would it be possible for things to happen in an unexpected and interesting way?*

A: Yes, that's the dialogue with the materials. You have that defined goal making the white circle and the stars. You actually make a pink circle on stars and that's a bug, but it turns out you really like the look of that. That's the materials 'talking back' in a way.

*Q: Can you give some examples of where something's happened and it's led to surprise.*

A: The surprise stuff happens often; with software, you are working to achieve a goal – we want to make it do 'this' and so you write some software let's try this and you didn't get the goal. But when you see it you go well actually it's more interesting than the original goal. So let's pursue that instead. I think every digital artist, for want of a better word, would say you often get mistakes that turn out to be quite serendipitous.

*Q: Are there things that turn out to be complete dead ends, a cul de sac?*

A: Yes, often. It's like project management, you try to do the risky things early so if they are going to screw up and fail, you've failed early. If you are going to try a new tracking system for tracking the movements of performers you don't trial that the week before the show is going to open. You try it early on and you can quickly see whether it's going to be a show stopper or whether it's going to be good or bad.

*Q: Can you anticipate that?*

A: Yes. That's part of the technical skill, being able to spot the stuff which is dangerous - technically dangerous and I guess creatively dangerous as well. The big risky ideas you are going to do sooner rather than later. With the kids show with kids as young as 3, we can't do avant-garde, you can't go too far... With the aesthetic we've already got that we know we can do well won't work, so we have to craft a new aesthetic. We have to be starting early, trialling a new aesthetic and figuring out whether it's going to work.

*Q: Would you say you are a risk taker when it comes to trying things?*

A: This question's really hard to answer- there's always yes and no. I'd like to think that aesthetically I take risks and enjoy exploring something new and experimental., I'd like to think that I'm into that, but also I don't like watching works that are based on technology that simply doesn't work. People fluffing around in front of a computer, sounds coming out from a computer and graphics coming out from it but really there are no connections, no meaningful connections between what the person's doing and what the computer's doing. I find that boring and so I want things to work- typically. I don't want the technical stuff to be risky. I want the technical stuff to be as 100 percent reliable as it can be. We set this thing up, put the projectors here, put the cameras here, do all the lighting, setting everything up carefully and thoughtfully. It's part of being a professional, like being a professional musician, so when the performance happens, all that stuff just works. So, I try to minimise the risks associated with that.

*Q: I wasn't thinking of the performance time but rather the time when you are generating ideas. Are you a risk taker then?*

A: In that sense, I think I am a risk taker yes. A calculated risk taker because you also know... again if it's just you and one other person then the risk is not that great. If the project doesn't come to fruition. But on the other hand, if you have got something like the Stalker scale, they are getting money, up to a couple of hundred thousand dollars from various sources to put these shows on, and if people are going to give you that money you have to put on a show, so there's a commercial side to it.

*Q: Is that a constraint on your risk taking?*

AJ: Yes, I think so. I guess maybe in a way, Andrew and I do other smaller things where we are doing riskier stuff where the consequence of failure is less- no one dies, no-one gets hurt, no-one loses a lot of money.

*Q: What does reflection in and on practice mean in your creative work?*

A: I suspect that everyone engages in reflection-in and reflection-on practice continually in all aspects of life. In the work I do there is continual movement between reflecting on the immediate situation - engaging in the 'reflective conversation' with materials and situations - and placing what we are doing in a larger context and 'reflecting-on-action'. The key thing is reflecting – only the scale, and possibly the

time between action and reflection, makes the distinction between reflection-in and reflection-on action. It's like Schon says: he gives the example of the architect looking at a site and calling it a 'screwy' site. In our case you walk into a theatre and you look around and say, 'These walls are a disaster, we can't project onto them,' or 'It's a big space with a 'boomy' sound.' You are looking around and getting a sense of the possibilities of it – what it affords and practical things like where you could put your projectors so they will work, where you could put the cameras and track people effectively, etc.

*Q: Is reflection on action something that happens after you have done something? Whereas reflection in action is as you are doing it. Do you see it like that?*

A: Well broadly yes but I don't think it is as tidy as that necessarily. You don't walk out the door and say 'it is time to reflect on action' When you are there in the moment and trying to see the software doesn't break and responding to the immediate situation, another part of you is always storing this stuff away and semi-consciously comparing it with other things you have done. But it might not be consciously happening all the time.

*Q: Are you aware of a time when you stop and take stock of where you are?*

A: Yes, that does happen too. There are times when you do sit down and say, 'Now I am going to rethink what's happening.' You are writing a paper often. And then there's a more formal process where I have the researcher hat on and I am interviewing people as well. This is where you are looking at your own practice and reflecting on that and you are looking at other people- reflecting with them, talking with them, interviewing them about their thinking and seeing that they had quite a different conception of stuff to what you had. And then you are writing that up and trying to make sense of it.

*Q: Do you think there is a difference between testing things out and reflecting?*

A: Well it's a continuum. You don't suddenly say, 'I am going to reflect on action'. Reflecting happens while you are testing things out, while you are seeing the results of the test as well as afterwards at various time scales.

*Q: I've talked to artists who sometimes say that too much 'thinking' gets in the way of their work. They feel that sometimes they just have to (they use this phrase) 'let it go'. Can you relate to that experience?*

A: As a trombone player I can, but not really as a digital artist. As a trombone player you often need to get out of the way of your own tendency to over analyse things. One difference is that as a digital person – at least in the context we're currently working in - by the time you get to the performance stage you are not really performing in the moment in quite the same way as you are on the trombone. By the time you get to the performance stage, it's mostly been decided: the show has a specific structure, and the behaviour of the interactive systems has been decided from scene to scene. Having said that, in performance there will always come a time when you have to let the work go, because the curtain is going to go up – we don't get to rehearse and develop for ever!

*Q: And at the end, when you see a performance, are you able just to enjoy it? Or are you still evaluating it when it's out there?*

A: I try not to evaluate consciously - with any performance of anything. I think it's a bad habit to get into. I'd rather just experience it. So I will often be in the experience mode while watching but at another time there is an evaluation thing that comes in. As you are experiencing that you may find something that's getting in the way of you experiencing it fully and you'll try and identify why. It might be that a particular animation is not going smoothly enough for example, so that would be something to fix...

*Q: If you are watching a performance of your own work, am I right in thinking you would notice if something went 'wrong' but when it doesn't go 'wrong', that's when it feels good?*

A: Unless it's a good 'wrong' – like a happy accident. A serendipitous thing where you say well that wasn't actually as we rehearsed it but it worked. It could be a little nuanced thing that I would notice because I know that it's not the timing we rehearsed. It could be something more substantial I guess-say if the projectors black out. Certainly there's a kind of satisfaction in technical achievement and things not going wrong, but that's not really my primary motivation. The reason we do things live in the first place is because we enjoy the unanticipated things that happen in the moment.

*Q: How you handle a 'wrong turning'?*

A: if is a severely wrong turning you don't do anymore in that direction. Or you try and find another way to achieve the same ends or you change course: if there's a boulder blocking your course you try and go around the boulder. Depending on what the situation is you choose what to do, in collaboration with others.

*Q: In terms of your role in that larger team, how does it affect the way you work?*

A: You have to get people on board, you have to influence people. You can't say "well I am going to go down this route..." With any collaboration you have to surrender some control to people around you or you are not actually collaborating. I don't seek to be the 'master' but we have a lot of autonomy still. We have a good relationship...The director ultimately makes the call but at the same time we are participating voluntarily so if he starts rejecting all our ideas, we can just say OK you go your way and we'll go ours.

*Q: What is your particular role in that team?*

A: They would probably say 'digital artist' or 'interaction guy'. It's coming up with the concepts for the interactive systems and then also implementing them and making them work, figuring out which states of those interactive systems because they can have different settings and colours, figuring out which pre-sets we are going to use, devising pre-sets that work, condensing them down into a palette that the director and choreographer can use as they put together a show...one reason the collaboration is good is that he (David Clarkson, director) is able to see possibilities of technical stuff – the creative possibilities of it. He can understand the tech side of it and he can see the limits and possibilities – so that's important.

It's a collaboration, so you are working with a director, choreographers and dancers as well Usually, we start with small workshops and try things out. Everyone will sit around and say we could try this or this. We'll put together a little trial - set up some software in a corner somewhere, and a projector and maybe the dancers will work with it, improvise with it. We'll be tweaking things, throwing ideas up on the projections. When things seem to work well we might video things so we will remember what worked and what didn't work. Working in a team, working on a scale does change things a lot. More people but also bigger productions...it's the real world of performance and I like that constraint in a way. I can see how some artists like to have their own thing and do that and not worry about anything else. But I like it-helpful constraints are good.

I am quite interested in using discussions, interviews with others involved in these projects as a way of reflecting on action. When I do this, it helps give me new perspectives on what has been going on. This is a kind of assisted reflection or reflection from outside my personal frame of reference. Interviews like this are a slightly more formal version of dialogues that go on between collaborators during creative development of shows. I think that running these as 'interviews' helps by giving everyone 'permission' to ask the naïve, obvious questions which lead to higher-level reflection-on-action.

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<sup>1</sup> Andrew Johnston's Website: <http://andrewjohnston.net>

<sup>2</sup> Johnston, A. J. and Bluff, A. (2018). Collaborative Creation in Interactive Theatre. In Candy, Edmonds and Poltronieri (eds) Explorations in Art and Technology, Springer Cultural Computing Series, 2nd Edition, pp 341-351.