

Waste is good

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At the top of Sennheiser's range is the "Orpheus Set", stereo headphones that retail for 9,652 pounds. They are good headphones no doubt, well-reviewed and finely crafted. But to most ears, they deliver a sound quality not greatly superior to a pair of 25-pound Vivanco SR250s, which have received several 'best value' awards. As an evolutionary psychologist confronting contemporary human culture, I wonder this: why would evolution produce a species of anthropoid ape that feels it simply must have the Sennheisers, when the Vivancos would stimulate its ears just as well?

The standard Darwinian account of consumerism is that natural selection shaped us to have certain preferences and desires, which free markets fulfil by providing various goods and services. For example, sugars were rare and nutritionally valuable in Pleistocene Africa, so we evolved a taste for sweets, which chocolate and cola manufacturers now fulfil, or perhaps exploit. This cloying theory can explain many features of many products, as cultural adaptations to our evolved preferences. On these grounds, it seems to give the Darwinian seal of approval to free-market consumerism.

However, this evolved-preferences theory can't explain the Sennheiser Effect. The nominal function of stereo headphones is to deliver a private soundscape, an acoustic virtual reality. We might expect headphones to be judged and priced in proportion to their sound quality. But they are not. The marketing folks at Sennheiser know that Orpheus Sets are bought mainly by rich men, young or middle-aged, who are on the mating market, openly or tacitly. Their 400-fold greater cost than the Vivancos is a courtship premium. While the Vivancos are merely good headphones, the Sennheisers are peacock's tails and nightingale's songs.

Buyers of top-of-the-range products understand that their price is a benefit, not a cost. It keeps poorer buyers from owning the same product, thereby making the product a reliable indicator of their possessor's wealth and taste. We want the Sennheisers not for the sounds they make in our heads, but for the impressions they make in the heads of others.

Conspicuous consumption from Veblen to Darwin

Thorstein Veblen understood all this a century ago with his theory of conspicuous consumption in *The theory of the leisure class*. Yet Veblen's sociological insight did not connect in any obvious way with natural science. That missing link can now be made, via new developments in a branch of evolutionary biology called sexual selection theory.

From this biological viewpoint, consumerism is what happens when a smart ape evolved for obsessive sexual self-promotion suddenly attains the technological inventiveness and social organization to transform the raw material of nature into a network of sexual signals and status displays. It transmutes a world made of quarks into a world of tiny,

unconscious courtship acts. Every thing becomes a product, every product becomes a signal, and every signal becomes sexual. Yet most sexual signals go unrecognized, unappreciated, and unreciprocated. The result is that fascinating phenomenon we call modern civilization, with its glory and progress, to be sure, but also with its colossal waste and incalculable alienation.

Consumerism's trouble is not that it is tainted by sexuality, or that material acquisition is some Freudian sublimation of sexual conquest. On the contrary, the problem is that human sexuality is tainted and mediated by consumerism. The alienation of the modern consumer, the habituation and disappointment that set in when the Sennheisers fail to deliver what they promise (not good sounds, but good mates) is not new. It may represent a deeper alienation of our selves from our sexual displays.

We will see that consumerism is just the most recent and superficial manifestation of evolutionary pressures for sexual signalling. These pressures have reached not only deep into our wallets, but deep into our hearts and minds. Perhaps our consciousness itself may be counted among our wasteful sexual displays. If so, the new evolutionary psychology may do to our sense of personal identity what postmodernist criticism does to a literary text: revealing systems of signals that produce effects without communicating meaning, that stimulate readers without disclosing authors.

Prodigious waste as a feature of sexual signals

Understanding consumerism requires understanding a little bit about the evolutionary process of sexual selection. Sexual selection is basically what happens when sexually-reproducing animals pick their sexual partners according to criteria that are consistent across generations.

Darwin first realized that if peahens consistently prefer to mate with peacocks that have tails brighter and longer than average, then peacock tails must evolve to be ever brighter and longer over evolutionary time. Peacock genes, no matter how useful for survival, can only make it into the next generation if they are carried in peacock bodies with long, bright tails. Thus, sexual selection can be more powerful than selection for survival.

Evolution is driven not just by survival of the fittest, but reproduction of the sexiest.

Many sexually-selected traits, such as peacock tails, humpback whale songs, and male human aggressiveness, are so costly in time, energy, and risk, that they severely reduce survival chances, but evolved nonetheless for their reproductive benefits. Until about ten years ago, biologists assumed that these costs of sexually-selected traits were incidental to their courtship function.

However, Israeli biologist Amotz Zahavi has been winning many converts to his view that these costs are an adaptive feature rather than a maladaptive fault of sexual signals. His recent book *The handicap principle* proposes that sexually-selected traits must be costly in order to be reliable indicators of an animal's fitness as a potential mate and parent. Zahavi called these costly displays 'handicaps', because their ability to indicate fitness in the reproductive domain stems directly from the way they reduce fitness in the survival domain.

Zahavi's logic is the same as Veblen's. If big, bright peacock tails were cheap to grow, easy to maintain, and light to carry around, any old peacock could sport one, no matter how unhealthy, hungry, or parasite-ridden he was. The tails would carry no information about peacock quality if they carried no increased costs. In Zahavi's view, the real reason why peacock tails are so big, bright, heavy, and cumbersome, is that only very healthy, fit, strong, well-fed peacocks can afford such tails. Since very fit peacocks tend to have fit sons and daughters that are more likely to survive and reproduce, peahens benefit by choosing big-tailed peacocks. Peahens that preferred shorter-than-average tails did not leave many descendants, because their offspring were less fit than average.

Large peacock tails, like luxury Sennheiser headphones, are specifically designed not to be affordable by every individual.

A clever peahen who read Veblen might propose that, for the good of the species, peacocks should stop this mad waste. Perhaps each peacock could agree to wear a little hat showing a number between one and ten that reveals his actual fitness (perhaps a composite score of their health, strength, fecundity, intelligence, and screeching ability).

But there would be no effective way to police this system of arbitrary quality-signs. Too many low-fitness peacocks would lie, because they could attract better mates by lying. The signalling system has to be self-policing. It has to include a range of sexual signals that differ in cost, that are differentially affordable by individuals of different fitness, by virtue of which they honestly reveal their fitness. So, sexual selection favours both the preference for costly sexual displays, and the displays themselves.

The handicap principle suggests that prodigious waste is a necessary feature of sexual courtship. Peacocks as a species would be much better off if they didn't have to waste so much energy growing big tails. But as individual males and females, they have irresistible incentives to grow the biggest tails they can afford, or to choose sexual partners with the biggest tails they can attract. In nature, showy waste is the only guarantee of truth in advertising.

Advertising and sexual signal systems

Conspicuous consumption is the cultural analogue of the peacock's tail: a handicap that reveals quality by wasting resources. Consumerism is a sort of ritualization of conspicuous consumption, where people display their wealth and taste by owning widely recognized products of commonly known cost.

Advertising based on image, as opposed to product features and price, attempts to create a sexual-signalling niche for each such product. This requires demonstrating a credible three-way relationship between product, potential consumer, and pool of potential mates appreciating the act of consumption. The cola advert must show the cola, the cola-buyer, and the cola-buyer-watcher. Crucially, it must pretend that it is already common knowledge that drinking the cola is cool, in order for the cola to qualify as an effective sexual signal. The advertising must lift the product up by its bootstraps from unrecognized thing to consensual object of desire.

The difficulties in comprehending this semiotic leap of faith are similar to the difficulties that evolutionary biologists had, for over a century, in understanding how peacock's tails could evolve. Logically, there seems nowhere for the process to get off the ground. If peahens didn't already prefer long bright tails, why should males evolve them? But if males didn't already have long bright tails, why should females prefer them? Likewise, if women don't already prefer men who drive Porsches, why should any men buy Porsches? But if no men drive Porsches, why should women develop any preference for Porsche-drivers?

The history of sexual selection theory is basically the story of how biologists solved this chicken-and-egg problem. Details aside, the answer is that evolution does it gradually, through continuous escalation of both mate preferences (analogous to consumer tastes) and courtship traits (analogous to product quality).

Yet the cultural evolution of products as sexual signals need not follow the same gradual dynamics as the genetic evolution of peacock tails. Mass advertising can jump-start this signal-evolution process by showing fake men (actors) driving not-yet-available Porsches, and fake women winking at them. The whole signalling system based around the product can be posited, all at once, in the virtual reality of advertising, before a single product is sold or a single sexual prospect is impressed.

When we buy a product because of image-based advertising, we buy into a sexual signalling system. But it is a hypothetical system, not a real system. It was invented by a few advertising executives in the last several months for one client company's profit. It was not evolved over millions of years by all of our ancestors to improve their children's fitness.

This can create problems. Gullible people may act as if the hypothetical signal system had already been accepted as real. They may spend more time displaying virtual signals (advertised products) than real, biologically validated signals (wit, creativity, kindness). They may become frustrated when their virtual signals are ignored, and may increase their shopping rather than improving their character. The result can be pathological, a runaway consumerism in which an individual gets lost in a semiotic wilderness, searching for sexual signalling systems in all the wrong places.

Some of the current resistance to Darwinism in general, and evolutionary psychology in particular, can unwittingly exacerbate such problems. The denial that we have any fixed human nature, that sexual selection played any role in human evolution, or that we have any universal sexual signalling systems, plays into the hands of advertisers. They would love us to forget our innate talents for courtship. They would love us to think that virtual signals and hypothetical signal systems are the best that we can hope for.

The most prominent critics of evolutionary psychology, Stephen Jay Gould and Steven Rose, overlook a major benefit of recognizing our innate human capacities for displaying our genetically heritable health, attractiveness, intelligence, and fitness. Appreciating such natural displays may be our best defence against the capitalist consumerism, the obsession with artificial displays, that they so despise.

The case against consumerist waste

As we have seen, one problem with consumerism is that advertising can raise unrealistic expectations about the sexual signalling power of products. Another problem is that even the most effective sexual signals cannot simultaneously improve everyone's mating success.

Sexual competition is basically a zero-sum game. Some individuals attract good mates; others don't. Heartbreak is inevitable given that human mating requires mutual consent, and given that people differ markedly in their physical, mental, and social attractiveness. Not every man can command a harem of five thousand like the first emperor of China. Not every woman can cycle through eight husbands like Elizabeth Taylor. No matter what sexual signals are available in a society, the basic zero-sum-ness of sexual competition remains.

Yet, if the costs of sending sexual signals become very high, a society's mating system can become a negative-sum game, costing everyone more time, money, effort, and risk. Two generations ago, Japanese couples did not bother buying diamond engagement rings. Then the De Beers diamond cartel, through an intensive advertising campaign in the 1970s, convinced Japanese women that they deserved a ring just like Western women. A new standard was imposed: Japanese men must spend at least two months' salary on a colourless lump of carbon to demonstrate their romantic commitment. Japanese marriages are probably no happier than a generation ago, but De Beers is richer.

In thousands of such cases, consumerism leads to costlier signals of wealth, more exhausting signals of health, more taxing signals of taste, and riskier signals of physical courage. They are endless treadmills of personal mating effort, often without social benefit. Sexual competition is one domain where improved technology does not usually improve average human welfare.

The sexual-signalling imperatives of consumerism introduce another form of waste: they give consumers little incentive to get good hedonic value for their money. Britain seems strangely comfortable with its oligopolies, cartels, and retail-price-maintenance agreements. These artificially inflate the price of cars, clothes, books, and consumer electronics by up to 50% over their prices in the U. S. If the point of buying a Porsche is to get a good A-to-B machine for the money, these cartels look pathological. But if the point is to advertise one's wealth and status, it doesn't much matter how the prices are set. As long as the prices are common knowledge in the mating market, each car model reliably signals the owner's wealth level.

In sexual signalling, price differences are much more important than absolute prices. But in human welfare terms, the reverse is true. Sexual signalling undermines economic efficiency.

Consumer-exploiting cartels thrive especially where products are given as courtship gifts, not just used as courtship displays. One risks sexual humiliation by showing an interest in good value for money when buying a romantic dinner, Valentine's Day flowers, or an engagement ring. This fear of humiliation makes consumers reluctant to challenge exorbitant prices and exploitative marketing, or high taxes on these luxury goods.

Marketing products as courtship gifts gives businesses and governments great power over buyers of those products, because it makes consumer activism look like the economic equivalent of erectile dysfunction. Only those who can't afford them complain about the unfairness of the prices and the taxes.

The sexual-signalling functions of most products are less obvious. As one drifts from the epicentre of courtship gifts to the fringes of more pragmatic consumption, prices drop, profits fall, and free-market competitiveness takes hold. Cultures differ in the boundaries they draw between courtship goods (where price should be no object) and ordinary goods (where price matters). Yet every culture retains a core of courtship products or luxury goods with which people fall in love, conspicuously casting aside their roles as rational economic agents.

The case for waste in general

Veblen's biographers often argue that his contempt for conspicuous consumption reflects the Norwegian frugality of Veblen's ancestors encountering America's Gilded Age. Sub-Arctic subsistence Protestantism meets Boston bourgeois luxury, and shakes its head in disapproval. Veblen slyly claimed he used 'waste' as a neutral, sociological term, but his moral indignation at consumerist signalling shows through every example he analyzes. Must we follow his moral crusade against waste?

Evolutionary theorists did for many decades, and it kept them from understanding sexual selection until about ten years ago. Veblen's peak was Darwin's trough. The rediscovery of Mendel's work around 1900 led a generation of biologists to view natural selection theory as old-fashioned, and Mendelian genetics as the way forward. Sexual selection theory was widely viewed as Darwin's worst blunder.

In the 1930s, the biologists of the Modern Synthesis combined Darwinian selection theory and Mendelian genetics. The great Synthesizers such as Julian Huxley, Ernst Mayr, and J. B. S. Haldane recognized that sexual selection could produce extravagant, wasteful signals, but they did not approve of such profligacy. They thought it was bad for the species, bad for evolutionary progress, and generally pathological. Their disdain for the biological waste of courtship was identical to Veblen's disdain for the cultural waste of consumerism. They revived natural selection, but left sexual selection to rot for another fifty years. Even when Zahavi proposed his handicap principle in 1975, biologists couldn't believe that nature could favour such wasteful signalling.

Like Veblen, most evolutionary biologists embraced a machine aesthetic that celebrated efficiency, good engineering, and form following function. Veblen shared H. G. Wells' vision of a technocratic utopia run by enlightened engineers, from which all traces of conspicuous signalling and invidious comparison were eradicated. Until about ten years ago, many evolutionists shared a similar vision of nature, with natural selection shaping adaptations for pragmatic efficiency, and nothing else.

But the revival of sexual selection has changed all that. Many evolutionists now recognize that almost everything in biology that we find beautiful or impressive has been shaped for wasteful display, not for pragmatic efficiency. Flowers, fruits, butterfly wings, bowerbird nests, nightingale songs, mandrill faces, elephant tusks, elk antlers,

humpback whale songs, firefly lights, frog choruses, fiddler-crab claws, lion manes, swordfish tails, and human language have all been shaped by sexual selection. Waste can be fun. Sexual signalling can be sublime. Evolution for invidious comparison can be creative rather than pathological. Modern evolutionists have become more comfortable celebrating biological products designed for wasteful signalling.

In fact, since each sexually-reproducing species can be viewed as a different sexual signalling system, the proliferation of these systems is what creates biodiversity itself. Without so many varieties of waste, our planet would not host so many species. There may be a hidden irony in environmentalism that worships biodiversity but derogates consumerism, if both result from the same imperatives of sexual signalling.

This history suggests that moralistic hostility towards wasteful display is bad for science, both natural and social. It shuts off analysis and derails serious thought. Veblen's insights were widely noted, but not often extended. For many decades, he had few intellectual descendants. In the last few years, a handful of social scientists have taken Veblen a bit further with their 'leisure studies' and their 'sociology of consumerism'. A larger number have fallen for the charms of 'culture theory'. However, culture theory's anti-realist, anti-scientific bias has crippled its ability to understand the sexual revolution that has swept through evolutionary biology. The parallels between Darwin and Veblen remain hidden.

Analysis of consumerism seems best advanced by combining the forces of two previously hostile intellectual camps: evolutionary psychology (as practised by critical-realist, ultra-Darwinian adaptationists like myself) and cultural theory (as practised by social-constructivist, ultra-Left, post-modernists). Evolutionary psychology provides the sexual selection theory and the science of human nature, while cultural theory supplies the acid scepticism and semiotic insight to cut through our complacent blindness to the sex, money, power, and history behind our cultural signal systems. Perhaps the skirmishes between these camps constitute some kind of ferocious, Klingon-style courtship that tests each prospect's strength and courage before acknowledging their attractiveness and potential fertility.

The case for consumerist waste

From a biological perspective, material products bought in a money-based economy have some unusual features that make them rather less wasteful than most sexual signals. First, being material objects, they last longer than the courtship dances, songs, and ritual combats of most species. Once our species started using material culture for sexual display, we could accumulate and even inherit large numbers of objects that improve not just our status, but our quality of life. Consumer durables such as houses, cars, and appliances, acquired partially for sexual display, stick around long after courtship ends.

More importantly, consumerism entails a social circulation of value rather than a solo act of waste. Compare the peacock's tail to a Porsche. Both are expensive to their displayer. But when the peacock pays the growth and maintenance costs of his tail, he doesn't transfer any value to any other member of his species. He just burns the energy, and the energy is gone. By contrast, when the Porsche-buyer pays for the car, he transfers money to the seller, who transfers some to the manufacturer, and hence to

the manufacturer's employees and shareholders. The only real waste in the production of the Porsche is whatever extra steel, leather, fuel, labour, and human ingenuity goes into its production compared to an ordinary car. Its price premium is not waste in any broader social sense, because the price is transferred to others within society.

This is an important effect, because ever since the automation of agriculture and manufacturing, most of us are employed, directly or indirectly, to produce wasteful consumerist displays for other people. If an asexual species invented automation, most of them would lose their jobs permanently. They would have no domain of waste to soak up the material surplus their technology gives them. In our sexual species, the demand for wasteful sexual displays is unbounded, so we need never fear mass, permanent unemployment, as long as consumerism persists. If everyone read Veblen and resolved to eliminate all traces of consumerist display from their lives, the global economy would collapse overnight.

Consumerism redistributes not just money, but status. Advertising posits products as sexual signals, but the product-buyers are not the only people to benefit from a product's sexual status. The status trickles out in all directions, along the entire chain of production and consumption. Porsche advertises. Buyers of new Porsches reap the status benefits of that advertising. But so do Porsche salesmen, Porsche executives, Porsche factory workers, Porsche shareholders, Porsche mechanics, receivers of gift Porsches, and buyers and inheritors of used Porsches. Although a physical product can only be owned by one individual, its sexual status value can be enjoyed by anyone associated with its production, financing, marketing, or consumption. In this sense, consumerism automatically redistributes sexual status from the wealthy to the suppliers of their status. This lends consumerism an egalitarian aspect utterly alien to sexual competition in most species.

Waste not, want not

A more positive attitude about wasteful signalling may be the best attitude for fostering the scientific analysis of waste. But is it the best attitude for fostering sustainable human societies? Surprisingly, biology suggests the answer may be positive. All sexually-reproducing animals face a trade-off between courtship effort and parenting effort. The more time and energy you waste on showing how sexy you are, the less time and energy you have for raising offspring.

The same trade-off seems to hold for humans. With the industrial revolution, urbanization, and the rapid increase in consumerism came the demographic transition: a dramatic reduction in numbers of children. Sexual competition intensified so much that the products of sexual reproduction were delayed. Consumerism is soaking up the time and energy that our ancestors used to devote to having large families. Instead of spending our twenties taking care of our first six toddlers, as our ancestors would have done, we spend our twenties getting educations, launching careers, buying stuff, going to movies, taking vacations, and worrying about status. Conspicuous consumption or conspicuous children, it's hard to attend to both.

Any well-intentioned, Veblenesque reduction in the waste of sexual signalling might reverse the demographic transition and create a population explosion. People like to keep busy. If a state decided to eliminate conspicuous consumption by outlawing luxury

goods, costly entertainment, status differences between occupations, and so forth, people might just marry younger and pump out more offspring. In fact, eliminating conspicuous consumption and other forms of wasteful sexual signalling would mean eliminating most of what we consider to be human culture. It would roll back the evolutionary clock a couple of million years, trying to re-create an Australopithecine lifestyle of small-brained primates bored to death, and surrounded by babies.

Whether such a state of affairs might be more globally sustainable could be debated. It is not hard for evolution to achieve mere sustainability. Trilobites flourished for hundreds of millions of years enjoying their low-consumption, low-waste, sexually unsophisticated lifestyle. They were a model of Veblenesque rationality and efficiency.

But waste is what makes things interesting.

For at least a million years, our species has been engaged in a great evolutionary experiment, to explore the wonderland of wasteful sexual signalling. Human language, art, music, humour, and clothing were the first of our new wasteful signals to evolve. Other varieties of sexual waste (i.e. human culture, religion, philosophy, literature) followed. The last century has seen a dramatic increase in a new kind of sexual waste, conspicuous consumption. It is new in form but not in function. It just translates a primordial logic of how to show off from biology to technology.

This brings some problems, as we have seen. We may too easily forget our innate biological capacities for showing off -- language, creativity, intelligence, consciousness. We may rely too much on Sennheisers. But perhaps our critiques of consumerism go too far when they condemn waste in general, as Veblen did. Sexual waste is what made our species what it is.

We are creatures of waste, evolved to burn off our time, our energy, our resources, our very lives to show that we can afford to do so better than our sexual competitors. The human brain, that most expensively wasteful organ, that ultimate biological luxury, is our original bonfire of the vanities.

Conspicuous consciousness

Consumerism, for all its pitfalls as a sexual signalling system, provides some novel metaphors for understanding how the human mind evolved. Human consciousness itself may have evolved largely through sexual selection as a sort of wasteful display.

Suppose, during the evolution of language, that our ancestors chose mates who were better able to articulate a wider range of perceptions and concepts. That new criterion of mate choice would impose selection for our minds evolving a sort of clearinghouse where impressions and ideas previously isolated in distinct brain mechanisms became available through articulate courtship. In short, by evolving consciousness, we could display more of our minds during courtship.

Such a process would not make the mindless principles of sexual signalling any more intelligent, rational, or conscious. Rather, they would let the principles of wasteful sexual display reach ever deeper into the mind itself. Rather than consciousness evolving as a neutral executive that coordinates our behaviour and experiences our ongoing lives with

authentic hedonism, consciousness may have evolved as a show-piece, a stage-set, an amusement park specifically designed to entertain others. Full of sound and fury, it may signify nothing more than our fitness, to those who consider merging their genes with ours.

Of course, if used vigorously and frequently, the mind often delivers the courtship effects it evolved to produce. It impresses potential mates with facts, memories, hopes, ambitions, sensitivities, tastes, empathies, and, perhaps its greatest trick, the illusion of boundless, authentic, conscious subjectivity. To work this courtship magic, the mind convinces us that we have an authentic, conscious subjectivity, and that the contents of our consciousness are uniquely worth communicating to others.

Actually, it doesn't convince us of this. There was no primordial self to be convinced. Sexual selection simply constructed us to have the form and functions that effective courtship requires.

Consciousness was not some pre-existing capacity that was distorted by the demands of sexual signalling. It evolved from scratch for sexual signalling: not a fallen angel, but a product perfectly adapted to its consumers through sexual selection, evolution's ingenious marketing department.

Intellectual consumerism

Where does this leave those of us who value the life of the mind? Perhaps equating ourselves with our vain, babbling, concept-spewing consciousness is no more authentic a lifestyle than identifying with an expensive, well-advertised possession.

Intellectualism and consumerism may be equally alienated modes of existence, if over-identification with one's sexual signals counts as alienation.

This seems especially true of intellectualism in the style of the *New York Review of Books*, wherein acquaintance with a few hackneyed names (Freud, Nietzsche, Foucault, Bellow, Kristeva, Sontag, Borges) suffices to display membership in a cultural elite. These names have become the debased coinage in the libidinal economy of the bespectacled. Their ideas become mere gambits for coffee-house courtship. Europe's cultural icons are conveniently packaged as American products. Their only distinction is that they are marketed by New York book reviewers and essayists rather than New York advertising firms, and their acquisition cost is a college education rather than a price in dollars.

Intellectual alienation no longer has any roots in the existentialism of Dostoevsky, Kafka or Sartre. It has become the same alienation felt by any other consumer buying products as sexual signals. And intellectual debate, too often, is carried out with the same bombast as lurching bond-dealers debating the merits of Mercedes versus Porsche, or the Seychelles versus Mauritius: signallers signalling their signals are best.

Perhaps it was always thus. Philosophy originated in sophistry, competitive public displays of prowess in reasoning and arguing. Universities were founded to teach dead languages, useless rituals, and a nodding acquaintance with Aristotle to a leisured class of priests. As Veblen noted, an English degree from Oxford was the premier badge of

conspicuous leisure for centuries. Only with the rise of science have the intellectual varieties of wasteful display achieved any cognitive link to reality or any pragmatic link to social progress.

Most intellectual display throughout history may have been waste in Veblen's sense. Yet those human achievements and insights we most value would never have been produced without our sexual instincts for waste.