

Iain McGilchrist Interview

April 09, 2018 – Isle of Skye

Diane Elliott:

You write about education, you've mentioned that a lot depends on education and that it should concentrate less on learning facts, that children are not stretched enough and also that teaching should be more rigorous.

Iain McGilchrist:

I think it's easy to confuse two things, one is freeing both teachers and children in the process of education and the other thing is going soft on education and the children, and those aren't the same thing. In fact part of the problem is we think the way to improve outcomes is to drill children more and more in rather narrow ways and that is the mistake. But demanding things from children is extremely important, we all thrive on facing challenges. In fact if we don't have challenges, we invent them for ourselves. I'm certainly not suggesting that education should be any less rigorous but I think it needs to be vastly more imaginative. I think if it were more imaginative, children would find it much easier to put more effort into it. Whereas it's very hard to put effort into something that means nothing to you at the time.

What I feel is that there is a number of things going on. One is the hamstringing of teachers. If education is to be good then teachers need to be free to do what they do best. At the moment their hands are tied and they spend far too much time, as do all professionals, from the police to doctors, nurses, everyone, in the meta-process, in documenting things, forecasting things, analyzing things, reporting on them and auditing them. In the past we seem to have had extremely good teachers and very high educational standards without any of that, so we know that is a waste of time.

I've just been reading a marvelous book called *The Tyranny of Metrics*, by Jerry Muller, an American philosopher which demonstrates very clearly that this whole business of constantly measuring has done nothing to improve the real things that we want improved. In fact it distorts the process, so that people try to game the system in order to come out well on the statistics and they spend a lot of time and ingenuity on that, that really should be spent on focusing on education.

So that is one error. I think another is that we think the way to get ahead is to concentrate almost exclusively on what are called STEM (Science, Technology, Engineering and Mathematics) subjects, and I'm somebody who naturally was inclined to such subjects. My grandfather on one side was a scientist, on the other was a doctor, my father was also a doctor and I was brought up in a household in which it was projected that I would be a scientist. As a child I loved all of those things but also I discovered, as soon as I was introduced to them, how incredibly rich and how important the world of the humanities is. Not only is it very imaginatively stimulating and enjoyable to study, but it actually gives us very important values and a context in which to understand why we do the more technical things that now have become the focus. And if we don't produce a future in which people

have a grounding in those wider values then it will make no sense for us to be pursuing ever greater technical aptitude.

Without giving children, therefore the people who will be trendsetters and value makers of the future a broader education, it's like putting machine guns in the hands of toddlers because we will have ever greater power to do things through technology, but no commensurate increase in wisdom about what we are doing with that technology. So I'm very concerned about how that will pan out, I already think that there are far too many apparently clever people who don't see any problem with the fact that when we increase our capacity to manipulate the world and one another, we don't necessarily do so for good ends. And even if we do so with good intentions it will only be a few milliseconds before the extremely bright, but not well-intentioned people will pick up those techniques and use them.

I also think we've misunderstood the importance of play, which is often considered to be a waste of time. Also sleep is now considered as a waste of time and people are trying to find ways of enabling us to do with ever less sleep. But in fact both play and sleep although they are not apparently productive, are incredibly important to the functioning of a sane human being, and also to the stimulation of imagination again. I keep coming back to imagination because it's an essential thing. Imagination is part of how we create the world on an everyday basis. This is something that Coleridge saw and wrote about, building on contemporary German philosophers, that the world we experience is partly a world we make, and if our imagination is poor, then we'll be living in a poorer world. So imagination is central.

All of those things need to be taken into account, we need to liberate teachers and students from very narrow curricular and constant assessment, we need to drastically reduce the amount of meta process involvement for teachers. We need to improve the content of the courses so that they are not purely STEM related and we need to introduce areas of creativity, music, drama, reading poetry and so forth, which are very important to the fulfillment of a human life.

Elliott:

The students worked on a project about the Highland Clearances, when thousands of Scottish people were moved off their land to make way for sheep to sell to the wool factories. It was a role-play project whereby one group included Patrick Sellar and his cohort and then the other group were the people who had been moved off the land.

We presented them with a tough philosophical problem and let them hash it out. Through that process, they have to look at their beliefs and their perspectives. I was interested to read where you wrote about truth and certainty, about how truth needs to be something which is uncovered, rather than through certainty. So it leaves young people with the idea that to get to the truth of something, you have to keep chipping away, and you have to take everyone's perspective into consideration.

If you could speak about accessing that process through the right hemisphere attributes; about wisdom and truth and certainty and how important it is for young people to have an opportunity to open up the right hemisphere rather than closing it down.

McGilchrist:

I suppose implicit in the education that is offered to many children is the idea that there are correct answers. They might be surprised to discover that in most traditions the wisest people are those who say they know least, and certainty is a sign that you are not there yet. Most of the training of Zen monks is about trying to disconcert this idea that there is a right answer. This does not mean that there are no truths, that there is no meaning to the idea that something is truer than something else; if we didn't believe certain things were truer than other things there would be no point in getting up in the morning because nothing would be better than anything else. So clearly that is an untenable position. That needs to be driven home because there is a tendency in certain streams of modern philosophy to say, because we can't be certain about truth, that means there is no truth. I would resist that very strongly.

So, if there are different kinds of truth how do we achieve them? Well interestingly, science, as it should be practiced, is a very good example of this. It is well known that you can never actually prove that a certain thing is true in science, you can only prove that the alternatives are false. Now that's not just applicable to science, it's applicable to how we acquire a wise understanding of the world. It's to see how going down this path leads to folly. We don't see this as the road to wisdom, we just know there are certain things we must steer clear of. It's rather an intuitive process, it requires a lot of hard thinking as well. People use intuition better when they've done a lot of hard thinking and people think better if they've paid attention to their intuition. So these things are not contrary to one another. In fact, most of our thinking, actually all of our thinking, goes on at a level below consciousness. The stuff we do consciously is just like the tip, the tiny tip, of an iceberg.

So, how can we help children to see that there are multiple truths? Well, one would be to stop helping them to believe that there's a body of knowledge that they need to acquire in order to get a good grade at A Level. Nowadays, for example, if you are studying Jane Austen, while you may be allowed to enjoy reading it, you have to know that there are six or eight things you must say in your essay to get full marks. In fact, it would be a much better principle to say what are all the things that people say about Jane Austen? Now turn them on their head and see what happens. During my training at Oxford I was very lucky to have a very good tutor, John Bayley, he was constantly taking what people say and inverting it and seeing what happened. It doesn't mean to say that there was nothing in the original position, but it meant that it was often masking something that you were just excluding because of course it must be "like this." So that habit of taking one position and then taking the other, is very important. I would like, as part of all educational systems, to see the discipline of arguing for a point of view as strongly as you can and saying "okay, that's what you believe, now argue against it as strongly as you can, and we're going to mark you on how you argue against that position. And marshal all the possible ways you can of countering what you've just said." So I think that's a very good discipline for anyone who is going to be thinking critically, and if you are going to be at the top of any enterprise, you've got to think critically, you've got to think differently. It's no good just accepting the wisdom; it would be very foolish to jettison that wisdom that's been acquired, but you need also to be able to question it and to think independently.

There is such a thing as knowing the way things normally work before you are free to jettison them. You learn the rules so you know how and when to break them. So it's not an invitation to chaos. Too often, attempts to make people creative are an invitation to chaos. For example, brainstorming is not really a creative thing to do, because there is nothing about the creative process that is purely random. In fact if you had to find a suitable

hypothesis to test and you just tested all the possible hypotheses randomly, you'd never get around to any of the interesting ones. So we're automatically creating things, at a level which we don't quite understand why, that further a certain point of view. So it's not an unguided process, it's just that it's guided unconsciously, it's guided intuitively. It's not guided by processes, algorithms that can be taught and can be followed out sequentially.

Elliott:

It's interesting that you bring up about taking up a different view. Another project we did at the school focused on the Scottish referendum. Just after the referendum took place all of the students were talking about the effects of the result, they were very passionate about their views, so we decided to create a project around the issues. We knew the political viewpoints of the students, so we assigned them to the opposite camp. They then had to look at all of the information that they'd bypassed in their beliefs as to whether Scotland should or shouldn't be independent. They were immersed in the opposing arguments. The more balanced viewpoints they expressed after the project had finished was incredible.

McGlichrist:

That's education!

Elliott:

It really was education. And also, through that, you see that they are accessing a different way of thinking, which continues after the project, and it does align with all of the right hemisphere attributes. It's so apparent when you look at it, you could almost check it off a list.

McGilchrist:

Well, one simple difference in my view, which is how the two different hemispheres approach the world, is that the left hemisphere is always looking for the correct answer and narrowing down and closing the conversation on that correct answer; whereas the right hemisphere is always - what Ramachandran calls - "the devil's advocate." Ramachandran is a famous neuroscientist who has looked quite a bit at the different hemispheres and he calls the right hemisphere "the devil's advocate" because it's the one that says "but actually it could be like this." And we need, of course, both of these processes; if we were constantly saying - "well it might be this, it might be the other," - we'd never get anything done. So, for purely practical purposes, we need to be able to close down. In other words, there is a dialogue which should be happening between the tendency to close down, and the tendency to open up. I sometimes describe what the world, as the left hemisphere sees it, would look like, and it looks surprising like the modern world in which we live. And people say to me - "so what would a right hemisphere world look like?" And I say, well, very balanced, because the right hemisphere understands it needs the left, it wants to enter into a dialogue, into a harmony, or a tension at any rate, between apparent opposites that can create something new. Whereas the left hemisphere thinks that anything that is, as it were, a fruitful tension or the other end of the pole, is to be cut off and dismissed. The trouble is, you can't cut off the other pole; if you take a magnet, it's got a north pole and a south pole, and you cut it in half to get rid of the south pole, the south pole is still there because a north pole and a south pole need one another! There are many things in life which are like this, all

electricity is like this, you need a positive and a negative. And indeed all values are like this. I would like people to question every single value that they hold dearly, up to a point, and see when does this become a problem? 'There isn't anything that you can name that doesn't become a problem if it is taken solely and singularly to extremes. There is always this tension built into reality, we need both kinds. But in the political realm in which we work now, you never hear that, you only hear "this is right,' versus 'that is right.'" There's no fruitful coming together of these points of view. Which, in my view, is how we produce a stable, healthy society.

Also, we should stop thinking about education as preparation for a job. It may well turn out that it is a preparation for a job, but it shouldn't be pursued as a preparation for a job. It's a bit like playing a game; actually the value of a game is in playing the game. And in doing education, the value of it is the process which changes one in ways that can't necessarily be specified or measured, though you can spot them. A trained teacher or any commonsensical individual can spot the difference between a bright enquiring mind and a dull and not inquisitive mind. So what I'm really suggesting is there is too much emphasis on productivity – which - may turn out to be counterproductive. And actually the way to make people flourish is not to say "you get this grade, so you get that job, and the more hours you work at that job, etc., the better you will become."

One of the paradoxes in economics is that Germany has the strongest economy in Europe, or certainly one of them, and people work the shortest hours; whereas, in Greece, they work the longest hours. So it doesn't work that way.

Another thing that I like is a point made by John Kay. He's the economist who pointed out that there were many large corporations that flourished into the 80's, including for example, Citigroup, Glaxo Smith-Kline and ICI, and they were then taken over by people whose expressed view was that the only thing that mattered was "the bottom line." And they then ceased to be profitable, ceased to produce what they were supposed to be producing. Surprising enough, the way to flourish is not to concentrate on the bottom line but concentrate on producing a good product! The rest takes care of itself.

Japan Airlines had got into severe financial difficulties so they appointed to head the company - a Buddhist monk. The monk was in his mid-seventies, and had no experience of running a large corporation; but within two years he had turned the fortunes of Japan Airlines around completely, and it is now a very successful corporation. When asked what his secret was, he said "if you want eggs, look after your hens." In other words, instead of constantly berating and pushing, and making your employees feel scared and anxious, which just makes them close down and produce poor quality work, you make them feel valued and give them some freedom and they will then feel motivated and freed up to do things that will make them enjoy their work; and what will be good for them will be good for the company. There is no necessary opposition between the good of the individual and the good of society. So in a good society, individuals will be fulfilled, but by just pursuing individual fulfillment, we will not have a good society.

Elliott:

You could just take that story and apply it to education. Value the children, don't make them feel that if they don't reach a certain performance level they're failures. If you academically fail in school, then you are a failure in life, that's the message, which is so difficult for them, especially if they tend to be creative. I've known highly intelligent students, intelligent in

many different ways, but they're just not exam-takers, they just close down when they know they are going to be timed. They feel they've got nothing to offer, they've got nothing that is valuable.

McGilchrist

My view is they will find it difficult in the workplace, because you can't just say I need absolutely no constraints, I'm not being timed. To an extent, you have to be able to discipline yourself. In fact, self-discipline is a very important thing that comes out of an education. The trouble is, the more you micro-control students from the top, the less self-control they will develop. In fact if they have to discipline themselves, they will turn out to be much more mature when they go to university, instead of finding that, "at last nobody is breathing down our neck, we'll spend three years partying." It may be a very nice way to spend three years, but it's not a good use of a university place, which is a very valuable thing. So actually learning self-discipline is probably as important as anything else in education.

But I know what you mean about the creative people who don't respond well to exams.

Elliott

Often they don't mind being assessed, it's the time constraints, whereby they've got an hour and a half to write a paper and they know people who go to university who have a couple of days to write a paper and have time to amend and to reflect on the work.

So there is that, and say if you are really interested in art, the way the exam is designed is quite narrow, you have to achieve certain criteria, which is difficult for students if they want to express themselves in a different way; it's closed down.

McGilchrist:

But does it have to be a conflict, does it have to mean if you want to be creative, you can't respond quickly and accurately? For example, I think you should be, as you quite rightly say, given time to ponder to read, to think, but when it comes to delivering your answer, I would be the opposite of what you are suggesting. I would be absolutely rigorous, and I would say it has to be in by nine o'clock on Friday morning and if you bring it to me at ten past...-well, I would be flexible - effectively, it's no good.

Elliott:

Yes, I agree they need deadlines.

McGilchrist:

You need deadlines, in fact, in life, deadlines are very creative. As I myself know, you need them. Often, one of the ways I fine-tune my life is to give myself long periods when I'm not under any pressure and also give myself engagements or dates by which I must have delivered something. This combination works well for me. I suspect it works quiet well for a lot of people, in talking to them. I think we need discipline and we need self-discipline, but that absolutely does not mean turning one's back on the creative, in fact it's the opposite. It maximises the spice of creativity if there is a degree of pressure.

Elliott:

We implemented the Arts Award, provided by Trinity College in London. The students can choose any creative area of work including photography, animation, fashion design, web design, anything at all which consists of creating a portfolio of work. Part of the process is for the students to find people who are connected to a creative profession and ask them to be their mentor. They also have to show their work publicly, so for example, if you're an artist you have to arrange a gallery exhibition which will be open to the public. The students also have to explore how their work would transfer into a real business skill. They have to find people who are actually making a living doing this. They are taken through the process and although there is no time limit on it from the college, we did put deadlines in place pertaining to pieces of work. At the end of the process, an assessor from Trinity College marks their work, and if they pass, they receive the equivalent of an A Level. It works brilliantly. It's these types of programs we want to make schools aware of, that there is a different way to have students access creativity.

McGilchrist:

I think that is very useful and helpful.

I'm also thinking about this puzzle, at the same time: that we have got far more focused on, say, maths, and far more routinised in the way maths is taught, yet the standard of mathematical understanding is going down very fast. I've just been reading and writing about the puzzle of what has happened to intelligence, and it's too big a topic to go into now, but there is something called the "Flynn effect," which is a popularly known phenomenon, and is perfectly valid; which is that, generation by generation, people seem to be able to score higher on an IQ test. But they don't actually seem any more intelligent than people were in the past! Actually that has now gone into reverse, something called: "the reverse Flynn effect." To explain the possible factors that went into the Flynn effect in the first place, and have now gone into the reverse Flynn effect, would be beyond this conversation. But one of the things that comes out is that university teachers in subjects like maths and engineering were completely appalled by the standards of mathematical understanding that were coming out of schools, at the same time that, apparently, high scores in A Levels were being achieved. So for government targets, the propaganda was good: lots and lots of people achieving high scores at A Level. But clearly, a number of things were happening. Number one, and I'm sorry to say this, but it is clear that the standards that achieve an A Grade are not the same as they were in the past. Also the understanding behind them is not there. And when you compare children's understanding of Piaget's developmental tests, (Piaget, as you know, was the famous educational theorist who developed a number of tests), as children reach a certain level of maturity they should be able to intuitively answer, through an understanding of how maths and physics work, (you don't need to be technically chained to this), eleven and twelve year-olds should be able to tell that if you put a large object into water, it will displace water not in proportion to the weight of the object, but in proportion to the volume of the object: that's a fairly straight-forward point. But despite the apparent level in maths education being so good, an absolutely whopping decline in capacity between the 1970's and the first decade of the 21st century has happened. So in 1975-6 54% of boys and 27% of girls were able to understand that task; now there is equality, but that equality is 17%. So the girls have got less good, and the boys have got massively less good. Progress?

There is a whole problem about boys' education here, which perhaps we should talk about. Boys respond to a completely different style of education which is exactly the opposite of the one which is now being promulgated. In other words, they respond particularly badly to being sort of drilled in procedures; what they like is risk, what they like is thinking outside the box. And they need to be encouraged to do so, and that's exactly what this 'education' doesn't do. They also need to be allowed to play in the outdoors and play with their peers in natural settings. Now people are trying to find ways of helping children by taking them out into the outdoor environment and not supervising them excessively. The trouble is that because of litigation, people have been worried about children coming to harm. In fact unless they are able to take risks, they won't ever learn anything and will remain vulnerable.

Elliott:

Even with the older teenagers in our school, they go outside and build dens, as younger children would. Just because they are teenagers, it doesn't mean they need to stop play; they still need that outlet of being in nature, going for walks, being able to mess around with sticks and fires.

McGilchrist.

Yes. Three years ago, I was in Burma, it was then, it might be different now, a largely non-Westernised society. I had the extraordinary privilege of being in the country and seeing people sitting and talking and playing. There were two things that struck me. One was that I was there for two weeks, and in the entire two weeks, in a country with a very high fertility rate, I never heard a child have a tantrum, scream, complain or whine. They seemed to be peacefully getting on with being children, and they were welcomed into the adult world in a most extraordinary way. They would be sitting around the fire and you'd see these little toddlers approaching the fire, picking things up. I saw a little boy with a knife, in the Western world he'd be told to "put that down!" And that was the other realization: risk.

My father died a few years ago and my brother and I got out the old ciné film that he'd taken of us as children growing up in the nineteen-fifties. I'd bought a projector so we could watch them. There we were playing, and my father was happily filming us doing things that nowadays people would think was too dangerous. My brother and I kept calling out 'elf and safety!' And what a dreadful mistake.

Elliott

Again, it's a closing down of a natural state.

McGilchrist

It is a closing down. Children are so inhibited now from doing anything that comes naturally to them. And I think that also, to take the conversation further afield, I think that fuels some of the more unpleasant crime. If you contain and cage children, particularly adolescent boys, they will find ways - if they can't find benign ways, they'll find malign ways - of rebelling against the system. They'll do things that probably, if they were older and understood more about the consequences of what they were doing, they wouldn't do. But at that age, the frontal lobes are not very well developed, so they're not inhibiting very much. Suddenly like a pressure-cooker exploding, all this containment is let out, in what I believe is

a show of rebellion against the repression, or oppression, of our culture. I am not saying we should not be strict about discipline. One of the problems is discipline, which is extremely useful for all children and very important for them to learn boundaries; it's not properly instilled. So teachers must be empowered to be more rigorous in discipline. A lot of this is just common sense.

Elliott:

I have two teenage boys and I've written about a journey I took in trying to find a school for them. Schools were not interested in boy energy, and a lot of teachers didn't want boys to express anything other than sitting down and being quiet. Anything outside of that was bad behaviour which they wanted removed from the classroom. Another type of approach I encountered was at a primary school, where boy energy was tolerated, on the playground, so the students were let loose to run wild, with no boundaries or supervision. Many kids were getting bullied or hurt.

McGilchrist

Which is not good either. Always there needs to be a balance; everything has to be this balance between elements which are effectively in tension with each other. And the mistake is to think one must be good, and the other bad; which is probably the most fundamental error in our thinking these days. People are full of things that they think are marvellous. The more of them they get, however, they're not, they're only marvellous up to a point: then they start to become toxic.

Elliott:

Another thing which was really interesting to me is the area of empathy, inculcating empathy in young people. How are we able to do that? What do we have to do to have children have empathy for each other? Right now, they are mostly in a competitive environment where they are pitted against each other and empathy is missing. It's difficult to be in a class where you have to compete and are in a race to prove yourself. One of the things we try to do in our school, through the role-play projects, is to explore empathy through the characters. However the projects are also highly competitive.

It is interesting how you say that empathy is a right hemisphere attribute, can you say anything about that?

McGilchrist:

Well, I've got a number of thoughts about it. One, to pick up on what you said, I would question whether a healthily competitive environment needs to be low on empathy. I don't think so. I think that organisms and all societies thrive on the right balance between cooperation and competition and we've been sold a story that nature is simply about competition. But absolutely not, nature is mostly about cooperation. However, there is an important element of competition and we shouldn't think it's bad and get rid of it, any more than we should think that the cooperation saps the energy of the competition: things work together.

I'm just thinking about a number of fairly highly competitive environments in which I was educated, where I was nonetheless impressed by the level of empathy. As a result, I left school thinking, in life, I would meet only nice and friendly people such as I'd been brought up with, as on the whole we'd got on incredibly well. And then I discovered, actually, in life, it isn't like that! Sometimes you have to learn the hard way.

I think the answer may be deeper than an educational answer can fully address. So, I would say that it's not to do with the school system, but to do with the society in which we live. Certain measures of empathy, one might think, were higher than they used to be, now everybody virtually agrees that one ought to be tolerant of, and kind to, people who are different from yourself, less well off, or whatever it might be. But, I'm afraid the evidence seems to be that generation by generation, young people are less empathic than they used to be.

I was very struck by something, years back when I was lecturing in Toronto. A woman came up to the microphone and said: "I teach five-to seven-year olds, and my colleagues and I have discovered, just in the last few years, that we actually have to teach our class how to read the human face." That was extraordinary to me, because, until that point, I would've thought that only children quite some way down the autistic spectrum would need to be explicitly taught how to understand the human face, how to read it. Almost like a machine could be given an algorithm: 'when the face does that, it means this.' Extraordinary. Then I put that together with two other things. One was, to come to your point about empathy, the research that suggests that people now respond less empathically to scenarios than they did thirty or forty years ago. And the other one is the one I get from teachers who, knowing nothing about one another, write to me with a very similar story. They're saying, "I've been teaching all my life and I'm now nearing retirement. I've always given my class a certain test, and I can only remember one child in ten years that wasn't able to do it; but now I find about a third of the class can't do the test which requires sustained attention." This has happened in the last few years. If you were to be as classic, as conventional, in your view of the right hemisphere as possible, you would say the three most clearly right-hemisphere-based things in neuropsychology are: 1) reading faces, 2) empathy and 3) sustaining attention. You won't find people anywhere in the world who dispute that any of those things are very largely right-hemisphere-mediated. And they all seem to be on the wane.

So I may be literally right that the right hemisphere is not being fed, nourished, fulfilled, in our society. Now whether anything you can do in a classroom can really alter that, or whether this needs to go much deeper into family life and so forth, I don't know. I'm going to make myself very unpopular by saying this but I think that the whole business of fixating on social media and technology, of one kind or another, is part of the problem. It may also be that television has eroded, because the change in empathy started before social media, it started really with the widespread watching of television. Of course, on television you get several things, you get to experience a scene from somewhere else in the world that is perfectly horrifying and it's flanked by perhaps an advertisement for cornflakes and a picture of a happy family doing something. These juxtapositions of images decontextualized and fragmented are something we've had to get used to. We have to be able to somehow distance ourselves in a way that is rather unusual. I think on top of that if you are interacting

with people through a mechanical interface it is not the same as interacting with them embodiedly, face to face, and we therefore miss a lot of what is essential in human communication, which is the non-explicit, the implicit.

It has to do with things that we are very good at picking up, well below the level of consciousness. So we can detect a very slight change in a facial expression that lasts only for a few thousandths of a second and we're able to discriminate an enormous number of fine changes through looking at faces all of the time. The trouble is, that when you are writing things and sending texts, first of all you are very restricted in what you can express by the sheer scope of it, you're encouraged to abbreviate the way in which you put things, so a lot of the fine tuning in what you're saying goes and you're not actually interacting with a face, you're interacting with words. That does alter communication.

I think all of these things, including of course, the corrosive effects of being tied to a mobile phone, in situations which in the past would have been very important for developing empathy. One of the biggest ones is the family sitting around a table; it's sort of a sacramental image, right back through the entirety of civilization, in fact civilization probably emanated from people sharing food around a fire. Wherever you go in the world you see this as the focus (which literally means "the hearth" in Latin), around which people are gathered. But now, we're no longer gathered around the fire talking, or around the table talking to one another. The sharing of meals has, to some extent, been eroded, so people tend to help themselves from the fridge at random times. But also when they do sit together, they don't fully concentrate on one another. I know it's corny to draw attention to this, because it's so obvious, but it is extraordinary to see a couple out for dinner, and instead of looking like a couple out for dinner, both of them are looking at their phones. I suppose their lives are incredibly pressured and they feel the need to do this, but somehow we've got to push back against it.

Sometimes, someone will come in to see me with a diagnosis of depression or anxiety, and the first thing they will do is take a device out of their pockets and put it down on the desk, and sometimes will remember to turn it off. I say to them: "Before we start, that might be part of your problem." They would go on to describe nothing very pathological in themselves, but a wholly pathological organisation in which they were working. In which they were constantly being pushed to work ever harder, with fewer of them to achieve more targets, until people went off sick. 'It's not you who are pathological,' I tell them, 'it's the system.'

Elliott:

I recently read a book by Johann Hari called *Lost Connections*. In it, he talks about loss of connection in relation to mental health and medication and how some people are going straight to medication without trying to fix the things that are wrong in their life.

McGilchrist:

Not that there is anything wrong with medication, nor that there's anything wrong with computers or mobile phones, that's not my message: it's about balance. And the balance comes somewhere very much further down towards not using them than we now think.

Medication is one I just want to comment on, because I think, for some people, medication is definitely not the answer and they need to do psychological therapy. But for some people, it's very important: it's life- saving. Again it's knowing when, and how much, and for whom. There isn't a one size fits all answer to any of these questions: it depends on who you are dealing with.

Elliott:

Is it time to look at people individually and to figure out what that solution is?

McGilchrist:

Absolutely. It's a wonderful idea, how on earth did we forget about it? The answer is that we now think that the accurate way is to use an algorithm, which of course is a generalisation that doesn't apply to any one individual. So for example, as a doctor, you are advised to treat depression in a certain way: you do this, you try that, then you move down to this level, where you do this one, and if that one fails you do another one. This is absolute nonsense, because there is no such thing as "the depressed patient:" there are only depressed individuals who are struggling with their lives. And they all are different, and the job of a good psychiatrist is spotting what this person needs, which will not be the same as what the last person needed. So, although these algorithms seem more precise, they are less accurate, in that they don't really refer to any one individual that's in front of you. Instead, as a doctor, as a teacher, you should be thinking now, what is best for *this* person, and it might not be in this class, anymore than the right thing for my patient would be to be in this particular group. Great for some of my other patients, but not for this one.

Elliott:

So it's that algorithmic, mechanistic kind of approach, which is the problem?

McGilchrist:

It's a huge problem. Once again though, it's not true that algorithms are never helpful. What is clear, to cut a very long story short, is that when people are beginning to learn something, it's quite helpful to have an algorithm. Hubert Dreyfus and his brother have done a lot of work on levels of skill: and they effectively divide skills into five levels (it doesn't really matter what they are), in the lower three, actually having rules to follow helps, but in the higher two, it positively gets in the way, it decreases skill, whereas originally it improved skill. A lot of the things that we "roll out," as they say, across the population are derived from seeing that you can make some quick gains, at a low level, by instituting something: you pick, as it were, the 'low-hanging fruit,' the ones that will easily respond to a measure that can be quickly put into place. But the mistake then is to think that that works across the board; and often what it will do is make a small improvement, for a while, for certain groups, but actually will get in the way of improvement for the really gifted and the brighter ones. We ought, as a society, to be paying at least as much attention to the really bright ones. At the moment we are paying most attention to the ones who are struggling; that may sound hard, we should pay attention to them; but everything has got to be proportionate. It's a question of well some children may not want to be in a school, and why should we force them to do so? They might be much happier doing something very skillful and practical, which they could learn, master and be very happy doing. One size does not fit all.

The notion that more schools with longer hours, longer terms, and more homework - this is not the way to improve education. It's rather like supposing the Greeks must have a healthier economy, because they work the longest hours in Europe, whereas the Germans will have a poor economy, because they work the shortest hours. It's not about the hours! It's about the quality of what's going on. So we need to re-think that one as well. Just forcing this process is not a good thing.

Elliott:

Absolutely, it's hard to see a way out because the system of education is so big and there is so much invested in the way we "do" education. Many people write about changing education and what we could be done, but very little actually changes.

We need to get our message out about how we changed education in our school, even to just add it to the other voices.

One of the things that you write about at the end of your book is about culture. I've been reading about D.T. Suzuki who brought Zen Buddhism to the west, he writes about satori, which is seeing to the true nature of who you really are. This is what we try to focus on when new students come in to our school; we try to focus on the individual and ask "who are you?" Then we see if we can pull out those interests they have, and merge it into what is happening in the school.

Suzuki defines satori as: "an intuitive look into the nature of things, in contradistinction to the analytical or logical understanding of it. Practically, it means the unfolding of a new world hitherto unperceived in the confusion of a dualistically-trained mind."

So, again, it is this going back to what is usually taking place within schools, the training of the dualistic mind.

McGilchrist:

Absolutely. It's really what I was talking about earlier, we 'think this is right, that is wrong,' whereas it's actually about not being dualistic about it, but bringing things together.

Elliott:

To take that point into culture, looking at the difference in Asian and Western students, whereby the Asian students are more holistic with little use for categories, they notice relationships and have more of an appreciation of the whole. This part of your research is really interesting. I looked at it from an art perspective and found a matrix on the differences between Eastern and Western art which was created by a university in Texas. What the report puts forward is that from a Japanese perspective, art is a way of life, aesthetics are integrated into aspects of daily life like the tea ceremony or the Japanese gardens...

McGilchrist:

And calligraphy, many children now find it difficult to use a pen at all. Whereas there's this deep idea, not a superficial idea, that actually the making of strokes on a piece of paper is expressive of something that is beautiful.

Elliott:

Yes, the university report says that art for us in the West is considered to be elitist, elevated and separated from most aspects of daily life. Art objects are displayed in museums. Whereas art making in Japan is an expression of ritual and tradition and obligation to the group. Here in the West, it is more about individuality and personal self-expression.

Maybe you could talk about your experience of the research you have written about in this area. Is there any way that we could incorporate an element of this Eastern outlook into our society?

McGilchrist:

It's a very good point. One of the saddest things is that, just at the point when we in the West really need to learn from the East, the East is trying to turn itself, as fast as it possibly can, into a copy of all the things we did wrong. Particularly China, which is very sad, because China is, of course, an ancient and very sophisticated civilization, it is now turning itself into a shallow civilization as fast as it can. Whether it succeeds in doing so, I don't know, because these things run so deep in China, that I imagine after a while the Chinese, being a very intelligent people, will start to think, this is a very poor trade we've done. But I think there are ways in which we could easily learn: the trouble is, as I said earlier, it's not something that just can be fixed at the school level, it goes into the fabric of society.

For several hundred years we have emphasised competition at the expense of social cohesion. For several hundred years we've been doing away with rituals, sidelining art as something pretty and ineffective, which is viewed as, if you're really going somewhere in life you don't need to do it, it's only a nice thing to do for relaxation at the weekend. Go to the opera in the evening, take your mind off your *real* work. This is a terrible inversion of reality; we don't have art as a sort of side dish to enable us to enjoy the main dish of making money. The only point of making money is to support a civilization in which the arts can flourish.

So the real business of life comes in things that we now sideline; and all that, to be honest, incredibly, dull stuff that people do in enormous offices under strip-lighting, under great pressure, all day long, staring at figures, it's not what a civilization is about, it's not what life is for. There's an enormous amount of very basic wisdom that we could have learnt from Oriental traditions; and one of the things I really loved about what I found out about the Japanese, is that it's not simple, they're not, in some ghastly sort of Soviet-style way, submissive to the group. They do think that the important thing about being an important member of society is not standing out, but playing your part and fitting in. Yet, they also are very private people who believe in individual difference, and that these things are rich and fulfilling, so they shouldn't be striving one against another. So you should aim to excel, you should do well, but not in some horrible competitive way, putting your boot in the face of someone else who might compete with you; you work together to produce good results, which is one of the things Japanese companies have always been said to be much better at than Western ones.

There's an enormous amount there that is very rich; and one of the things I didn't talk about there, but have thought a lot about since, is that in Western universities, where a lot of particularly Chinese, Korean and Malaysian students now go to be educated, they're often seen as somehow either rather passive or perhaps not contributing, or not doing well, because they're *quiet*. Their natural reaction to something is that you speak only when you have to, because the real processing goes on when you're silent, and that speaking interferes with intellect. Whereas in the West we think that intellect is all about talking, and that silence is when nothing better is happening. It's another example of how we disproportionately value the very tiny bit that is explicit, and devalue the 99.9% of all that we're thinking and doing and learning, which is not explicit.

So that's another interesting thing to throw into the mix – that - actually teaching children to be peaceful would be a good thing. I'm not very good at being prescriptive, but if I had to be prescriptive, one of the things which I would think that ought to be mandatory at schools is teaching children to sit quietly, and learn mindfulness, for perhaps ten to fifteen minutes every day, maybe before entering lessons, so that their minds are settled and focused. This would have a number of good effects; it would make them no doubt study better, and perhaps make them more peaceful in getting on with each other, but that's really not the point. The point of mindfulness is it is valuable in *itself*, because it centres you now, here, in the world. You only have one shot at being alive; if you spend all your time somewhere else in your head, you've never actually been here. So it's very important to learn that fairly early on in life. Far too late, people come, sometimes through a mental breakdown, to learn that actually they need to cultivate peace.

One of the things people said to me when I came to live here (on Skye) was: "will you not be bored?" Well, nobody who knew me really well actually asked me that question, because I do not know what it means to be bored, I've never been bored for an instant in my life. I love peace and quiet, it's then that all the rich stuff happens, it's not in the constant chatter. When I have to go to places, and do a lot of talking, I find it quite exhausting, not because I don't enjoy talking, as you can see, I can talk the hind leg off a donkey! It's just that it takes a lot out of me; you have to come back and replenish in quiet and solitude.

If there was one piece of advice for young people it might be: learn to prize being quiet with yourself, not always having to be stimulated by something outside of you. In fact, learning to centre things in yourself is very important, because, in the all-important questions you are asking, about what do we do about education, what do we do about many things in our society, there is a sort of one-way ratchet which makes it hard to go back. The more you control, define and limit what people do, the harder it is for them to cope on their own. It's not as easy as saying: well, we relax some of those things. If you imagine a society in which people are so micro-controlled that there are millions of rules, people start to take the attitude, well, if it's not forbidden by the law, then it should be allowed, I can do it. Indeed, we're starting to get into that world: well, if there's no law against it... Well of course there's no *law* against it, because any normal person with any kind of moral sense would see that this is not a good thing to be doing! We don't have to have laws for everything; a society full of fulfilled people, a healthy society, is one with very few laws, because largely you're relying on the fact that these things are internalised.

There are many stable civilisations which had very few rules and laws, though actually as you get more into civilisations you start to need more - what I should say is: there were cultures, and still are cultures, often ones that we look down on, because they're not advanced cultures, in which there are very few such rules because these things are taken for granted, because they are taken within. If your moral sense has to be forced on you from the outside by a lot of rules, it's rather like a lot of scaffolding that holds up a building: eventually, if you take it away, the building collapses. Or in the case of a patient who needs to build strength, often a physiotherapist will say: "no, you can't rely on the wheelchair, you can't rely on your crutches, you're going to walk, on your own." Of course that can seem cruel, and it has to be done gradually: physiotherapists are sometimes thought of as rather cruel people, but of course by doing this they are helping people get their core strength back. If we are going to help people in the future, we have to help them do it from within, not by imposing things from without.

Education is never about putting something in from outside, from someone else, it's about drawing out what is already in there latently. If it's not in there latently, no amount of pushing or shoving things in will help: you have to draw it out from that person. So we've now got into a view that education is about a lot of information that is pushed into a person, at the top end and comes out at the bottom end as a sheet of paper. But this is not what education is: education is about a relationship, a relationship between teachers and their charges, in which something is kindled and something -that should be rather electrifying - is happening in which the teacher responds to the children, the children respond to the teacher. If that is not there in the classroom, no education is happening.