BRAIN SCANS LIE: NOT YOU

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Science reporters are good at indulging readers in search of certainty. We are regularly told that the gene “for” a disease may have been found, or that falling in love is “localized” in a particular part of the brain. Recently there has been talk of brain scans to reveal lies, a technique that has been touted as capable of superseding polygraphs.

But diseases develop in complex ways that are rarely (though not never) reducible to an absent or dysfunctional gene; and brain scans are even more difficult to interpret, because the brain is immensely, some say infinitely complex. No serious scientist can claim to discover one seat for one disease or function. The biological underpinning of our physical and psychological lives is mostly irreducible to the kinds of explanations one typically reads over coffee on a Sunday morning. Machines can register some of the physical by-products of our thinking, feeling selves; but it is hard to conceive how they could ever read and know these selves.

It is an old fantasy that they might do so. The fantasy stems from a misapprehension of what science does. Science does not deal with the fleeting world of meaning or value that humans live in. It deals with the recognized or recognizable bits and pieces that make up our physical world; it is a constantly changing set of bits and pieces, prone to misinterpretation and revision, to cultural bias and to the mistakes humans always make.

If so many of us are tempted to believe that one physical part is solidly the equivalent of a psychological characteristic, that is because we still have not quite digested the idea that each complex individual is ultimately made of physical stuff, and that our minds are our brains. In order not to contend with this - quite literally - mind-boggling reality, we tend to abandon scepticism in favor of certainty. We would rather simplify the physical stuff than contend with the complex minds.

Medicine is a case in point: although there is no doubt that it is much better to be ill today than it was even a hundred years ago, many illnesses still resist treatment simply because doctors are not, and indeed never have been, omniscient. The main thread that runs through the history of medicine is that of ignorance; and the best doctors have always been and still are those who acknowledge how little they know about the body’s functioning. It is not the case that the past produced myths, fictions and bad science, and that mistakes have become the exception. Mistakes are still common in medicine. The belief instead that the present is superior to the past - presentism - breeds the sort of arrogance that leads to the misguided theories one might believe were spun only in the past.

The technology that allows heretofore unimagined glimpses into the body, the constant growth of knowledge about it and the ability to perform micro-surgery - all these are indeed marvelous, and one can only be thankful for, and admiring of them. But doctors still examine and treat people, not molecules or graphs. The doctor-patient relationship has certainly changed over the centuries, but not as much as it might seem. The quality of medical care has always been a function of human interaction. We still need to trust our doctor and to believe in the efficacy of treatments. Only a small percentage of what we know about the microscopic world is directly applicable to the macroscopic one, and it remains difficult to make the leap between the two dimensions.

For millennia, the unseen dimensions of our profoundly psychosomatic organism was imagined to be constituted of four “humours”, each one common-sensically corresponding to broad bodily functions and states, and to broad, still recognizable temperaments. These dimensions are becoming more visible by the day. Generalizing humours have been replaced with much more precise substances. But even these can seem to explain more than they do, as if the mere availability of a physical, graspable description of our fleeting, ungraspable psychological and spiritual life meant that the physical realm alone had to be considered.

The necessary but sometimes abused reliance today on technology, tests and measurements can make one lose sight of the complex person that is a patient, for we have always been psychosomatic creatures, whose bodies and minds are profoundly connected in ways scientists have not yet fully understood. Psychiatrists, for instance, can be all too prone to read mental states exclusively in terms of brain disease, rushing to prescribe medications may cause harm when they do not help. Yet, much of the science reported by much media sounds more definitive than it is, despite the calls to scepticism proferred by the best scientists - likely to describe themselves as sceptics whose work does not so much uncover truths as yield verifiable data about portions of truths.

Today's search for balance through spas or diet is another version of humoural credence, and the increasing reliance on non-technologized, gentler, alternative medicines corresponds to patients' need for a holistic view of the body that has all but disappeared from modern western medicine. Past belief structures are powerfully present within ours, and it is only by understanding them that we can make sure we remain sceptical where certainty is more attractive.