How Scientific Can Psychiatry Be?

What is Usefully Measured?

A Cul-de-sac of contention

David Zigmond

Science depends first on observation, then on finding patterns and measurements. How effective is this approach when applied to our mental distress?

A recent article *The AI will see you now*[1] (*New Scientist*, 17/1/26) [1] vaunts a mostly jaunty optimism for an exciting possibility – making gigantic strides in the reliable objectification of psychiatry, so clarifying the perennial puzzles of mental distress and self-stymying behaviours. The advances will be made by AI monitoring of physiology and physiognomy – the observable functioning of our body and face. The claimed accuracy and efficiency of these physical changes thus observed are designated as 'digital biomarkers'. These would, it is hoped, also bring other benefits to psychiatry: it would confer much greater parity – in effectiveness, reliability, confidence and esteem – when compared with physical medicine; psychiatry has been long regarded as a kind of less legitimate step-sibling. Some would go further and say that mental illness is, in any case, much the same as physical illness but – unfortunately and unjustly – more reluctantly investigated, invested in, and thus understood. A Cinderella Service.

These are widely-held beliefs and seem to underly the writing of *The AI will see you now*. Such beliefs are, for many, powerfully wish-fulfilling and thus attractive. Surely, it is believed, why couldn't a bolstered Brave New World, now, through its science, eliminate our myriad forms of mental distress just as science has helped us drastically reduce so many physical afflictions: infections, organ and skeletal failures, malnutritions, obstetric catastrophes…?

While there is some truth in this optimistic view, it is meagre and unreliable because most of our mental distress and problematic behaviours have only very partial similarities to

physical illnesses. Our capacity to accurately define, predict or manage physical and mental ailments is usually very different.

Why is this?

Well, physical illnesses have clear and fundamental biological determinants: we share these with all other animals. They too get infections, tumours, organ failures, genetic aberrations … they all eventually ail, fail and die. Biological machinery in all animals is vulnerable and mortal: clearly we share many physical perils with all those other creatures.

But human mental health is very different: biology here is more of a capricious influencer than an invariable and preeminent determinant. Other creatures (notably, unless they are impeded or impounded by humans) seem not to self-immolate or stymie through their own complex consciousness; but this is certainly very distinctive of humans. For we humans are troubled – haunted – by forces quite apart from, and additional to, the biological…

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The origin of this crucially problematic surfeit of human consciousness is an anomaly and a mystery.[2] What is much clearer are the effects: the difficulty we humans have in

tolerating the resulting complexity of our consciousness. This difficulty accounts for much of what we do: the myriad devices we fashion to distract, project, replace, escape or obliterate our crowded, entangled and often conflicted thoughts and feelings. It is often painful and threatening to be deprived of any of these devices – to be left alone with our consciousness. We have consequently evolved as a species unique in our restlessness, insatiable in our deflecting appetites, and tormented by our imaginations. In contrast, as far as we can tell, other creatures' sentience is almost entirely tethered to the *here* and *now*. But Homo sapiens – with its incomparable burden of cleverness – finds ever more ways to escape such ancient anchorage. Yet since recorded times there have been seers who have alerted us to the perils of such escapes and urged us to countervail: many religions, meditations and philosophies originate with attempts to re-anchor us in the *here* and *now*.

But, instead of such enlightenment, our ever-advancing and dominating technology draws us powerfully away from such repose: it is designed to urge and implement an endless stream of replacements and displacements from the *here* and *now* – our screens, phones and media channels all remove us instantly and insistently from what is close and actual.

Indeed, there is growing evidence that the increasing prevalence of mental health problems – particularly among the young – parallels our increasing use of digital devices that displace our natural forms of anchorage. By contrast, those people now identifying their consequent need to reestablish such natural healing and quieting – by reclamation of

the actual – willingly spend significant time, and sometimes money, to achieve this: 'digital detoxes' and silent retreats serve to re-anchor us.

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All of this signifies much of Humanity's Conundrum.[2] Amidst this we have an ever-changing mixture of organic biology and an untethered maelstrom of distinctly human consciousness. What, there, can be the place of these newly-heralded digital biomarkers? What are they? And what can they add to our knowledge and understanding of our myriad and growing forms of mental distress?

These designated biomarkers are all bodily manifestations that can be detected, monitored and transmitted by digital devices: such things as heart rate and rhythm, respiratory rate, muscle tone, sweating intensity, facial mobility, pupil size, blinking frequency etc. What do they tell us? Well, such features *may* demonstrate, for example, excessive dispiritedness (aka depression) or fear (aka anxiety), but then they may not – so such features are correlates only, not pathognomonic (ie accurate and specific diagnostic signs). Personal inner lives may remain externally undetectable, and formidably so. For example, a significant number of suicides occur among people performing and behaving in a fully functional and responsive way until their sudden and (apparently) impulsive self-destruction.[3]

What do we (think we) know of others? And how do (we think) we know?

Such knowledge is so often elusive and unreliable. This is because we have so many ways of masking or deflecting our inner thoughts and feelings from others. Yes, skilled, trusted and empathic interviewers may make some headway in perceiving and deciphering, but even then only sometimes. Could digital devices and AI do any better? And then what is the likelihood that such a masking person[4] would wish to cooperate with any kind of digital monitoring?

And, very significantly, even if digital biomarkers can transmit a person's inner turmoil they tell us nothing of its personal origin or meaning – something crucial to psychiatry, though much less so to physical medicine.

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This brings us to essential questions. How do we humans best understand our often chimeric distress? How and why do we attempt to corral all this into patterns of categorised 'mental disorders', and then attempt to manage all these with our medically-modelled psychiatry?

Our medical model is based on modern empirical science. It first observes, then clusters these observations into patterns of similitude which become generic diagnoses. Similarly

observed trial and error remedies can lead to generic treatments. This approach has accumulated a brilliant record with its mastery of physical ailments. In the last hundred years the medical model has rendered massive advances in our effective control, sometimes elimination, of many previously life-blighting, often lethal, *physical* illnesses.

The reason science can be so effective in physical medicine is because it is there dealing with physical objects – organs, structures, fluids – which occupy and endure in physical space and whose properties can therefore be observed, engaged, sampled, monitored, and measured directly by others. They are '*real*'.

Mental health has no such ready and successful inclusion in the medical model. This is because, almost always, we are dealing with dysfunctions of experience, of consciousness – a non-physical state which has no direct access for others; we must make do with only consequences (eg speech, behaviour, actions) and then inferences from these. These are very different kinds of 'reality'. The consciousness itself can be directly known only to its resident 'minder'. Plato's analogy of the shadow-in-the-cave serves well to explain the limitations of our current psychiatry, nearly two and half millennia after Plato.

Our neurosciences can certainly slightly mitigate this ultimate elusiveness but can never fundamentally eliminate it. Scientific-rational-empirical thinking has, though, certainly helped our sanity: it has helped us abandon beliefs and methods that we now view as being medieval-like in their fearful superstition, harshness, ignorance and cruelty.

Statistical epidemiology helps us identify proclivities, triggers of problems, and then effective healing influences. Modern drugs are certainly safer and 'cleaner' than their predecessors, yet rarely consistently more effective[5]…

So all of these scientific approaches – our medical model can – with wise discrimination – shepherd us to greater humanity, empathic rationality and speculative respect for the anguished strugglings-of-consciousness of others. Only rarely though can psychiatrists or other mental health practitioners achieve the near-certain, often rapid, total successes that can be achieved by, say, the surgeon operating on cataracts or coronary arteries, or the physician prescribing the correct antibiotics.

Psychiatry certainly needs a consistent supervising scientific *approach* to prevent its false trails, follies and collateral damage. But that is very different to vaunting it as a predominantly scientific *activity*. So such a scientific approach may be an essential component, but psychiatry, to be most safe, humane and effective, must gather and grow into realms of empathic and imaginative speculation that cannot themselves be observed. So often we best comfort, calm and heal by establishing a bridge of resonance with another's struggling and flailing consciousness. Like horse-whisperers, we must be able to sense the unexpressed, often inchoate, experience of the other.

Will digital biomarkers and other behavioural conduits help such fragile and nuanced bridges and connections?

Not much, I think. Though such activities will certainly display the more readily marketable science-mantle of the practitioner…

Psychiatry is a humanity guided by science.

That humanity is an art and an ethos.

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Notes and references

1. *New Scientist*, 17/1/26

2. Zigmond D (2021), *Humanity's Conundrum. Why do we suffer? And how do we heal?* Filament Publishing.

   The origin of this mystery and its vast web of consequences is explored in this slim volume.

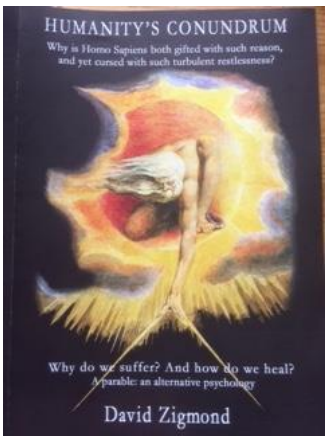
3. This tragic and shocking news is conveyed most publicly and most often about people in the entertainment business. Remarkably, though with less newsworthiness, doctors have a similar increased incidence of shock suicides erupting from apparently 'normal' behaviour.

   Clearly, such events lie beyond the reach of psychiatry's usual capacities of detection and engagement.

4. Several decades ago, psychiatrists used to talk of 'masked depression' to account for such difficult-to-define-and-decide patients who were not uncommon. However, such a quasi-diagnosis cannot be usefully subject to algorithms, generic care plans, psychometrics, computer coding, etc – all essential to modern team-management and patient-streaming.

   So, despite the term's previous usefulness, it is now very rarely used.

5. Big Pharma and prescribing practitioners will understandably dispute this in self-interest. But the ever-increasing need for mental health support amidst ever-increasing psychotropic drug consumption is evidence for the lack of preventative or curative capacity of such medication use.



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