THE BEHAVIORAL ECONOMICS GUIDE 2014

Edited by

Alain Samson

With a Foreword by

George Loewenstein and Rory Sutherland

FOREWORD

George Loewenstein and Rory Sutherland: *An Exchange*

George Loewenstein to Rory Sutherland:

Dear Rory,

As you know, Alain Samson asked us to write a foreword for his Behavioral Economics (BE) Guide, hoping to gain the perspective of two people applying the science (if I can be so presumptuous) of BE in the academic/public and private sectors. I'm sure that Alain would appreciate some colorful fireworks to illuminate his guide, so, as the representative of academia, let me begin with a challenge:

I've researched many topics in my long academic career, and my latest research topic has been Rory Sutherland. Watching your many **TED talks** and reading your pieces in **The Spectator** has not only been incredibly stimulating but, I must say, a lot more entertaining than my usual academic research. Your TED talks should be required viewing for any graduate student in search of novel, important research topics.

In working my way through your talks I was searching, as social scientists are prone to do, for a central, unifying theme, and it turned out to be a fairly easy task. A—*the?*—central theme of much of your work, and one that you allude to in every one of your presentations, is the idea that our perception of, and reaction to, reality is subjective. How you *feel* about products, or even about your life, is at least as important, and probably much more important, than the product or your life's objective characteristics.

This is an idea I can embrace, because it's been a central theme in my own work. In research on **'coherent arbitrariness'** [see also **'anchoring'**] with Dan Ariely and Drazen Prelec we find that people often have little idea about how much they like, or how to value, goods and experiences. We even identify experiences which are sufficiently ambiguous that people can easily be persuaded that the same experience is either good (in which case subjects are willing to pay to experience them, and more so if they are longer) or bad (in which case subjects demand to be paid to put up with them, and more so if they are longer). In another line of research, on **hedonic adaptation** (much of it with Peter Ubel and reviewed in a paper with Shane Frederick), we find that people are able to adapt to a very wide range of experiences. Adaptation, again, drives a wedge between the objective characteristics of an experience and people's hedonic reactions to it. In research on **'source dependence'**, with Sam Issacharoff, and **'history of ownership effects',** with Michel Strahilevitz, we find that how you obtain an object and how long you own it are both important determinants of value, over and above the object's objective characteristics. In diverse research on the impact of relative comparisons, my colleagues and I find support for the idea, highlighted in many of your talks, that almost all judgments are relative. And, in a series of thought pieces, I have written about the importance of meaning in people's lives and the malleability of what matters—what people value.

Many of the sections of Samson's guide to behavioral economics also reflect this theme, beginning with the first, on **Prospect Theory** (which posits that judgments of value are relative) and its extension to **framing effects.** The sections on **Availability** and **Salience** highlight the observation that how one thinks about a decision, and the judgments one makes in support of the decision (e.g. of the probabilities of different consequences), is often highly malleable. Research on the **status quo bias and inertia** also highlights the arbitrariness of many decisions by demonstrating their dependence on defaults, due to the tremendous attractiveness of doing nothing, i.e. deciding by not deciding (to paraphrase a famous word poster from the 1970s). It would be easy to extend this list with other subsections of Samson's compilation of concepts on **anchoring effects**, the **affect heuristic**, **diversification bias**, **hot-cold empathy gaps**, and **partitioning effects**.

So far so good. Where we begin to part ways, Rory, is in the implications we draw from this central insight regarding the subjectivity of valuation and experience. The conclusions you draw are far more optimistic than those that I draw, and (not surprisingly) far more positive about the role of advertising and marketing.

Is the fact that perceptions matter more than reality a good thing or a bad thing? In some situations, I believe, it is arguably a very bad thing. To make my point, let me just focus on one of the factors that drives a wedge between the objective and the subjective: *Adaptation*. Adaptation is almost certainly, in the net, a good thing. Pain, hunger, sexual deprivation, and other forms of misery are signals that evolved to motivate behaviors that promote survival and reproduction. If the signal, such as hunger, has been in force for an extended period, but we have failed to take actions to eliminate it, it almost surely indicates that we are unable to do so or have consciously decided that it's not worth it. In that case the signal serves no further function, and nature has mercifully evolved a mechanism—hedonic adaptation—to eliminate it. An organism that doesn't adapt hedonically will not survive for long; yet, adaptation has diverse downsides.

The most obvious 'cost' of hedonic adaptation is that it occurs for goods as well as bads, creating the 'hedonic treadmill' that prevents us from enjoying whatever successes we may achieve in life. Adaptation to pleasurable experiences may also be responsible for destructive addictions, which are due in part to the decreasing pleasure taken from a given level of a good or activity and in part to the displeasure (craving)—which increases in intensity the longer and more we have been indulging—experienced when consumption of the good or activity ceases.

Also, as a result of adaptation, we can become inured to, and complacent in accepting, circumstances that in the long run are not good for us. Well before we became collectively aware of the horrendous threat of climate change, Dubos (1965:278-279) wrote prophetically that "this very adaptability enables [us] to become adjusted to conditions and habits which will eventually destroy the values most characteristic of human life."

Adaptation may work against moral values as well. In his book 'Nazi Doctors', R.J. Lifton (1990) describes a process whereby German doctors (who had taken the Hippocratic Oath to do no harm) were gradually transformed into active killers, and Christopher Browning documented, in his book **'Ordinary Men'**, a similar process among German 'Police Orders' in Poland. In the famous **Milgram experiment**, subjects were not asked to instantly administer a potentially lethal shock but were given a series of requests to increase the voltage slightly. Having just administered a 100 volt shock to someone, administering a shock of 105 volts doesn't seem all that much worse.

Moreover, but without going into further detail, to the extent that we experience, but fail to predict, adaptation in ourselves and others, all sorts of other bad consequences arise—interpersonal misunderstandings and bad decisions, as highlighted in the subsections of Samson's review focusing on **projection bias** and **empathy gaps**.

Before passing the proverbial baton to you, let me turn to my second point—the role of advertising and marketing. In several of your TED talks you make the claim that advertising creates value because it highlights positive aspects of subjective experience that people might not otherwise appreciate. I find this claim difficult to accept as a general rule. It's true that advertising can elevate people's *desires* for specific products, but does this value translate into *happiness*? And, closely related, are the products that tend to get marketed the ones that bring people enduring satisfaction, or, rather, those that are profitable to sell?

I am reminded of a cute paper by Jing Xu and Norbert Schwarz titled **'How do you feel while driving your car?'** The paper focuses on people's attitudes toward driving nice cars—I believe the example they use to illustrate their point is a BMW, which in the US perhaps to a greater extent than in Britain epitomizes a 'prestige brand'. Xu and Schwarz asked people to predict and recall how driving their own car feels, and they found that answers to these questions were highly correlated with the cost of the car. Yet, when people were asked "How did it feel last time?," their self-reports were uncorrelated with the cost of the car, except in the special and unusual situation that they were driving the car for pleasure, i.e. on a 'joy ride' (contrary to the stereotype, we Americans do spend much of our time engaged in activities other than joy-riding).

Marketing in this case does not seem to create *value* but instead to create *desires* that are, if anything, antithetical to value. There is some truth to the song lyric that "the best things in life are free," but freely available pleasures rarely, if ever, benefit from the value-enhancing wonders of commercial marketing.

One day I spent a delightful day biking with a friend, which ended up at a roadside tavern where we rewarded ourselves and undid the health benefits of the ride, with burgers and fries and pints of beer, paying with a credit card. Suddenly, I experienced a déjà vu moment, but it wasn't because I had experienced something similar in the past. With an unpleasant shock of recognition, I realized that I was playing out with frightening precision a scenario I had witnessed in an advertisement for a credit card – perhaps even the same one as I had used to pay for our refreshments. Advertising has created the iconic images by which we form our conception of the good life. This is not value-enhancing. The result, most of the time, is discontentment when we recognize the paucity of our own existence when compared to the gorgeous groups of mirthful friends hanging out in exquisite places and drinking Bacardi. Moreover, even in the unlikely event that we do manage to achieve the transcendent—the advertising ideal—as I did during that bike ride, advertising has a pernicious effect; it transforms experience into cliché.

One last gripe: **Would you really enjoy that slow train ride with the supermodels?** Like the Bacardi commercials, the main emotion that a slow train ride surrounded by supermodels would engender in me would be frustration.

Rory Sutherland to George Loewenstein

Dear George,

There are some aspects of this debate which I know I shall never win. Academics will always be hostile to consumerism, and for very easily understandable reasons.

First of all, academics inhabit a peer group where overt displays of material wealth tend to reduce rather than enhance status. I may be stereotyping the faculty at Carnegie Mellon here, but I rather suspect, George, that if you were to return from Europe kitted out head-to-toe in Dolce & Gabbana and driving a Bugatti Veyron, your stock among the faculty would fall rather than rise.

There is, of course, a perfectly simple explanation for this: **countersignalling and game theory**. For any group which enjoys a peer group status currency of its own (instead of Porsches, academics have tenure, citations, parking spaces, named professorships, Nobel Prizes – and, boy, do you like dressing up in gowns) it is obviously in your interests to disparage and depreciate other status currencies, in order to increase the relative value of your own. British aristocrats have been doing this for centuries by praising the importance of breeding and ancestry – areas where they enjoy a comparative advantage – and dismissing new money (except when discreetly marrying it).

The point I make here is that we are being manipulated and nudged all the time – not only by media or businesses, but also by each other. The process is inevitable. Criticising nudging is like criticising electromagnetism or gravity – the best we can do is be aware of the forces at work, to understand them and to make people widely aware of them.

But I digress...

I began writing this reply in a café in my local town. I drove there, paid to park my car (not a BMW) in the local car park using an app on my mobile phone, posted three small packages to someone 70 miles away (at a cost of about £1.50 each), bought a coffee (a flat white, for £2.40) and then sat down to write this.

Just as with your experience of the cycle ride and the burger, these few trivial incidents can be quite illustrative of some of the wider peculiarities of human psychology and economic behaviour.

First of all, my parking experience. I parked my car using the steering wheel. Nothing remarkable in that, you may say. In fact all cars, from Formula 1 cars to your much-despised BMWs, are steered using what is essentially the same interface.

But when thought about more deeply, it is quite interesting. Why do we steer cars with our hands? After all, our hands did not evolve for this purpose at all.

What the steering wheel does is exploit an evolutionary adaptation – the opposable thumb – for a purpose entirely different from that for which it was intended.

We do quite a good job of adapting the design of *physical* objects to our physical form. Where we are still woefully poor, however, is in the field of *psychological* design: when we start designing experiences and interfaces for the evolved human brain, we often inadvertently build in painful psychological hooks that cause immense confusion, distress and annoyance.

So my first approach is always to use the insights of this science merely to eliminate such annoyances. I think – I hope – that is mostly harmless. However, I would not deny that it *is* possible to manipulate people using the techniques of behavioural science in advertising and marketing. In fact one of the most important applications of behavioural science is to spot when people are designing misleading choices, and then to call them out for doing it.

More than that, in fact. I would actively *like* a moral debate on this issue and believe it is long overdue. In truth, I think that the advertising industry ducked this debate about fifty years ago by engaging in a dubious act of denial. Unnerved by books such as *The Hidden Persuaders*, by attacks on motivational research and by an experimental study of subliminal advertising effects in cinemas (which it later transpired was bogus) they disingenuously played a get-out-of-jail-free card by pretending that advertising worked exclusively within the realm of conscious awareness.

This act of denial had some terrible side-effects. It created a strange culture within marketing where everyone pretended that all persuasion occurred through reasoned argument alone. As a result of this convenient fiction, important aspects of human behaviour were effectively off-limits for about fifty years. The denial of subliminal effects also made marketing/psychology much less influential than it deserved to be.

The truth is, of course, much more complicated – or complex, in fact. My own view is that, since human behaviour is a complex system, interventions within it can rarely be classified as always simply good or bad – there are always questions of nature and degree.

Marketing is like cholesterol. There are good kinds and bad kinds. It is essential to our existence but too much of it can be dangerous. The problems occur when we avoid the subject altogether – precisely to sidestep this ambiguity. Because of this strange moralistic aversion to using insights from psychology in the design of experiences, we have shied away from this subject instead of paying it the attention it deserves.

But, as I said, my main focus is on removing hooks and snags. In advertising we often talk about 'added value', but there is such a thing as 'subtracted value', too.

This subtracted value happens when we design for the wrong part of the brain (market research) or for an imaginary brain (that of *homo economicus*) rather than for the whole brain as it actually is. When we do this we actually make products or services which are less valuable than they should be.

We make this mistake of creating 'subtracted value', or of negating real value, for various reasons. For one thing, we do not understand the shape of our own brains as well as we do our bodies. Moreover, for some strange but perhaps adaptive reason, we are also blind to our level of ignorance about our own psychology, since we have a natural tendency to 'post-over-rationalise' the reasons for many of our feelings and behaviours.

This causes us to design for the wrong kind of brain. Because the System 2 part of the brain (to use **Kahneman's analogy**) is the noisiest and most talkative part of our mental apparatus, we tend to design things for that part of our mental make-up, and ignore those 'System 1' aspects of our evolved psychology which are sometimes both incapable of expression and/or and opaque to introspection. Those more diffident parts of the brain – which are hugely involved in decision making and behaviour and many other important things – are effectively mute.

That's the problem which happens when you ask people what to do. Market research is often at risk of only listening to part of the story.

And now I come to my coffee and my postage. And, to be frank, I am completely flummoxed. By any objective measure, the relative price of these two goods makes no sense at all. I could have saved 95% of the price of my coffee by the simple expedient of waiting until I got home and making it myself. It is easily substituted for. By contrast, had I decided to boycott the Post Office and to deliver my packages in person, it would have taken me the best part of the day and cost about £25 in travel costs.

Yet do you hear consumers wandering around praising the postal service for its spectacular network effects and economies of scale? No, you do not. (Ungrateful bastards.)

I imagine there was some period after the penny post was introduced in the 1840s when people did go, “Wow, this is really cool” – for about a month. But no-one now seems to separate the value of posting a letter from some established norm about what it costs to post a letter. I suppose in technical terms what we could say is that “The consumer surplus creates no happiness.” A service for which I might willingly have paid £10, were no cheaper alternative to exist, is sold to me for £1.85 – and yet I do not walk out of the post office punching the air with the feeling that I just saved £8.15 on a £10 good. Instead I just think, “Hey, £1.85 – that’s what a package costs to send, so I guess that’s what it’s worth, meh.”

I don’t know what the answer is to this question of adaptation. All I would argue is that the possibility exists to make people a little more appreciative of experiences such as posting a letter. In such a case I would argue that what advertising creates here is not ‘added value’ but ‘revealed value’.

Certainly I might contend that people might be better off if 1p were added to the price of every letter and the revenue then spent on telling people how good the postal service is (our postal service is certainly better than people think). Yet, if you were to announce this plan, people would be scandalised.

A few years ago, when £16bn had been spent upgrading the west-coast rail line in the UK, the national auditor criticised the rail authority for spending about £3m (i.e. c. 0.02% of the overall cost) advertising the improvements. The logic behind this, presumably, is that it’s perfectly acceptable to spend £16bn improving something so long as those improvements are kept secret. This is clearly insane.

All this reveals is that there is no really objective view of value in the human mind. And therefore, as Ludwig von Mises believed, there is no sensible distinction to be made between value created in a factory and value created in an advertising agency.

Interestingly the late, mostly great, Gary Becker (in a paper with Kevin Murphy) seems to agree with me on this. Their model of advertising seems to suggest that advertising should be viewed not as persuasion (something which distorts preferences, as you suggest) but as a complementary good, the consumption of which, alongside the main product, increases the value of that main advertised product and which therefore allows sellers to capture more of the consumer surplus. He sees advertising as potentially a value-add, not as manipulation.

Nonetheless, I agree that we are right to be suspicious of manipulation. After all, the most successful advertisers over the past 150 years have been totalitarian regimes.

North Koreans seem genuinely happy with the rule of Kim Jong Un, for instance. Perhaps they are also wildly happy with their postal service, having all been shown a film at school entitled 'Brave postman battles elements in 27th Prefecture to deliver post in an efficient Juche manner in accordance with the teachings of the Dear Leader Kim Jong Un in defiance of Yankee imperialism', or something.

But what is strange is that we are already affected by frames, without being remotely aware of them. When you described your cycling experience, it was clear that you saw the cycle ride as virtuous and the food and beer as sinful. Yet people have been enjoying the consumption of beef products and fermented beverages since the time of the pharaohs.

Indeed, perhaps 900m people in China would have read your story and said, "The beer and the burger I understand. What I don't understand at all is why a presumably wealthy Yankee professor would get to the restaurant by bicycle, when I have been dreaming of owning a car for the last ten years. Travelling by bicycle is the lowest form of drudgery."

You have clearly been manipulated here. But it's not the credit card company I blame, it's Nike.

George Loewenstein to Rory Sutherland

Dear Rory,

I admit that I had it coming, and I can deal with being shot down from the ivory tower, though there is some irony to the sniper being a graduate of Cambridge—a student of classics, no less. I refuse, however, to take the rap on my fellow citizens' choice of cars (or trucks, or trucks masquerading as cars). Nor am I willing to accede to the claim that my love of bicycling is an academic pretension, or a response to effective advertising from companies like Nike (bad choice of company in any case; I don't think they make any products for bikers). In any case, I shouldn't need to be arguing for the inherent value of bicycles to a true believer in the inherent value of… **mattress-toppers**! As the popular adage goes, one man's mattress-topper is another man's mountain bike.

I have never been in a debating club (unlike Cambridge, my university didn't have a famous debating club), but my understanding is that a common strategy of debating is to disarm your opponent by pre-emptively acknowledging the weaknesses in your own argument. Is it possible, however, that you take this strategy too far? How can I outdo a statement that "the most successful advertisers over the past 150 years have been totalitarian regimes," or your citing of Joseph Goebbels and Kim Jong Un as the most successful practitioners of your craft? You have put me in the unexpected position of feeling the need to defend your profession!

"Marketing," as you write, using a metaphor that doesn't seem destined to win favor from your colleagues, "is like cholesterol. There are good kinds and bad kinds." This raises the question of when marketing is beneficial and when it is socially wasteful or even harmful. Let me propose a series of questions one could ask for any marketed product to help to identify whether its marketing is of the artery-clogging or plaque-busting kind:

Does marketing provide in-kind benefits?

Certainly some advertising is entertaining; indeed, some people I know watch the Super Bowl for the ads, in extreme cases recording the whole event then skipping over the scant moments of actual sports squeezed in between the ads. Advertising also supports media, Google searches, Facebook and all sorts of other services, and provides employment to countless individuals. Of course, if they weren't employed in marketing they would probably be engaged in other forms of gainful employment, but it is difficult to imagine exactly where a lot of the smart, creative, artistic, intuitive people who populate the marketing profession would find an alternative demand for their talents. Teaching (classics)?

How inherently good is the product?

To the extent that there are real differences in quality between products, marketing is beneficial if it disproportionately drives consumers to high-quality products. There is an old **'signaling' theory of marketing from the economist Philip Nelson** which proposes that marketing provides valuable information—that marketed products are disproportionately good ones, because it wouldn't make economic sense for a seller to propel buyers to an inferior product that shoppers would only buy once. On the other hand, many products, like bottled water, fancy liquors, perfumes, and BMWs, are highly valued only because, and to the extent that, they are successfully marketed.

Is pleasure from the product enhanced by advertising?

Even if Evian tastes, in actuality, no better than London or New York tap water, it could be argued that marketing is beneficial to the degree that it makes people feel that it does taste better, at least if doing so enhances pleasure from consumption.

Is the product good or bad for the consumer's welfare?

Some products, such as exercise clubs and highbrow cultural items such as books, movies, and plays, are arguably good for people in the sense of developing their minds or bodies. Others, such as alcohol, cigarettes, and highly processed foods, impose 'internalities'—health or other costs that consumers fail to internalize. Advertising could be argued to be beneficial, to the extent that it promotes products with positive internalities, and detrimental, to the extent that it promotes those with negative internalities. Rory, no need to tell me that I come off in this paragraph as a hopelessly elitist ivory tower snob.

Is the product good for society?

Analogous to—and much better known than—the concept of internalities are externalities, costs that people impose on others but fail to internalize. Most products, like big cars, airplane travel, and heavily packaged take-away lunches (which in this country, bizarrely, are exempt from the taxes applied to food eaten in), produce externalities, if only in the form of carbon gas emissions.

In addition, as **Robert Frank** has written about so eloquently, products that are consumed conspicuously produce a kind of consumption 'arms race' between consumers, with not much greater benefits than the more familiar type of arms race from which the metaphor derives. One person's fancy car, large house, or incredible vacation is, for observers, a source of envy, very likely driving them to competing conspicuous purchases in a never-ending cycle that promotes waste, encourages debt, and discourages saving (neither of which is typically observable by others).

What are the market forces?

Another form of arms race occurs in the commercial sphere. An increase in one company's marketing forces other companies to also increase their own marketing, or risk losing business. The end result may be a huge boon to marketers, but it is of questionable value to consumers or society as a whole.

Rory, to quote an esteemed ad-man, "I digress." Whatever our differences over the merits of our respective professions, we clearly agree on one point, the value of behavioral economics, and on a second point, the value of the online resource that Alain Samson has created to provide academics, practitioners, and anyone else with an interest in expanding their intellectual horizons with an entrée to the topic. After you respond, if you choose, to these comments, and hopefully answer my question about whether you would really like to take a long, slow train to Paris surrounded by supermodels, I propose that we *channel* any reader we haven't lost long ago to what they presumably came to this guide in search of.

Rory Sutherland to George Loewenstein

Dear George,

I entirely agree. And you're making me feel guilty now.

And thank you for pointing me in the direction of Phillip Nelson. I did not realise that Nelson was the original coiner of the phrases "search good" and "experience good." (A mattress-topper, by the way, is very much an experience good. Until you own one, you cannot conceive of any reason for buying one at all).

He was also the source of this quotation: "What makes the advertising issue fascinating... is that it is fundamentally an issue in how to establish truth in economics."

And it has to be said that economics has always found it difficult to understand marketing at all.

This was written in 1924 by Pigou: "Under simple competition there is no purpose in [....] advertisement since, *ex hypothesi*, the market will take, at the market price, as much as any small seller wishes to sell." Once you assume that consumers have fixed preferences and perfect information, and you really have created an imaginary economic model where there is no role for any marketing activity at all.

But the real problem is not really so much that modern economists don't realise that economics is a much more complex enterprise than the simple 100-year-old neo-classical model suggests. The larger problem may be the model of economics which persists in government, in business schools and in business itself.

The real problem with this model is the other things it leaves out: it is, essentially, a model which is trust-free, psychology-free, context-free, relationship-free and ethics-free.

In particular, by assuming trust, you effectively create a model which does not seek to understand trust or the importance it (and its absence) may play in economic activity.

As Joseph Stiglitz writes, “Even in a market economy, trust is the grease that makes society function. Society can sometimes get by without trust – through resort to legal enforcement, say, of contracts – but it is a very second-best alternative.”

As a simple thought experiment, the London taxi service may be expensive, but it works because you can comfortably climb into a random black taxi at 3am and be confident that the driver will take you home. I would, at a pinch, trust any London taxi driver to drive my two young children unaccompanied. The reason this works is because of The Knowledge – a three-year commitment which you have to go through before you earn your badge. Once you have sunk that up-front investment into becoming a taxi-driver, you are disproportionately unwilling to sacrifice that investment by risking your badge by ripping off tourists, visiting professors or so forth.

Yet, if only 1% of London taxi drivers were muggers, the people who would suffer would not only be the small percentage of people who were robbed. The fact is that the whole taxi system would collapse, and everybody who ever wanted to take a taxi would suffer, as would the 99% of honest taxi drivers who would lose most of their custom.

Now in this case The Knowledge serves as a commitment device. In many other situations, your brand reputation serves the same role. A brand reputation, like the knowledge, is a double-edged sword. Like a taxi-driver’s badge it is costly to acquire and hence extremely costly to lose. The compensation for this is that the trust it engenders allows you to command a price premium for as long as the products and services you sell under that brand name live up to their promises.

Or, when expressed in economic language, “The branded rent stream is capitalized into brand equity, creating a large bond held by the brand owner as a commitment device. It makes sense for consumers to deviate from trustworthy brands only when they have enough industry-specific information to do so.”

Now the mechanisms consumers use to identify trustworthy participants in the marketplace vary. On eBay it is ratings. On TripAdvisor it is the customer review. In many cases it is the advice of their friends. Sometimes it is simply social-copying or habit. And sometimes it is advertising.

In fact, the idea that advertising is always persuasive is disproved by the fact that in many categories, it acts as a discouragement. No London club (or Ivy League University) can advertise successfully, as prospective buyers would take that as a sign that the club or university has more vacancies than applicants – and it is assumed that any club worth joining is oversubscribed already.

In the Soviet Bloc in the 1970s, government advertising reportedly depressed sales. In an environment of scarcity, where people expected to queue for the most banal necessities, advertising campaigns along the lines of “discover the joys of anthracite” or “things go better with gherkins” were taken as evidence that these products were of such irremediable crappiness that even desperate people weren’t willing to buy them.

The understanding that a lot of life depends on signalling has come remarkably late to economics, and I suspect is not taught in all but the more advanced classes. And yet evolutionary biologists (including Charles Darwin) had noticed the same phenomenon in nature long before. Amotz Zahavi's costly signalling theory is, I would argue, one of the most useful tools economists have for understanding human behaviour.

Which brings me to Robert H Frank. I am so pleased that you quoted him – especially his book ***The Darwin Economy*** – as I think it is one of the best books written in recent years which most people in behavioural economics have never read (George Akerlof and Rachel Kranton's ***Identity Economics*** is another). I also agree with Frank that economics – and business in general – may have more to learn from Darwin than from even Adam Smith.

The only problem I have is that evolutionary theory has much greater explanatory power than predictive power. And it is fiendishly difficult to make judgments – in evolution, in business – on what behaviours or adaptations will ultimately prove useful or not. I agree with Frank's suggestion that we should be cautious about runaway signalling effects – since they can often be inefficient. But the only problem is that quite a lot of progress probably has its origins in status seeking long before it becomes actually useful.

Cars were probably status goods for quite a few years before they were actually superior to horses as a form of transportation. Washing machines and dishwashers were once seen as luxuries. Your bicycle probably incorporates a host of improvements which were the product of rivalry and competition rather than straightforward utility. The development of computers was, for the first few decades, driven by competition among geeks long before people actually found a practical use for them.

I must admit female fashion seems to be an exception here – it was once described as "innovation without improvement" – but I'm simply not brave enough to propose imposing a pigovian tax on women's shoes.

I am also sympathetic to your list, which seeks to ask what forms of consumption have positive or negative externalities. The problem here is that many demonised products – fast food, pizza, sodas, wine, beer, bottled water – are in fact complementary goods. Their value lies not so much in themselves (Coke is no better than water as a source of hydration) but in the fact that they are accompaniments to the things in life which hedonic experts widely agree are critical to happiness: spending time with friends, providing hospitality, acts of micro-generosity and so forth. It won't win me many friends, but I would argue that there was even a positive value to cigarette smoking in this respect: certainly the quality of conversation and time spent hanging out together have both declined since most people gave up.

A perfectly serious suggestion recently advanced by an epidemiologist, to explain why moderate drinkers seem to enjoy better health than non-drinkers, is simply that light-to-medium drinkers have better social lives, which in turn prolongs their actual lives. That beer perhaps did you more good than the cycle ride.

Nonetheless, I do believe there are some forms of consumption which are more pro-social than others. I also think there are forms of consumption which deliver more happiness per pound than others – and I think this should be widely debated at the very least. Michael Norton and Elizabeth Dunn have written a book, ***Happy Money***, based on this premise.

I'll end with two more things. I admit I have been wary about marketing's power to mislead when deployed by totalitarian regimes. But there is an interesting question here: totalitarian regimes do a terrible job of marketing products but a very good job of marketing themselves – something that's easy, I suppose, when you have a 100% share of voice. But free market capitalism seems to do the opposite: it is very good at marketing products and services, but very bad at getting people to see the value in the system itself.

Finally, I think that the adoption of just a few principles from behavioural economics into business and government thinking can have a significant effect on human wellbeing and economic progress over the next ten years. The vital thing is that this happens fast. In general the speed of adoption of ideas from the social sciences seems to be measured in decades at best, centuries at worst.

At the very simplest these are:

1) Small changes can have large effects
2) Psychology is really important.
3) People can't always explain why they do what they do, or what they want.
4) Preference is relative and social and contextual, not absolute
5) Trust is never a given; commitment really matters
6) People satisfice

I am sure you can add to this with some much more valuable principles – it isn't intended to be exhaustive. But the important fact is that these are six things which are not widely assumed in decision making.

When I say that the next revolution is psychological not technological, I fervently believe it. And I know you do, too. Once that's accepted, I think all the other minor disagreements become quite unimportant.

I'll end with one last observation. **Paul Krugman once wrote a piece** asking why, long after the upheavals of urbanisation, food in England remained so bad for so long. One of his suggestions was that, by 1950 or so, Brits had simply no conception of what better food might be like…:

> *And so ordinary people, and even the middle classes, were forced into a cuisine based on canned goods (mushy peas!), preserved meats (hence those pies), and root vegetables that didn't need refrigeration (e.g. potatoes, which explain the chips). But why did the food stay so bad after refrigerated railroad cars and ships, frozen foods (better than canned, anyway), and eventually air-freight deliveries of fresh fish and vegetables had become available? Now we're talking about economics—and about the limits of conventional economic theory. For the answer is surely that by the time it became possible for urban Britons to eat decently, they no longer knew the difference. The appreciation of good food is, quite literally, an acquired taste—but because your typical Englishman, circa, say, 1975, had never had a really good meal, he didn't demand one [my italics]. And because consumers didn't demand good food, they didn't get it. Even then there were surely some people who would have liked better, just not enough to provide a critical mass.*

People are creatures of habit with narrow frames of reference. Sometimes, too, I think people are too thrifty (a lot of behavioural economics focuses on reducing the savings gap – but China arguably has the opposite problem). Widening the scope of people's aspirations isn't always a bad thing, as I hope you have found from your culinary experience here in London in 2014.

Or, as FDR (yes, truly) remarked, late in life: "If I were starting life over again, I am inclined to think that I would go into the advertising business in preference to almost any other. The general raising of standards of modern civilization among all groups of people during the past half-century would have been impossible without that spreading of the knowledge of higher standards by means of advertising."