

# Evolutionary and narrative medicine: are they compatible?

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Evolutionary medicine and narrative medicine are two powerful frameworks for approaching medical practice that have emerged in the past thirty years. One is based on biological science and the ideas of Charles Darwin, along with his more recent followers. The other has come out of the social sciences. It draws on ideas that are familiar in philosophy and the humanities about the central role of story-telling across all human cultures. At first sight, the two frameworks and the movements associated with them may seem to stand in opposition to each other as ways of thinking about medicine, or even to be incompatible. How can a framework that rests on the acceptance of biological truth be harmonised with one rooted in subjectivity and relativism? As someone with an allegiance to both schools of thought, who has tried to contribute to each of them,<sup>1,2</sup> I want to argue that they are in fact complementary and have the potential to enrich each other.

Evolutionary medicine follows the famous dictum laid down by the geneticist Theodosius Dobzhansky: ‘Nothing in biology makes sense except in the light of evolution.’<sup>3</sup> Since medicine is so thoroughly anchored in biology, scholars in evolutionary medicine argue that doctors should extend their curiosity from familiar questions like ‘what has caused this disease?’ or ‘how should we treat it?’ to more fundamental ones like ‘could this condition have arisen in humans because it conferred benefits in some circumstances?’ and ‘is it possible that treatments may have damaging effects by countering those benefits?’ Such questions invite us to take a perspective based in deep time and on other kinds of societies than our own. The questions can also be unsettling because they suggest that medical mindsets based on proximate explanations and linear solutions might have utility in the short term, but may be far too limited in their intellectual

and ecological scope. Evolutionary medicine has now influenced thinking and practice in a wide range of areas including antibiotic resistance, congestive heart failure and depression.<sup>4</sup> Indeed, there is a persuasive argument for teaching evolutionary biology in medical schools, in order to underpin an adequate understanding of the other basic sciences.<sup>5</sup>

## JOY AND SUFFERING

Narrative medicine is an entirely different kettle of fish – to use an appropriately colloquial metaphor. It is based on the idea that human beings understand themselves primarily in terms of the stories they tell to others and themselves.<sup>6,7</sup> According to this idea, joy or suffering, and the meanings we attribute to these, do not arise from events alone. They are constructed in the same way that novelists or film makers create their own works: with beliefs, values, characters, timelines, puzzles and imagined futures. Narrative medicine regards each medical problem as inseparable from the story in which it is embedded. It asks questions like: ‘what has influenced how this patient is constructing their story?’ and ‘why are they describing it to me at this moment in this particular way?’ It sees problems and stories as iterative: you cannot fix anyone’s problem unless they also go away with a better story to tell. Its perspective is best summed up in the title of a famous article by the American family physician Howard Brody: ‘My story is broken, how can I fix it?’<sup>8</sup> Like evolutionary medicine, narrative medicine has also staked a claim for centrality in the medical curriculum.<sup>9</sup> But when their origins are so dissimilar and they appear to be pulling in entirely different directions, is it really credible that both of them can be regarded as unifying disciplines for teaching and practising medicine?

The answer, I believe, lies in the field of study known as cultural evolution. Modern evolutionary theory has gone far beyond the finches and apes that Darwin wrote about. It has examined how its core principles might apply within human cultures. It has also

shaken off the taint of so-called ‘genetic determinism’ – the idea that genes alone govern the fate of individuals, regardless of any interaction with others or wider society.<sup>10</sup> Theories of cultural evolution come in many flavours, but the most familiar of these is probably Richard Dawkins’ notion of the ‘meme.’ Like all evolutionists, Dawkins is a firm believer that our actions are all ultimately directed towards the preservation of self, progeny and kin. Yet in *The Selfish Gene* he argues that humans, alone on earth ‘can rebel against the tyranny of the selfish replicators’<sup>11</sup> We do this, he proposes, through cultural transmission and the natural selection over historical time of cultural traits (or memes) with survival value.

## EVOLUTION IN THE MOMENT

This kind of argument has been developed by many others. My favourite elaboration of cultural evolution is in a book by the evolutionary ecologist James Chisholm with the wonderful title *Sex, Hope and Death*.<sup>12</sup> Chisholm argues that everything arising from human nature – including child-rearing, religions, myths, laws and morality – is a manifestation of our reproductive strategies; both by their variety and underlying similarities, they have contributed to our position as a species that currently prevails on earth. Other writers have argued that story-telling and the exchange of different narratives are a crucial feature of how humans transmit and develop cultural understanding, at every level from whole societies down to the tales that parents tell their children.<sup>13</sup> Hence, story-telling, cultural transmission and biological descent can be seen as parallel processes, or as nesting inside one another. From this perspective, it is entirely possible to understand what doctors and patients are doing during their interactions as evolution in the moment: experiments in sense-making that function in much the same way as any other evolutionary process, through trial and error, and in continual flux.

People often misunderstand the phrase ‘survival of the fittest.’ It does not necessarily refer to fitness in the gymnastic sense, but rather to the survival of whatever ‘fits’ with the changing and often unpredictable environment in which each organism finds itself. It is no great effort to imagine that what we should be doing with each patient is to pursue two evolutionary

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objectives at the same time: to find the most fitting biological solution for their problems, while collaborating with them in the creation of a story that 'fits'. Every time we do so successfully, we are bringing about a synthesis of evolutionary and narrative medicine. In the same way, the movements to promote these two frameworks are not in any sense at odds with each other. They are both contributing, in different ways, to the vision that Darwin himself expressed so poetically: "There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that...from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved."<sup>14</sup>

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