

Food: emotion, imagination and reality

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I became interested in diet and health and what was then called 'alternative medicine' while still at school and went on to study medicine. I have been a member of the BHMA for 32 years and co-led the London Medical Students Group from 1988–1991. I work mainly in general practice, and I was a member of the clinical team at Bristol Homeopathic Hospital for eight years and taught at Bristol University on the Whole Person Care course for 15 years. I am a registered human givens (HG) therapist, and teach regularly for HG College. In 2018 I set up JoinedUpHealth to develop and deliver education for GPs (and perhaps the public) about how the HG model applies not just to mental but overall health. In terms of diet and health I have experienced a number of approaches including classic whole-food vegetarianism, blood-type, Atkins, low-carbohydrate, raw diet, and veganism. Things have settled down completely since moving to a blue-zone diet about eight years ago. www.joineduphealth.net

There is a real urgency to solve the extinction and climate disasters that we have collectively created, and food production is a massive part of the problem and solution. There is nevertheless a division of well-meaning opinion on what exactly we should do, with at least two quite different dietary approaches proposed to tackle the rising tide of chronic disease and the climate emergency. Rational objectivity requires calmness, good quality information, and a willingness to consider many perspectives. If 'a human being is an animal that believes the stories it tells about itself', surely our task is to work out what is the truest story.

Why are we in this situation?

The answer lies in the way our embodied minds work, which is of course not in the reasonable, rational way imagined by lawyers, logicians and (when we know we are right) ourselves. What is going on is far more interesting, far less 'cognitive' and a great deal more emotional. Rational objectivity is a state we can hope to achieve, and it requires special conditions, of which the key component is calm. Calm, good quality information, and a willingness to consider many perspectives. This, and other similarly helpful tools for understanding our human world, came for me primarily through my long reflection on the human givens (HG) approach (Griffin and Tyrrell, 2003).

The HG model starts with the observation that human beings are organisms, and like any other organism we survive and thrive by deploying a set of innate resources to meet our innate needs in the environment. It goes on to describe health as arising from a situation in which needs can be met in balance, through properly developed and deployed resources within an environment that will

support this process. Though developed originally to describe mental and emotional health, this simple biological idea works well for health overall: the key to creating and restoring health is work out how to meet our needs in balance. Crucially this means we must distinguish clearly between our needs and desires, a surprisingly difficult task particularly in the area of food and nutrition.

Our emotional guidance system

One resource, which we share with the other vertebrates, is vital to understanding many of our difficulties: the 'emotional guidance system'. What do we mean by this? Animals typically operate through movement and behaviour, an approach that requires large-scale information processing equipment – brains and nervous systems – to integrate information and guide action aimed at meeting needs such as nutrition, safety and reproduction. The fundamental questions for a moving organism are to move or rest and, if moving whether towards or away. Fear and disgust prepare us to move away, anger and desire to move towards –

though in quite different ways. Emotions guide the actions of the entire organism and one of the fundamental tasks of this system is to find food.

It has transpired that these emotional (or more correctly, affective) states are built into the fundamentals of brain function, into everything it perceives and predicts, though we only tend to notice them as a feeling or emotion when the intensity is strong enough. Back in the 1990s the concept of emotional hijack was popularised, but this idea – that strong emotional arousal hijacks cognitive processes – has been replaced by a more nuanced model (LeDoux and Brown, 2017) in which affect and emotion are continuously focusing our attention and framing our perceptions (Feldman Barrett, 2017).

The totality of sensory information available through eyes, ears, nose, skin, joints, muscles, tongue and internal organs would if processed raw require what Douglas Adams memorably described as ‘a brain the size of a planet’. Instead our brain is constantly jumping to conclusions – usually with remarkable accuracy – by creating a simulation of the world from a series of summaries of past experience learnt from infancy onward. What we experience, what we see, hear, touch and smell is a set of constructions, a simulation which our brain has created on the basis of prediction. This is the basis of many well-known phenomena, including the fact that you can read the rest of this sentence with some of the letters missing. It is a very efficient way of dealing with all the data to hand, and is balanced by an ongoing ‘error checking’ process.

The mirage-making brain

Crucially this whole process is influenced by affect; and generally the more intense the affective-emotional state we are in, the less interested our brain becomes in checking out whether what we perceive is true. Lisa Feldman Barrett expresses this memorably by comparing the highly emotionally aroused brain to ‘like a bad scientist’ who is unable to acknowledge data that contradicts their theory. This suggests that confirmation bias is in fact a manifestation of the way we perceive the world. It also warns us that passionately held views are likely to be held even in the presence of information that clearly contradicts them.

Furthermore, human beings have taken this ‘mirage-making’ capacity of the brain to extraordinary lengths. The human brain, perhaps uniquely, is not just dealing with real-time information coming from the outside world and from our biological interior, but also with dreams, visions, memories and anticipations, fantasies, inventions, symbols, and stories. Our brains can create not only a current reality but can create images and hear sounds of things past, things future, things as yet undreamt of. We run simulations of that argument we had last week, or watch an internal movie of ourselves performing well in an interview, or dream up a new recipe. Not only this, we have created language to symbolise ideas, objects and actions. So when we read a book we may hear the voices described, when we listen to someone speak we may see

what they talk about, and these sights and sounds are (almost) as real to our brains as reality itself. And all of these are, in important respects, as real to the brain as anything else. Our mind might much more usefully be described as a ‘reality simulator’, or as our ‘imagination’. And the basic stuff of emotions – affect – is woven right into the fabric of this amazing human resource. One lovely way of summing all this up is, ‘A human being is an animal that believes the stories it tells about itself’ (Rowlands, 2010).

But why is any of this pertinent to food?

The finding and consuming of food is of central importance to any animal, so the role of affect in our perception of nourishment is extraordinarily ancient and well-developed. There are few areas of life as emotive as food. We are fed by those we love and who love us when we are at our most small and vulnerable. The simple act of eating in company – with family or friends – is profoundly bonding, creating trust and love. Because eating is such a strong stimulator of our relaxation and connection responses we can learn to associate comfort with anything from a tub of ice-cream to a steak. Refugees and exiles always dream of the food of their homeland, the taste of a loved recipe from childhood is, as Nigel Slater noted in his book *Toast* (2003), a powerful gateway to a world of memory and feeling. Regardless of the environmental or health costs of a particular food eaten in childhood, each of us will perceive it through a powerful and very personal lens of emotion and feeling.

This is one of the ways in which food becomes identity. This is the hidden payload in the often repeated and seldom examined phrase ‘we are what we eat’. Indeed. The French are (apparently) ‘frogs’, the English ‘les ros-bifs’, the Dutch ‘kaaskoppen’ (cheese-heads), and the Germans ‘krauts’. In this way we can understand that anyone who has not grown up eating a diet that will optimally preserve their health and wellbeing may encounter a profound sense of threat to their identity when a suggestion is made that they might change their eating patterns. There are people who would rather die than change what they eat: and history is full of examples of people who have chosen death rather than give up a core aspect of identity. And not just because of identity: the social aspects of shared food are enormously powerful, as anyone who has changed their diet from the prevailing pattern in their family and social network knows to their cost. Anyone who has decided not to eat meat, for example, may find themselves as pressured and mocked as a teetotaler in the company of drinkers.

Pleasure and addiction

The human givens model has a neat way of understanding addiction – when our emotional needs are not met in balance we can easily form an addiction to any activity that

can generate a feeling of pleasure. Obviously this happens most readily when there is an element of pharmacological action as with tobacco, caffeine, alcohol and opiates. And the food industry understands all too well that there is a simple recipe for creating addicting foods: fat, salt and sugar. The foods most problematic in terms of addicting behaviour consistently have these features, or at least two in combination. The fat-and-salt combination in bacon or cheese is as hard to deal with as more regularly demonised sugary foods such as breakfast cereals and sodas (Schulte *et al*, 2015), which is a concern as bacon is in the same carcinogen category as asbestos and plutonium (IARC, 2018). And if you are now undergoing a strong emotional reaction – do look up the references! What is interesting is that although there is a clear sugar–salt–fat predisposition to addicting foods, which are associated with all the brain changes seen with classic addictions (Wiss *et al*, 2018), there is also evidence that individual conditioning is important – anything pleasant can be addicting (Burger and Stice, 2012). This is all very relevant because the language of resistance around dietary improvement is at times identical to that around tackling addiction. For example: ‘you’ve got to live’, or ‘life wouldn’t be worth living’ or ‘it’s my only pleasure in life’.

Safety also plays a part

We all have an innate need to stay as safe as possible (while meeting our other needs), and a perceived threat to safety puts us in a highly focused emotional state. Decades of marketing specific foods on the basis that they contain specific essential nutrients has created a situation where people fear doing without foods that are simply not essential, in order to obtain nutrients that are found in an enormous variety of foods. A good example is the marketing of milk as containing vitamin D which began in the 1920s and soon shifted to calcium. Milk is not an essential food for any adult mammal. Perhaps you now are feeling cross, and perhaps tempted to put this article aside? Bear with it. It may be worthwhile. If I mention spinach and iron (another early example), does that help? Notice how powerful these reactions can be.

Seafood is another good example here. Nowadays we are advised to eat oily fish regularly. One wonders how many of those giving this advice notice or care that the oceans are now dying toxic waste dumps with dwindling populations of oily fish concentrating ever larger quantities of persistent organic pollutants and heavy metals, or that wild fresh-water fish also contain the long chain omega-3 fatty acids (William *et al*, 2017) we believe we need to get from seafood, but which most of us (but not all) can, along with our microbiomes (Wall *et al*, 2009), produce for ourselves (Domenichiello *et al*, 2015) from abundantly available alpha-linolenic acid, or obtain direct from algae (Sarter *et al*, 2015). No. We tumble straight from magical ingredient to over-specific terminology into a collaboration in the destruction of marine ecosystems.

Returning to safety and fear, these show up again in the issue of familiarity. It is an essential protective instinct for small children to be disgusted by unfamiliar and strong-tasting foods, and they learn by imitation (and now also through advertising) what is safe, desirable and palatable. This distrust of the unfamiliar remains, albeit in somewhat diminished form into adulthood. At the Food Gathering we heard a wonderful story about an old lady who refused to try the ‘organic’ potatoes until they were offered as a free sample. She had distrusted these strange new-fangled and doubtless hallucinogenic objects, until she ate them and found that ‘they were real potatoes, like the ones you used to get’.

Black and white thinking

Just as the animal fundamentally needs to distinguish what to approach and what to avoid, in the area of food we have a profound tendency to divide foods into ‘good’ and ‘bad’, ‘healthy’ and ‘unhealthy’. And often all that is needed to flick a food from one category to another (a process usually accompanied by fear or desire) is a word, an ingredient, a nutrient or an idea. This is the whole magic of food labelling and marketing. Yet in reality foods are varied in their quality, content and provenance in very many ways, some are better in many or all ways than others. It is more helpful to think of better and worse, than good and bad, in colour, rather than plain black and white. Yet day by day we are faced with a series of effectively binary choices – to eat or not to eat specific foods – and we are easily swayed by ‘low-fat’ ‘protein’ ‘natural’ or ‘vegan’ to makes choices that could easily have been improved on. The use of self-declared standards in this area is of concern. We may support the idea of pasture-feeding livestock, but there is no currently binding definition of this, and a ‘pasture-fed’ designation that is on the wrong side of the threshold required to either confer proven overall health, and overall climate benefit is simply greenlighting a product that could be construed as harmful.

The power of language

We are so accustomed to our trick of substituting sounds for objects, processes, perceived qualities and abstract concepts that we forget how powerful and potentially misleading our language can be. ‘Milk’ is a noun that can be used to describe both a skimmed homogenised carton and the liquid of yesteryear which could be found on our doorsteps, consisting of several layers: milk, cream, air, foil, and bluetit. ‘Bread’ can describe a pizza base and a wholemeal spelt loaf. Which means that terms like ‘bread’ and ‘milk’ can hide as much as they reveal.

But at least milk and bread – variable as they are – are as tangible as tables and carburettors. Our difficulty becomes more obvious with abstract terms like ‘natural’, ‘goodness’, ‘healthy’ and – paradoxically – ‘real’. These terms can be useful, but only when we can agree on what

they mean. Politicians love such words because they can be used to manipulate us. ‘The people of Britain want change’ – yes, but different people want different things to change. ‘Change’ is an example of a nominalisation – a word that denotes an abstraction, action or quality, but which is used like a noun. It is an essential task of language to summarise sometimes complex concepts, but our problems start when we are left filling in the blank ourselves: in the politician’s audience we are all obliged on hearing the word ‘change’ to imagine our own idea of desirable change. ‘Sustainable’ is another example, because one person’s sustainable is another person’s environmentally damaging. We all have a slightly different idea about what ‘real food’ might be. It is a useful way of starting a discussion, but we need to move beyond this concept to something we can see or touch, test or otherwise agree on.

Us-and-them thinking

Language is often used to create categories, which however arbitrary, can acquire an apparent solidity (through the same fundamental process as the examples above) causing many difficulties. It is not unusual for people to describe themselves as vegetarian or vegan or paleo or low-carb. The tragedy is that these are all arbitrary artificial concepts, which are then used as the basis of ‘us and them’ thinking, promoting conflict, sometimes between people who actually agree on a great deal more than they disagree on. But a moment’s thought can often release us from these traps. After all, how often does a person need to eat meat to be an omnivore? And if you have porridge for breakfast are you a vegetarian? It is pointless if vegans assume that nothing about their diet can harm the environment or that no animals died or suffered in the process of producing their food. Similarly it is quite daft to think that anyone now can eat a paleolithic diet without being a traditional hunter-gatherer in one of the few remaining wild places on our planet.

Collective self-deception

Both are examples of linguistic spell-casting, forms of collective self-deception. Another place in which this is particularly problematic is in the description of foods as macronutrients. The habit of discussing food primarily in terms of protein, carbohydrate and fat is quite novel, and really only took off in the 1970s. There are two huge problems with this approach. The first is that the overwhelming majority of food is made of living things, and living things are built of cells, and cells are made of lipids, water, carbohydrates, proteins, nucleic acids, and myriad other compounds. Unless the food has been refined into a pure compound – like white sugar, corn oil, or whey powder – it is usually unhelpful to label it primarily as one or other macronutrient. The second, related problem concerns research (above and beyond the well-known issues with industry funding, which is widespread in

nutrition research). There is no agreed definition of high or low carbohydrate, fat or protein diets. Yet these terms are routinely used. It is hard to think of another area of science where such a lack of clarity would be tolerated for an instant, let alone decades. For example it is not uncommon for the ‘low fat’ group in a diet study to be eating 30% calories from fat (Shai *et al*, 2008). Since most of us don’t read the actual scientific papers (often they are behind a paywall), we (or the journalist writing about the study) who believe the abstract and the title are misled. This misapprehension about macronutrients has also provided ample material for storytellers, and human beings do love to believe the stories they tell.

What are we to believe?

A recent story goes like this: on the basis of cherry-picked data in Ancel Keys’ Seven Countries Study, the scientific community went on a 50-year publicly-funded wild goose chase blaming saturated fat for heart disease, and gave the public the misleading advice in the 1970s that what was needed was a shift to a low-fat diet. This low-fat diet advice led to the avoidance of dietary fats and an upswing in the consumption of sugary and starchy foods leading the current obesity epidemic (Taubes, 2009). A great story, and debatable at every point (Guyanet, 2017; Astrup *et al*, 2000; Pett *et al*, 2017) the most striking evidence being from the US government data that shows that Americans overall didn’t ever eat a low-fat diet during this period, they just kept right on eating more and more of everything (USDA, online).

Perhaps you’ve also heard another: that from the turn of the millennium the meat and dairy industry funded studies that appear to have been designed to neutralise the scientific consensus on dietary fat. Examples include that you can eat beef and lower your cholesterol, by halving the overall saturated fat in the ‘beef’ diet (Russell *et al*, 2012); not controlling for known confounders (Guo *et al*, 2017); apparently comparing high fat and high carb diets, while actually carefully matching fatty acid intakes (Thorning *et al*, 2015). They were able to rely on our modern press and commentariat to over-interpret the studies and overlook the fine print. I like this story too but I know enough now to hold it lightly. The truth is going to be in one way more complicated (Forouhi *et al*, 2018), and less of a stark contrast to the past (Sacks Frank *et al*, 2017). The truth is much easier to apprehend when we talk about foods, rather than macronutrients, and if we give due emphasis to studies that can robustly show causation and that focus on meaningful outcomes.

We can ask ourselves, could this situation have arisen without the particularly problematic interaction between human imagination and emotion when it comes to food?

What are we to do?

‘Let us not talk falsely now: the hour is getting late’, sang Bob Dylan in *All Along the Watchtower*.

The hour is indeed getting late and, regardless of our intentions, to avoid ‘talking falsely’ we need calm attentiveness and the ability to hear clearly what other people are saying. We do well to notice that most informed proponents of different dietary approaches agree on many elements of healthy diet and most thoughtful food producers can find ample common ground. We need therefore, to open ourselves to information that might disprove our ideas, and be prepared to be wrong at times. We need to urgently agree guiding principles that are maximally consistent with the reliable information we have to hand, not just our favourite data. We urgently need robust terminology and concepts to describe the actions we need to take. Our planet will remorselessly respond, not to what we imagine we are doing, but to what we actually do. Even our bodies can only do so much: clinical experience suggests there must be a limit to the food-placebo effect. We are with a few enlightened exceptions, emotional creatures, living largely in our imaginations, believing the stories we tell about ourselves, using words that we take for reality. Given all this, surely our task is to work out what is the truest story.

Perhaps we can start by noticing the basic dietary pattern that the longest lived and healthiest populations around the world eat (Buettner, 2012) is neither low-carb, nor vegan, nor paleo, and is probably consistent with all the aims and objectives of those who met at the Real Food Gathering in April. And it might just see us through.

Blue zones

With their strikingly high concentrations of individuals who live to be over 100-years-old, blue zones include the following regions: Ikaria, Greece; Okinawa, Japan; the province of Ogliastra in Sardinia, Italy; the community of Seventh-Day Adventists in Loma Linda, California; and Costa Rica’s Nicoya Peninsula. Although food choices vary from region to region, blue zone diets are primarily plant-based, with as much as 95% of daily food intake coming from vegetables, fruits, grains, and legumes. People in blue zones typically avoid meat and dairy, as well as sugary foods and beverages. They also steer clear of processed foods. A wholesome diet isn’t the only factor thought to lead to longevity for those living in blue zones, however. Such individuals also have high levels of physical activity, low stress levels, robust social connections, and a strong sense of purpose.

www.verywellhealth.com/blue-zone-diet-foods-4159314

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