Editorial (20.1)

Fishing and splitting the brain

March 31, 2018 · Column

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Allen P. Editorial (20.1): Fishing and splitting the brain. Emergence: Complexity and Organization. 2018 Mar 31 [last modified: 2018 Dec 2]. Edition 1. doi: 10.emerg/10.17357.1c1b8eda4b290469919d808bfb61fc1a.

In discussions of a small philosophy group that I belong to, a suggestion came up to look at the ideas of Iain McGilchrist who had written the book “The Master and his Emissary.” It is about our divided brain, which many of you will know about, but he shows how it contributes to the making of the Western world, and philosophy. These brief notes on Iain McGilchrist came from Linda, one of our members.

McGilchrist is a former Consultant Psychiatrist and Clinical Director at the Bethlem and Maudsley Hospital, London, and has researched in neuroimaging at Johns Hopkins University Hospital, Baltimore. He taught English at Oxford University, where he has been three times elected a Fellow of All Souls College. He works privately in London and otherwise lives on the Isle of Skye.

Throughout this book he bridges the fields of medicine, psychiatry, and philosophy (and others). He uses the thinking of philosophers repeatedly as examples of what can be understood by our brains at various stages in our history, and surprisingly who the more useful thinkers might be. He has been praised by philosophers, university professors and writers and was winner of the Scientific and Medical Network Book Prize (2009, when this was published). His accurate use of English makes this book a delight, whether he is explaining neuroscience or the complexities of culture.

As you will already know, the right brain has always enabled us to see the bigger picture, it has flexible attention, can see an array of possible solutions, can see associations between different concepts and ideas, is sensitive to our surroundings and environmental influences, sees the interconnected nature of things and people, handles spatial arrangements well, notices emotional expressions, facial expressions, vocal intonations, can see individuals, can ‘deeply’ understand, including implicit information, and can spot anomalies. Overall it provides us with insight.

The left hemisphere, again as many will know, has developed from right brain information and patterns, our language, writing, the ability to categorize, tightly focus and scientific rigor. It increasingly believes it is right! Once it has grasped patterns from the right brain it codifies them and makes rules of them. But then much awareness of life is lost.

Right brain thinking comes first and then the left codifies it, often missing the overview. The main premise of the book is that the left hemisphere of the brain is becoming too powerful with each generation, especially since the industrial revolution. This threatens the way we see the world and the kind of world we are creating. The left and the right hemispheres were previously in harmony, the one cooperating with the other, and he gives examples from about 800 to 200 BC, including the prime time of the Greeks.

He charts the development of both hemispheres through history with fascinating examples of our growing awareness of ourselves. Examples include:

- The art of ancient Greece shows the gradual appreciation of facial expressions (right hemisphere) and language and writing (left hemisphere).
- Rome’s greatness depended more on codification, rigidity and solidity (left brain) than it did on flexibility, imagination and originality (right brain). It could not maintain contact with its Empire and the rest of Italy without the legal regulations essential to political, social and economic order (left brain).

McGilchrist highlights the paradox of philosophy… we need to get beyond what can be grasped or explicitly stated, but the drift of philosophy, is always and inevitably back to the explicit. Merleau-Pont, Scheler and Wittgenstein perceived that explicitness ties us down to what we already know.

Now let us see how this links to the concerns of E:CO and of living in a complex world – and not a mechanical one. This is about some work I did in the early 1980s, when asked to build a computer model of Canadian fishing fleets and fishermen fishing in the North Atlantic. This model tried to capture their behavior as they moved around the North Atlantic from one area to another, fishing out successive areas and moving on to others. Of course, their movement could be purely random, but on the whole fishermen will be influenced by the information they currently have about where fish are and what type of fish are being found. But, in an effort to talk successfully to the economists who manage the fisheries, I first built a simple, rational model of fishermen. That is, they would move to the zone where they thought the largest profit could be made. Instead of simply using statistics to guide the fishermen around the possible fishing zones, the model attempted to generate the behavior of the fishing fleets as they went to different zones in the North Atlantic around Nova Scotia. The model, using the relative attraction of

different zones, from current profits, only worked alright briefly, but then would not ‘fish’ successfully. This is because it could only use the information it already had about fish stocks and could not generate NEW information. In the longer term therefore, it tells us that fishermen must do something different from just fishing out what they know! They must explore places where they have no knowledge of potential profitability! They MUST go out to places for which they have no logical justification at the time they do it – they must explore the unknown!

Fishing successfully therefore requires 2 types of behavior: Exploratory and Rational. We need to explore in order to discover, and then we can use rationality to decide where and what to fish. These ideas then led to a better model of fishing fleets which had some boats exploring and others exploiting the knowledge efficiently. Similarly, in living we need to both explore and examine our experiences. Learning is a permanent necessity – but it requires the presence of exploratory behavior (going into the unknown) in order to find new things, and also whether things have changed. It also implies that ‘mistakes’ and ‘errors’ will be the made by any individual that is going to learn things. Clearly, McGilchrist is saying something very similar with the left and right brain powers. The left brain can formalize and make rules and rational responses about what is happening. But in order to widen experience and to try out new pathways, we need the right brain to take us into uncharted waters!

Evolution is really the driving force of behavior and experience, essentially it refers to a situation in which new behaviors/ideas/recipes are tried out and are retained when they seem successful. The ‘split brain’ idea, which is similar to Exploratory and Rational fishermen, does offer a structure that provides a capacity for ‘learning’. We see that the emergence of a left and right brain in our evolutionary history would indeed have provided an enhanced capacity for diversity and learning. So, for me, the ideas that have been developed in Complexity support the ideas of McGilchrist. The emergence of a left and right brain in our evolution is the way that survival has shaped us. We really need NOT to all agree on everything!!! But not necessarily kill those with whom we disagree. This allows diverse views to persist giving resilience to populations.