

## Dawkins, fairy tales, and evidence

“I don’t know what to think about magic and fairy tales ... er – I would like to know whether there’s any evidence that bringing children up to believe in spells and wizards, and er - magic wands and, and things turning into other things ... umm – it, it, it is unscientific – I think it’s anti-scientific – umm ... whether that has a pernicious effect I don’t know.”

So said Richard Dawkins on *More4 News* recently. He was talking about what he was going to do now he’s retired from being the Professor of the Public Understanding of Science at Oxford, and he said that he’d like to write a book for children. Like many people who write books that children read, I find my ears prick up when people not known for that activity say they’re going to write a children’s book. In many cases, of course, what that means is that the publisher will pay a ghost writer to write some catchpenny trash, and the latest celebrity will put their name to it and pocket an enormous advance. I see that David Beckham is now also “going to write a children’s book.”

But Richard Dawkins doesn’t come into that category. I have the utmost respect for Dawkins; I think that as a writer on science he is among the every greatest, with a brilliant prose style, an ability to find analogies and metaphors that are endlessly inventive and illuminating, and a profound sense of wonder at the universe that science investigates. He’s also a man of complete integrity, and when he says “I don’t know what to think about magic and fairy tales,” I believe him. He’s not condemning them without thinking: he really does want to find out whether such things damage a child’s understanding, and he’d like to find some evidence. And that, of course, is the ethical way to go about it.

Now I’ve been thinking about fantasy and fairy tales for a long time, and when I read what Dawkins had said, and watched the clip of the interview, it set me wondering what sort of evidence we could realistically expect to find that would settle the question one way or the other. Or perhaps, of course, we’d find that no matter how hard and how far we looked we would find no evidence at all, reminding ourselves that absence of evidence is not evidence of absence. I also

began to wonder about my own attitude to fantasy and fairy tales and what that was based on; and this seemed like a good opportunity to think these things through.

So: what do we mean by evidence? What kinds of evidence are there, and which one might be applicable in this case?

Well, we believe different things in different ways and for different reasons. Gradually, at various points in our childhoods, we discover different forms of conviction. There's the rock-hard certainty of personal experience ("I put my finger in the fire and it hurt,"), which is probably the earliest kind we learn. Then there's the logically convincing, which we probably come to first through maths, in the context of Pythagoras's theorem or something similar, and which, if we first encounter it at exactly the right moment, bursts on our minds like sunrise with the whole universe playing a great chord of C Major.

Then there are other ways of believing that things are true, such as the testimony of trusted friends (I know him, and he's not a liar), the plausibility of likelihood based on experience (it's exactly the sort of thing you'd expect to happen), the blind conviction of the religious zealot (it must be true because God says so and his holy book is inerrant), the placid assent of those who like a quiet life ("If you say so, dear"), and so on. Some of these, especially the last, carry within them the possibility of quiet scepticism (I know him, and he's not a liar, but he does exaggerate a bit).

In fact there's not just one way of believing in things but a whole spectrum. We don't demand or require scientific proof of everything we believe, not only because it would be impossible to provide, but because in a lot of cases it isn't necessary or appropriate.

However, in this case I imagine Dawkins would like something reasonably *objective*. Are there any models for examining children's experience in this way? As it happens, there are. One very interesting one was carried out thirty or more years ago by a team led by Gordon Wells and his colleagues at Bristol University, and described in a book called *The Meaning Makers: Children learning language and using language to learn* (1987). Wells and his team wanted to find out how children's language was influenced by what they heard around them. They selected a large number of families with children of two and three years old, whom they followed right up to the end of their primary education, and gave them unobtrusive lightweight radio microphones that could be worn under their clothes. They could pick

up not only what the children said, but also what was being said by parents or other adults nearby. The microphones were switched on at random intervals for 90 seconds at a time, the results recorded and transcribed, and then an enormous amount of analysis was done on the results.

What they found wasn't surprising, but now they had evidence for it. Briefly, they discovered that the **more talk** went on around young children, the more included they were in conversation and chatter, the quicker and more fully they picked up language skills. One interesting discovery was that the most enriching experience of all was the open-ended exploratory talk that arises from the reading of stories. Wells says "Several investigators have noted how much more complex, semantically and syntactically, is the language that occurs in this context. [It also has a particularly important contribution to make to the child's imaginative development]. Furthermore, the frequency with which children are read to has been found to be a powerful predictor of later success at school." (Gordon Wells and John Nicholls, *Language and Learning: An Interactional Perspective*, 1985).

So it's not impossible to set up rigorous experiments to test what and how children acquire various forms of understanding, and to learn interesting things from them.

But to go back to Dawkins and his question, how on earth would we set up an experiment to test the effect of fairy tales?

It would have to be of much longer duration than the Bristol study of language development: it would have to last as long as childhood itself, or at least until the children could be considered to be beyond any further influence. Till they leave school, at any rate. And it would have to differ from the Bristol study in an important way, because you'd have to have a control group. Whereas the Bristol scholars were only concerned with finding out what actually happens in the natural course of a child's life, this study would depend on having some children who were allowed fairy tales, and another group who weren't. To make it absolutely beyond question, it would have to be policed pretty rigorously: no *Harry Potter* under the bedclothes. Actually you'd probably have three groups: one group that was left alone, and which could be presumed to experience a normal child's exposure to fairy tales and magic, another group that was allowed realistic fiction but no fantasy, and a third group that was allowed all the non-fiction they desired but no stories at all. No nursery rhymes, which are full of nonsense like a cow jumping over the moon; no

*Cinderella*; but also no *Swallows and Amazons*, no *Beano*, no Jacqueline Wilson, no Roald Dahl, no stories of any kind whatsoever.

And you'd follow the children all the way through their schooling right up to leaving age, and see whether the ones who were kept away from magic and spells were thereby advantaged in their understanding of science, and whether the ones who were allowed realistic fiction differed in any way from those who were allowed no fiction at all.

That would probably answer the question with the objective answers you wanted, but of course you wouldn't do it. Firstly, it would be impossible to police, and secondly if you did police it at all rigorously, it would amount to child abuse. You'd have to keep them in a sort of prison camp. But Dawkins knows this; he wouldn't ask for the unreasonable, or the impossible, or the cruel. So when he says he'd like to see some evidence, I can only assume that he's prepared to be a little generous in his view of evidence, and admit testimony of a kind that while it might not satisfy a scientist, or a criminal court, which requires proof beyond reasonable doubt, would be enough for a civil court, which requires the balance of probability. We don't demand or require scientific proof of everything we need to know about, not only because it would be impossible to provide, but because in a lot of cases it isn't necessary or appropriate.

And the only way we know what's going on in the mind of someone who reads a story is to believe them when they tell us about it, and compare it with our own experience of reading, and see what we have in common. So when it comes to the matter that Dawkins is concerned about, which is also a matter of belief – namely the question of children's belief in fairy tales and magic and spells – all we have to go by is belief itself, belief and trust, but then as I say, we do have our own experience to compare it with. It's that sort of evidence, and that's the only sort we've got, but then, we get by pretty well with that in most of our dealings with other people, unless we're paranoid.

So: do children believe what they read in stories, or don't they? And if they do, in what way do they believe it?

Well, this is what I think about it.

I think it's very like play – perhaps more like play than like anything else. We used to say "Let's pretend ...". When I was a boy of eight or nine, in Australia, what we said was "Let's make out ..." which is a

phrase that would have got me into trouble in the USA if I'd tried it there. "Let's make out we're cops and robbers ..."

So we pretended to be figures from the stories we'd seen in comics, or heard on the radio, or seen at the cinema, and we acted out stories that we improvised as we went along. I knew I wasn't really Batman, or Davy Crockett, but at the same time I was imitating things I'd seen Batman do on a printed page or Davy Crockett do on the cinema screen – say at the siege of the Alamo, where the defenders held out for as long as they could, while knowing that they were outnumbered and they were probably going to die. And when we died we did so with heroic extravagance. My body was doing all a nine-year-old body could to run out from behind a wall, fire a musket, clutch my chest, stagger, crumple to the ground, slowly drag a revolver from a holster with a trembling hand, and kill six Mexicans as I breathed my last.

Those were the physical things my body was doing. What was my mind doing? I think it was feeling a little scrap, a tiny fluttering tattered cheaply printed torn-off scrap of heroism. I felt what it was like to be brave and to die facing overwhelming odds. That intensity of feeling is what both fuels and rewards childhood play. When we children play at being characters we admire doing things we value, we discover in doing so areas and depths of feeling it would be hard to reach otherwise. Exhilaration, heroism, despair, resolution, triumph, noble renunciation, sacrifice – in acting these out, we experience them in miniature, or, as it were, in safety.

The other thing to be said about the kinds of play I used to take part in is that as far as I can remember, it almost always embodied *story* of one kind or another. It consisted not of musical tones, or shapes and colours, or words, but of *events* – of ambushes, betrayals, combats, the making of alliances, the tracking of prey. Even when the play was formalised by a set of rules, as in games of football or cricket, it was experienced as a drama, with an opening, a tussle for supremacy, a fightback, a final triumph or defeat. You could tell the story of it. And even the rules themselves could be co-opted into the narrative. I remember being outraged by the behaviour of the other team the first time I played street cricket soon after we moved to Australia; they insisted that I was out even though the fielder had caught the ball after it had bounced. "One bounce, one hand," they crowed, mocking me for my ignorance as I denounced them for

their unfairness. So the story of that game became part of a larger story in which I learned about local rules; I learned that what I took to be universal truths, such as the laws of cricket, were not all that universal after all; or a story in which yet again England got beaten by Australia.

But I was wondering about belief, and the way we believe in stories, and in play. At no time during the endless hours of play I spent as a child did I believe that I was anyone other than myself. I was acting; I was pretending. Sometimes I was me, and sometimes I was me pretending to be Davy Crockett. But now that I think about it carefully, I realise that it was a little more complicated than that. The two kinds of me were superimposed and not separate; I could be Davy Crockett to the hilt, and be me at the same time, trying out what it would be like to be Davy Crockett – to be still myself, but close to Crockett-hood.

But it wasn't consistent; it varied a lot. When I was playing with my brother and my friends, I was almost entirely Crockett, or Batman, or Dick Tracy, or whoever it was (and I remember games when there were about six different Batmans racing through the neighbourhood gardens). It was when I played alone that I found it possible to be myself, but a different myself, a myself who wasn't Davy Crockett but who was Davy Crockett's close and valued friend, who sat with him beside a campfire in the wilderness or tracked bears through the primeval forests of suburban Adelaide. Sometimes I rescued him from danger and sometimes he rescued me, but we were both pretty laconic about it. In some ways I was more myself at those times than any other, a stronger and more certain myself, wittier, more clearly defined, a myself of accomplishment and renown, someone Davy Crockett could rely on in a tight spot.

What's more, he seemed to value me more than my friends and family did. He saw the qualities in me that their duller eyes, unused to sharp-shooting, failed to see. In fact Davy Crockett wasn't alone in this superior perception; I remember that King Arthur had a high opinion of me, and so did Superman.

Now I think that those experiences – and every child who has the chance of both playing with friends and playing alone will experience something like that – were an important part of my

moral education as well as the development of my imagination. By acting out stories of heroism and sacrifice and (to use a fine phrase that has become a cliché) grace under pressure, I was building patterns of behaviour and expectation into my moral understanding. I might fall short if ever I was really called on, but at least I'd know what was the right thing to do.

That sort of play, the solitary play perhaps even more than the communal play, seems to me very similar to what we do when we read – at least, when we read for no other purpose than our enjoyment, and especially when we read as children. I'm conscious that the way I read as an adult is a little different, because there's part of my reading mind now that looks with critical attention at the way the story is told as well as at the events it relates. It may be because I write stories myself, but I often find myself thinking "Why did she change the point of view here?" or "He's losing the track – this passage is going on too long" or "We're too close to the action – he should come back a bit" or "She did that scene beautifully" or, my favourite, "That's good – I'll steal it."

But thoughts like that seldom if ever came into my mind as a child. Then, what I thought mostly was "I want to be in this story with them." I put it like that because I want to clarify a word that we often use without really thinking about it, and that's the word "identify". We say children "identify" with this character or that; that in this book there's no-one they can "identify" with, whereas lots of readers like that one because they all "identify" with the hero. I think that's partly true and partly not. A minute ago I described games where I pretended to be Davy Crockett, the sort of public or communal game, where you could see six miniature versions of Batman racing around. If you like, in those games I was "identifying" with Davy Crockett or Batman, but those games weren't much like reading. There were stories involved, as I said, but they were long and slapdash and repetitive and not nearly as well told as the comics or films we plundered for the characters. What's more, it was all public, out in the open, with a lot of shouting and negotiation and arguing and stamping and throwing down of challenges and storming off in a passion of bitterness only to return five minutes later as if nothing had happened. In fact, now I think about it, it was more like film-making than anything else.

The other sort of game, where I was by myself with Davy Crockett in the wilderness, was much more like reading, because here I was able to remain myself, and be Davy Crockett's friend. I didn't want to *stop* being myself; I wanted to put myself into the story and enjoy things happening to me. And in the sort of private, secret, inviolable space that opened out miraculously between the printed page and my young mind, that sort of thing happened all the time. Just as now I read to see what happens next, *and also* to enjoy or to criticise the way the author has arranged and related the events, so then I read to see what happened next *and* to put myself in the story as a friend of the characters. I wanted to be in the story, and remain myself, but a better myself, as I said.

An example of the sort of story where the qualities I admired, especially courage, were present in full measure is Arthur Ransome's wonderful novel *We Didn't Mean To Go To Sea*. The four Walker children, whom we meet first in *Swallows and Amazons*, are a couple of years older now, though their ages are cleverly never made specific. They are on the coast of East Anglia, not Lakeland this time, and they're spending the night on a boat belonging to a new acquaintance, a young man called Jim Brading. He leaves them in charge while he goes to buy some petrol for the engine, and – doesn't come back. Time goes past. Where is he? A heavy fog falls, and the tide, stronger than they thought, pulls the boat free of its anchor and out to sea. So there they are, with the barometer falling fast, unable to start the engine because there's no petrol, unable to see where they are – and the wind is rising. The novel tells what happened next, of course, as you expect stories to do, and it does so with beautiful clarity and honesty – they feel horribly seasick, they're desperately afraid, they're worried that their mother won't know where they are and will be more and more anxious with every passing minute. But the children do know enough about sailing to keep the boat pointing more or less out to sea and away from the dangers of the coast, and keep it from capsizing or running into any of the other vessels they meet in their terrifying involuntary voyage across the Channel in a storm. Their resolution and courage, and their sense of responsibility for this boat that isn't theirs, made me feel that they were people whose high opinion would be even more valuable than that of Superman or Davy Crockett.

Was that because the story was realistic? After all, there's nothing in the remotest degree fantastical or supernatural in Ransome's stories

about the Walker children; everything in them is scrupulously within the realms of the possible. Was that why I felt them more engaging, more truthful, than the Superman comics I devoured so eagerly at the same time? No, it was because it was a more skilfully told story, the characters more richly imagined. It was simply a better work of narrative art than most of the comics I read, better than Walt Disney's *Davy Crockett* film. That's what I can see now; if I was asked when I was young why I liked it I would probably just have said "I dunno."

But I don't think Richard Dawkins was talking about literary quality. He was pretty specific: it's fairy tales and fantasies that he's concerned with. As a matter of fact, Arthur Ransome wasn't averse to magic and fantasy: in *Old Peter's Russian Tales* we can see him relishing the fairy-tale elements. What about my childhood reading? Did I enjoy stories about "spells and wizards and magic wands and things changing into other things?"

Indeed I did. One of my favourite characters was a comic hero called Mandrake the Magician. He was an elegant figure in evening dress, with a pencil moustache, who fought criminals such as The Cobra, or Aleena the Enchantress. He could do magic with no trouble at all: a villain would find himself suddenly changed into a mouse, or someone trying to run from the police would find himself frozen in mid-air. From time to time the writers of the comic strip would remind the readers that it wasn't really magic, that these were illusions that Mandrake by "gesturing hypnotically", but I wasn't very impressed by that: it was *as good as* magic, after all. Mandrake wasn't all that popular among my friends, because there wasn't much for them to do except stand very still or pretend to be a mouse when I gestured hypnotically, and if there was more than one Mandrake at a time, it ended pretty quickly in a stand-off, each of us rendered helpless by the others.

But Mandrake wasn't such good company as Davy Crockett had been. He was rather smooth and glossy and altogether too mysterious. He wasn't a companion; he didn't feature in my solitary play. Someone who did, or rather a whole family who did, was even more implausible: I mean the Moomins. Little creatures looking like miniature hippopotamuses who lived on an island in the Baltic Sea? Absurd. But what I felt for the Moomin family, and all their friends, was nothing less than love. In fact I loved them so much that I

would never have said to my friends “Let’s pretend we’re Moomins.” That would have been inconceivable. I would have had to make public something I felt private and secret about, something I could hardly voice even to myself, something if, it were ever discovered, I would have felt embarrassed by; and the shame of discovery, I’m sure, would have been followed quickly by the even greater and longer-lasting shame of betrayal. To save face, I’d have felt obliged to mock and scoff at those dear friends of mine, and at any kid who was so stupid and babyish as to like stories about them.

But when I was alone, with a Moomin book open in front of me, and that great secret space opening up between my mind and the pages, I could revel in their company, and sail off in their floating theatre or travel to the mountains to see the great comet or rescue the Snork Maiden from the Groke, and no-one could possibly have told, from looking at me, what I was thinking and feeling, what my mind was doing.

Here comes the Dawkins test: did I believe the Moomins were real? No, of course I didn’t. I knew they were made up. I was *pretending* they were real in order to enjoy being with them in imagination. I wasn’t in the slightest danger of confusing them with real life. I knew perfectly well where real life ended and Moomin life began. The delight of being with the Moomins was a complex kind of delight, made up partly of the sweetness of their characters, partly of the delicate simple precision of the drawings, partly of the endless inventiveness of Tove Jansson the creator, partly from the fascination I felt with the northern landscape in which they lived: a whole bundle of things, none of which depended on their being true or real.

Similarly with another childhood favourite, Norman Lindsay’s Australian classic *The Magic Pudding*. I didn’t worry for a moment whether it was really possible to have a pudding that changed from plum-duff to steak-and-kidney when you whistled twice and turned the bowl around, or how likely it really was to find a penguin strolling around Australia in charge of it. That didn’t matter a bit. I loved the rumbustious humour and the funny pictures and the sparkling word-play and the ridiculous situations, and I still do.

Nor did I believe for a second that elephant’s trunks were so long because one of their ancestors played a desperate tug-of-war with a crocodile, as Kipling told me in the *Just So Stories*. If someone had

asked me, in a serious kind of way, why I thought elephants had long trunks, I'd have scratched my head and said "I dunno." I knew, even when I was very young, that "Because the crocodile got hold of the elephant's child's nose and pulled and pulled" would be the wrong sort of answer. I would have been just as fascinated, in a different kind of way, to hear the real answer; but that wouldn't diminish my pleasure in the story, including the delight I felt in murmuring the sounds of the words: the "satiabile curiosity" of the Elephant's Child; the "great, grey-green, greasy Limpopo River, all set about with fever-trees."

I knew these things weren't real, but that didn't matter, because I didn't want them to be real, I wanted them to be funny. Or delightful. Or exciting. Or moving. And they could be all those things, and real as well, as some things were, or all those things and imaginary, and I could tell the difference, and it didn't matter.

I think the problem Dawkins has with magic and spells and so on lies in a part of what he said in that interview I quote earlier, a part I didn't focus on then, but which I'll come back to now. He said

"I would like to know whether there's any evidence that bringing children up to believe in spells and wizards, and er - magic wands and, and things turning into other things ..."

He didn't actually finish that sentence, but he went on to say that that sort of thing was unscientific, and even anti-scientific, and that he didn't know whether it had a pernicious effect. But notice his words: *bring children up to believe in spells and wizards and magic wands...*

Does anyone, ever, anywhere, *bring children up to believe* in such things? Surely that isn't what happens when we offer a story to a child. No-one says "You must believe this, because it's true, or because I'll be cross if you don't, or because it's wicked not to," or anything of the sort. What we say, in effect, is "Let's have fun pretending that once upon a time there was a magic pudding, or a fairy godmother, or a teddy bear that could talk ..."

And as a matter of observation, pretty well every scientist who ever lived was brought up with fairy tales, and it didn't stop them from becoming distinguished in their fields.

He's on rather firmer ground, though, when it comes to the other idea he was worried about, *things changing into other things*. Some

parents do bring their children up to believe that bread can change into flesh and water into wine, and that they must believe this or they'll go to hell. Some of these parents, or some other parents, bring their children up to believe that the world was created six thousand years ago, and that scientists are wrong when they tell us about evolution, and shouldn't be allowed to teach it in schools. And I fully agree with Dawkins when he says that this is pernicious and damaging.

But there's a world of difference between that sort of thing and offering a child a fairy tale. Children really do learn quite early on that there are different ways of believing for different kinds of story, even if some adults have forgotten this. It's perfectly possible to believe in Darwin's account of natural selection, *and* to enjoy the story of the Elephant's Child. It's perfectly possible to be secretly in love with a family of beings who couldn't possibly exist, *and* to nurture a passion for science.

And when an experiment is impossible to carry out in reality, we have to resort to a thought-experiment. It was impossible for Einstein to ride on a beam of light, so he had to imagine what it would be like, and the result was his theory of relativity. A great scientist uses his imagination on nature; a great novelist, on human nature. Here's an example of what one great novelist imagined it would be like to live without fairy-tales. Dickens in *Bleak House* is describing the repulsive Smallweed family:

“During the whole time consumed in the slow growth of this family-tree, the house of Smallweed ... has strengthened itself in its practical character, has discarded all amusements, discountenanced all story-books, fairy tales, fictions and fables, and banished all levities altogether. Hence the gratifying fact, that it has had no child born to it, and that the complete little men and women whom it has produced, have been observed to bear a likeness to old monkeys with something depressing on their minds ...

“Judy never owned a doll, never heard of Cinderella, never played at any game. She once or twice fell into children's company when she was about ten years old, but the children couldn't get on with Judy, and Judy couldn't get on with them. She seemed like an animal of another species, and there was instinctive repugnance on both sides ...”

When it comes to evidence, I think there's nothing for it: we just have to trust what people tell us, and check it against our own experience. And if what they say is that stories of every kind, from the most realistic to the most fanciful, have nourished their imagination and helped shape their moral understanding, then we have to accept the truth of that. My guess is that the kind of stories children are offered has far less effect on their development than whether they're given stories at all; and that children whose parents take the trouble to sit and read with them, and talk about the stories – not in a lecturing sort of way, putting them straight about whether fairies could really exist, and whether Peter Pan could really fly, but genuinely *conversing* – will grow up to be much more fluent and confident not only with language but with pretty well any kind of intellectual activity, including science. And children who are deprived of this contact, this interaction, the world of stories, are not likely to flourish at all.

What sort of evidence that is I don't know, but I believe it, and all human experience is for it.