

## 5. Economics in the Wild

Let me return to a now familiar example and ask an elementary question: how is it possible to claim that the bus is more expensive than the car? The cost of the bus is straightforward enough: it is the cost of the ticket, charged in hard cash. The cost of the car is more complex, and I will need to do some maths. The tank of fuel costs such and such, and I get so many miles to the tank, or thereabouts, and the round trip to work is so many miles. A little arithmetic and I have my number. I could be more precise in my calculations if I wished; perhaps there is a little computer in the dashboard that will do the work for me. Meanwhile, I know that the tank of fuel costs such and such because there is a price per litre displayed at the filling station, and the pump measures the amount I put into my tank, and charges me accordingly. I can trust the pump because it has been tested by a qualified official according to prescribed weights and volumes. The instruments in my car are also calibrated by standard measures. There are road signs marked with distances, or I can consult a map, or a digital route planner. If I look at the map the scale requires a mathematical conversion, but Google or my satellite navigation system will do the job for me in a moment.

Even in this simple example, it is clear that such calculation goes right the way down, forming an endless regress where the only escape, eventually, is to trust someone else's judgement, expertise, or calculative skill. As systems become more complicated, we can do less of the calculating for ourselves. My grandfather, a physics don with a penchant for cataloguing, used to note down miles and petrol stops in a little notebook he kept

in the glove compartment, working out his fuel consumption longhand. Now it is a matter of making a few checks on the dashboard display.

This may seem like a good thing. Less time scribbling in notebooks means more time to do other, more pleasurable things. But, as Foucault never tired of reminding us, knowledge is power, even – especially – in its smallest and most tedious manifestations. Calculation is a form of knowledge, and becomes therefore a conduit for the exercise of power. It is the root of the panoptic archipelago discussed in the last chapter. It was calculation that enabled Taylor to drive craft out of the workplace: he may have begun with time-and-motion studies of lifting and loading but by the end of his career he had managed to systematize the lathe worker's craft. It took him twenty-six years, during the course of which he cut his way through eight hundred thousand pounds of iron, in fifty thousand tests, but he managed all the same. By 1906 machinists used his 'slide rule' rather than their own judgement. Still more complex calculation supports the transformation of Norwegian fishing: computation of fish reserves, of birth and mortality rates, of an acceptable return on capital. It is not the fishermen who calculate but the bureaucrats, and these equations embody and transmit their power over the populace. In the case of the private investor, the necessity of buying in much of the calculative power required to invest places them at a permanent disadvantage to those who provide it.

### *Calculation is power*

The sharing of calculation is all but inevitable. We manage to exist in a technologically advanced society only through the distribution of calculation to others; increasing complexity

requires more delegation, and places us ever more in the hands of those to whom we give over our calculative efforts.

The phrase ‘distributed calculation’ was coined by the American naval scientist Ed Hutchins, in his fine book *Cognition in the Wild*.<sup>1</sup> He uses the example of a warship navigating tricky waters to show how complicated cognitive tasks can be broken up into simple stages, using specialized instruments and coordinated by systems and rules. On the boat, no one knows the whole picture. Below deck, sailors take readings of depth using a Fathometer, while elsewhere they record speed. High on sighting platforms others take bearings from landmarks on port and starboard sides. These readings are fed to the map room – and Hutchins is at pains that we should understand just how much calculative work is already buried in the maps themselves – where the location of the ship is plotted and sent upwards to the bridge. The whole process is coordinated by the Navy procedures set out in a thick handbook, and strengthened through repeated exercises, until a difficult calculative task is made robust enough to be continued accurately even in the heat of battle, even if individual crew members are lost.

The same thing happens in everyday life. The simplest choice, whether to catch the bus or the car, is only possible within the calculative infrastructure that is provided by economics. Economics ‘in the wild’ is a set of technical practices of measuring and calculating, embedded in and distributed among the artefacts and devices that surround us all the time: tickets, coinage, petrol pumps and mileage counts, signs and maps, multiplication and division. Economic man is a hybrid of all these, employing specific networks of artefacts for specific tasks, whose rational calculation is made possible through a constellation of instruments, measuring devices and calculators. Devices become, as Michel Callon puts it, ‘prostheses’ for economic action; in the sociology of markets we have adopted another word, ‘agencement’,

to describe this constellation of humans and devices. It is a useful word because it reminds us that devices have agency: they *act*.<sup>2</sup>

Yet these ‘agencements’ rapidly become invisible. The example of the bus shows how quickly the hard work of calculation disappears into the background. Unlike the warship, where operational procedures are rehearsed through constant drills and practices – deliberately kept visible – the calculation that supports everyday life is hidden from us. Every technical innovation shuts away a procedure that might otherwise have been done longhand. Map, notebook and mental arithmetic segue into the dashboard computer. We can now do more. It becomes possible to devote much more attention to the fuel efficiency of one’s car: my dashboard computer is much easier than my grandfather’s longhand calculation. We begin to take the production of a fact – for that is what our fuel consumption figure is – for granted. We lose sight of how it is made and start to make use of it, even if it is only to support a bar-stool argument about the respective merits of various motor cars.

Another example is provided by our local supermarket, where we come up against calculative power that far outstrips our own: the wire shopping trolley. It is part carrier, but also part calculator, capable of exploiting our cognitive weaknesses. Supermarkets have long been mindful of the problem that careful shoppers may stop selecting goods before their budget is entirely spent, if only to avoid embarrassment at the checkout. The easily visualized volume of the trolley’s basket offers a rule of thumb measure of expenditure, turns a difficult piece of mental arithmetic into a quick estimate, and deploys calculation to the shop’s advantage, allowing customers to carry on loading up the products.<sup>3</sup>

Supermarkets are engaged in constant competition, and of late, with customers’ purses tightened by recession, the battle for business is focused even more on price. Shops compare prices

with their rivals, focusing their deals on whatever their chosen customers perceive as important – white bread, frozen prawns or luxury orange juice – and claiming that they save each time they visit the store. But shoppers can never be expected to process cost comparisons across every good in the supermarket. That would be too onerous for the customer and risky for the store; if the shop handed its customers the numbers it would be handing power back to them, and running the risk that shoppers might come to undesirable conclusions.

So we receive single pre-processed facts, such as a till receipt that shows a notional saving of £2.78, or a percentage figure flashed across the television screen during an advertisement. These facts tell us something about how we *should* shop. If one shop is cheaper than its rival, then we should shop there, in the cheapest supermarket. We should be indifferent to all other factors, such as location, taste or social demographic. If these campaigns are successful, and their longevity implies that they are, it is because they have managed to insist upon the primacy of economic logic as a means of directing shopping choices. A hidden, distributed infrastructure of calculation transforms us into a different kind of shopper, one who focuses on price above all else.

As we wander up and down the aisles, our movement directed by the architecture of the shop, our attention is captured by the carefully coordinated offerings of products on the shelves. Labels and signs lead us around the store, and steer our assessment of products, easing comparison between rival goods. The labelling systems of supermarkets advance an inexorable economic logic, showing the price and weight or volume of the good, and facilitating comparisons not just across different versions of the same product, but of different goods entirely by translating that into a price per kilogram or similar. In the supermarket, we really can compare apples and oranges, as the price label is ruthless in its analysis.

A Marxist would urge shoppers to look past the artefact and see the labour relations embedded in it. These bananas do not really exist: they are the essence of exploited labour, taking the shape of a commodity. For many, that vanishing act is a step too far, and the bananas remain solid on the shelf. But try the same trick with a label and it works. By showing *only* the price of the goods being sold, the label can effectively purge every other factor from our decision, even if we know full well that the price saving offered in the supermarket is paid for elsewhere, in intensive farming, intensive labour, or exploitative working conditions.<sup>4</sup> It is the *label* that renders us blind to the circumstances of a commodity's production. It frames our decision, guiding us as to what matters and what does not.

This is why campaigners for better conditions for workers or for livestock, or for healthier food, recognize the battle for labelling as so important. As a counterfactual, try the trick of the label again, in reverse: this shirt was stitched by a woman in bonded labour. Her name is Runa, and she earns £7.95 a month. This phone was made by a man who took his own life: soiled goods, 25 per cent off. A 'Fair Trade' designation on packaging brings the subject of labour conditions back into the theatre of the supermarket, and a 'free range', or 'organic' label does the same for livestock and even arable crops. But it does so in a controlled manner in keeping with the economic nature of supermarket activity. Dealing with indentured labour and the products of sweatshops is no longer a matter of moral outrage – thou shalt not buy this shirt – but a fine, graduated consumer choice. Supermarkets offer established hierarchies of labelling where improvements in the quality of husbandry, or of a living wage, are reflected in increasing prices and consumers are free to establish the cost of their own conscience. In the supermarket, even moral virtue has an economic dynamic.

The supermarket is a theatre of economic activity, and in the

theatre we must perform as an economic actor should. Vague worries over distant, uncertain labour conditions and mass production are pushed aside when we are faced with the immediate economic concerns articulated by the labels. There are rules to the ballet of a supermarket, as the French sociologist Franck Cochoy has observed; our interactions are with the shelves, the labels and the goods, not with one another, nor indeed with those who grew, reared, or stitched the products. It is, to borrow his metaphor, a garden of economic choice, tended by careful plantsmen and women.<sup>5</sup>

As I noted in the case of my bus ride to work, the economist sees externalities as market *failures*, places where the market cannot reach. Pollution, noise, exploited labour and intensive production – all of these would go away if the market were able to incorporate them fully in the cost of decisions – in other words, if we were to realize, fully comprehend and pay for the costs we impose on others by our actions. The example of the supermarket suggests otherwise: that the removal of the need to recognize, understand and pay for such costs is a triumph of the market. We must not be reminded of these costs, lest bad feeling get in the way of our spending. In this sense, turning something back into an externality is a useful result. Creating commodities, making them calculable and commensurate, turning everyday folk into calculative, rational agents – this is hard work. It is an organizational and technical achievement, a great success, not a failure. The supermarket frames the decisions that we take, and in doing so manages to exclude – to externalize – so many vital factors. And how is this done? By metrics, measurement and qualification, all crammed into a tiny, simple device: the label.

We can now recognize economics in the wild: planning, accounting, consulting, auditing and measuring.<sup>6</sup> We become economic, not through an act of deliberate choice, but through the systematic use of ordinary, everyday material devices: the very things that help us navigate the world.

*Small but mighty: the FICO® Score*

Reshaping an entire industry, purging it of social ties, emotion and affect, and repopulating it with economic men and women is a decades-long project. The transformation in our understanding of houses – from places to live into investments; from a home into an asset – has taken roughly three decades. This would not have been possible without a radical restructuring in the provision of mortgages and insurance. When a person of my parents' generation wanted a mortgage, they went to see the bank manager. An important person in a small town, the bank manager had personal relationships with his clients and oversaw their current accounts. In my father's words, the bank manager 'knew what you were good for'. The old-fashioned bank manager had but one mandate: not to lose the bank's money. His job was to lend at interest, but carefully; he was obsessed with security almost as if the money was his own. In a manner of speaking it was, for he was lending out his savings and those of his neighbours.

In this, he had traditional economics on his side as well as common sense. Established banking theory tells us that lenders will do better to refuse risky loans than to offer them at higher interest rates, and that banking markets do not naturally 'clear', which means that supply does not match demand. For much of free-market economics, a 'non-clearing market' is a terrible problem, but banks have lived happily with it for many years. Banking is not a risk-sharing venture. A bank charging a few per cent interest every year can never afford to lose the capital of the loan itself (the 'principal') and will stay away from risky lending, even if the rates that could be charged are higher.<sup>7</sup>

Lending is what the Nobel Prize-winning economist George Akerlov called 'a market for lemons'. Buyers who cannot judge

the quality of goods on offer will protect themselves by offering low prices, driving away the better-quality sellers, so that only the 'lemons' (the duff goods) will be left.<sup>8</sup> In order to stay in business, good-quality sellers can protect themselves with guarantees, develop brands and reputations, or build social relationships with their clients. In banking, where borrowers are the sellers and bank managers are the ill-informed buyers, the job of the bank manager was to assemble as much information as he could, and to entangle economic relationships with social ones. He would shake his borrowers' hands and look into their eyes, go to their cocktail parties and the weddings of their children, working to construct as much social scaffolding around the relationship as he possibly could. That way, the bank got its money back, for it is hard to default on social as well as financial obligations. Old-fashioned banking was a low-risk, low-return business, but done carefully and on a big enough scale it was a profitable endeavour.

Jump forward thirty years to my recent credit-card application. I visited an online comparison site to track down the best interest-free deal, clicked through to the provider's website, filled in my name and address, my annual income and some other peripheral details, and pressed send. Less than a minute later I had been accepted for a card with a credit limit of eleven and a half thousand pounds sterling at an annual interest rate of nearly 20 per cent. Low risk, low return this is not. Something profound has happened to banking.

Behind this dramatic change lies a shift in the way that credit applications are processed and in the kind of information banks consider important. The lender is no longer concerned with the individual circumstances of borrowers; the credit-card company does not know me personally, nor understand what I am 'good for'. What the credit-card company does know is the statistical likelihood that I will pay the money back. It has access to

credit scores and population-level lending data, and employs an algorithm to make a decision on this basis. It no longer *avoids* risk on an individual basis but *manages* it across the population. The fundamental understanding of risk in lending has changed, and the story of this transition is not one of high politics but of technical ingenuity and entrepreneurship.

In 1956 two former military scientists set up a firm in San Raphael, California. These men were trained in the new discipline of operations research, where the power of algorithms and data analysis had been put to work solving the tricky computational problems that war had thrown up, such as aiming bombs and automating anti-aircraft gunnery. (It was complex stuff, and after the war, operations research laid the groundwork for modern computational economics and game theory.)<sup>9</sup> Shaped by their discipline, these men were committed to delivering practical solutions in which scientific method was built into functioning hardware. Their names were William R. Fair and Earl J. Isaac, and the company they founded was called Fair, Isaac & Company Inc. Today that firm is called FICO, is listed on the New York Stock Exchange with a capitalization of one and a half billion dollars, and supplies an essential part of the apparatus of American economic life: the FICO<sup>®</sup> Score.

The history of Fair, Isaac & Co. has been beautifully documented by the sociologist Martha Poon.<sup>10</sup> In its early days, the company built credit scoring systems for retailers in small-town rural America, offering its clients a chance to improve their business in the new area of mass-market consumer credit. Just as today, point-of-sale equipment needed to be straightforward, usable by clerks with no calculator and no statistical knowledge, so any system had to be built into the hardware with the difficult mathematics ‘distributed’ back to Fair, Isaac & Co. The firm developed a bespoke system for each client, using the existing records that its shops had accumulated. When the system had

been delivered, the clerk would ask the applicant set questions provided by Fair, Isaac & Co., score the applicant's answers according to predetermined tables and add the scores up to arrive at a 'yes' or 'no'. Retailers could now see the probability of default compared with the existing client base: a little extra knowledge that allowed the stores *either* to increase their volumes at the same level of default *or* reduce defaults at the existing sales levels.

Poon is keen that we understand the physical nature of the credit scoring. This was not rarefied financial engineering in Wall Street skyscrapers. Young analysts, no matter how highly qualified, served time in the field hauling files from dingy rooms in remote shopping malls, photographing the records and sending them back to the firm's headquarters in California for coding and analysis. There, a team of housewives working in their homes converted the handwritten records into punch cards for analysis and the Fair, Isaac & Co. computers produced a final algorithm for the client. It really was economics 'in the wild'. Rarefied problems of sample selection and analytical focus were sorted out among the dusty cabinets, analysts making up the rules of this new research discipline as they went along, and the coding required care, skill and judgement as the messy data were corralled into a regular format.

Fair, Isaac & Co. soon moved on from the dusty graft of small-scale credit scoring. In the 1980s, firms in the booming but competitive credit-card industry wanted access to individual scores that would help them to sort out and stratify their market. Mass mailshots were common, but lenders could only then disqualify or accept applicants on the basis of whether they met a generic list of requirements. Far better for the lender to be able to calculate risk in a fine-grained manner, charging more interest where the likelihood of default was higher; a credit market that would 'clear' in this way would allow the lenders as much

profit as possible. Suddenly, this was no longer a market for lemons, as buyers (lenders) could differentiate between good and bad sellers (borrowers). Risk could be managed and priced. So Fair, Isaac & Co. went to work to build a credit score on the basis of data collected by credit bureaus – the large firms such as Equifax that we know today – which maintained substantial records of missed payments and court hearings, together with information on regular payments but did not at the time offer a statistical analysis of this information. The new scoring system, known as PreScore, allowed for the pre-screening of mailshots and, as Poon points out, turned credit control into a marketing function. Lenders could suddenly see the universe of people who were statistically likely to keep up repayments on the cards and target them directly.

Yet Fair, Isaac & Co. was still making scoring systems. Its master stroke was a move, in the early 1990s, to a single numerical *score* for individuals, to sell data rather than technology. With a maximum value of 850, the FICO® Score is a continually updated, floating, consumer credit score. It expresses the creditworthiness of an individual as a single number: a fact. And as facts tend to do, it has travelled. It shook off the memories of its parturition – of dusty filing cabinets, of rural America, of hard-working young statisticians with their microfilm cameras, of economics in the wild – and moved on. In politics and high finance, where it made its new home, it became the basis for a sea change in lending activity.

On 11 July 1995 the giant government-backed mortgage lender Freddie Mac adopted 660 on the FICO® scale as its threshold for lending. A score of 660 therefore marks the lower limit of ‘prime’, and everything below that bar is described by a term that we now know all too well: ‘sub-prime’. From 1995 the score worked exactly the same magic that Fair, Isaac & Co.’s scores had done in the credit-card market, making visible a

whole new raft of consumers who could be targeted by lenders prepared to take on more risk for more return. There have always been bad borrowers, especially in times of house price inflation, but credit scoring made it possible for lenders to know exactly how bad they were, and efficiently target them at higher interest rates. Being a credit risk no longer meant being *excluded* from credit, but *paying more* for a scarce resource: a credit score imposes the laws of supply and demand, and risk and return upon an unwilling market.

When the credit crisis broke in 2007 we quickly learned that a central cause of the collapse was high levels of default among sub-prime mortgages. Of course, the other reason lenders were happy to target high-risk customers aggressively was because they were no longer lending their own money; in another set of extraordinary innovations mortgage risk was sold on to others, and the FICO® Score became one of the central devices in coordinating flows of risk and capital around the globe.

Policymakers and Wall Street engineers may have treated the FICO® Score as a useful fact. But for most people the credit score looks more like an asset, and FICO itself has been quick to see the revenue potential from this application. A visit to [myfico.com](http://myfico.com), the firm's consumer facing website, allows US residents to discover their credit score and offers advice on how to manage it.<sup>11</sup> The incentives for doing so are both financial and practical. According to the website, a one hundred point difference in an individual's score could save \$40,000 in repayments over the life of a \$300,000 mortgage. I am told that young people wanting to rent an apartment need a healthy FICO® Score to get a foot through the door. Each year I ask the American students in my class if they know about the Score, and most do; to build a healthy rating, some of the wealthier youngsters have been given credit cards and have, from their early teens, carefully spent and regularly repaid the balance. A person's FICO®

Score is a personal attribute, something to be worked on and built up, a financial version of a university education or a wash-board stomach.

The growth of credit scores exemplifies the move from lending as embedded in personal relationships to lending as an exercise in statistical risk management. The tools of economics, inscribed into technical devices as primitive as the paper score-cards of store clerks in rural America, or as sophisticated as the algorithms that lie behind the FICO<sup>®</sup> Score, have slowly severed the social bonds that served to stabilize the mortgage market in prior years. The growth of credit scoring was initially championed by governments pursuing left-of-centre economic policies of social inclusion. The bank manager and the store lending clerk were perceived as being too intimidating, and too exclusive. Relationships between bankers and clients were smothering, and the subservience to the small town peacock in the bank chafed. A bank manager's decisions could be erratic, based on physical factors, whether a customer came over as 'shifty', 'evasive', 'argumentative', of 'seedy appearance', or 'flashy'. He would sniff out the moral fibre of prospective borrowers and inquire as to the purpose of the loan, always on the lookout for domestic difficulties and extravagant spouses.<sup>12</sup> It was thought that financial inclusivity and opportunity could be better served by the objectivity of social science and that two birds might be killed with one stone: the problem of 'information asymmetry' that has bedevilled lenders from the earliest days (simply put, borrowers know much more about their ability to pay than do lenders) could be solved by statistical analysis and at the same time lending could be made available to everyone.

There are some problems with the credit scoring approach. Its dynamic response to recent activities makes for occasional collateral damage: an outbreak of loan delinquency among

forty-year-old academics who buy their groceries online and my next credit-card application is out of the window. More important were changes in industry structure that followed, of necessity, the redefinition of the nature of risk. In British retail banking, the 1980s saw the traditional values of ‘sobriety, convention, long and faithful service and skill in judicious lending’ replaced by an emphasis on marketing, on selling, on customer service and quality.<sup>13</sup> The bank manager, where he still exists, has become a salesman. (As often as not, he is now a she: female employees, considered to have better powers of persuasion, have moved front-of-house.) Managers are subjected to competitive, target-driven employment policies. Banks, competing to increase shareholder returns through aggressive cost cutting, have closed underperforming branches and outsourced customer-facing roles to call centres abroad. The rise of ‘objective’ credit scores, instantly available, reliable and cheap, has been matched by the transformation of banking into a profit-focused sales industry. As one senior banker told me, banks simply could not make enough money by lending alone; not enough, anyway, to satisfy hungry shareholders and guarantee executive bonuses.

As ever, imposing targets and competitive reward structures make real the kind of employee that they presuppose, and the risk-averse credit manager is replaced by the sharp-selling hustler whose primary concern is to secure an annual bonus. The evidence for this in the banking industry is a wave of weighty settlements for mis-selling of financial products, investment schemes, payment protection insurance and, most recently, exotic derivative-based loan insurance that has cost small business millions.<sup>14</sup> It is more than culture that is amiss in banking. We have witnessed the complete reshaping of an industry along the lines envisaged by textbook economic theory, and at the heart of this transformation are the technical devices and material artefacts that hold together not only the industry, but also

the people around it: the policymakers, central banks, ratings firms, depositors, borrowers and shareholders.

It is ironic and unfortunate that credit scoring turns out to be much less inclusive than its supporters had hoped. Credit scores rely on records of regular salary payments and existing credit obligations. Affluent and financially aware individuals, with good financial discipline, can instantly gain access to credit. Those who are off the grid, on the other hand, who have never been steadily employed and who lack a history of credit repayments are permanently excluded from participation in the new financial Utopia. The situation is compounded by the fact that the branches closed by the banks over the last thirty years – the less profitable branches – tend to be those in disadvantaged areas, exactly where the support of banks is most needed, and where the discretion of an insightful bank manager – a real person prepared to take a decision on the basis of a subjective assessment of character or intention – could have transformational effects.

A loan made by a careful individual to a well-selected borrower, even without a credit history, need not be higher risk than a statistically determined credit-card loan. Just look at the high levels of repayment among micro-finance projects; social relationships, as any good business person knows, cement positive behaviour and personal responsibility, encouraging individuals to pursue courses of action that may transcend self-interest in the short term. The global financial crisis and ensuing destruction of capital was not brought on by a few wonky loans to small businesses. Perhaps the instantaneous, depersonalized issuance of credit creates the very conditions that encourage default. Loans that are selected as commodities, through online comparison sites and application forms, or sold by unscrupulous intermediaries for their own short-term benefit carry no obligation beyond the legal claims that enforce them, and these have little value in a collapsing market. The 2005–6 housing market

collapse in the United States showed the world what happens when financial obligations turn out to be supported by nothing more than paper. Wholesale default, with keys returned to lenders in the post, became normal.

In other countries, such as the United Kingdom, borrowers are not legally permitted to escape their debts in this way and must cling on, hopelessly indebted and struggling to make repayments on a property that is worth a fraction of the outstanding loan. In Ireland, those who bought properties in partially completed developments at the top of the bubble have seen developers walk away leaving them with little or no basic services, sanitation, drainage or street lighting. Denied a legal escape, Irish citizens struggle to support the vast debts of banks that are considered ‘too big to fail’ – another unabashed economic calculation – maintaining a bizarre, upside-down socialism where the poor must pay the price and bankers and bond holders find themselves comfortably protected. As we have all discovered, the rationality formed in the mould of online calculators, best deals, credit ratings, and an incessant short-termism of come-on prices, remortgages and refinancings is no basis on which to build a prosperous society.

### *Lists, rankings and the commodification of education*

One could argue that the credit crisis was a freak event, an outlier. That is just what the banking industry did, of course, as it wriggled on the hook of the worst financial mishaps in decades. But there does not always need to be a calamity to make us uncomfortable. Let’s turn to the case of higher education. In the last two decades, higher education in the United Kingdom and elsewhere has become increasingly market-driven. Universities have been transformed into a specialized service industry and a

national corporate export. This reform has taken place under successive governments, but has reached a zenith under the stewardship of David Willetts, minister for universities and a leading intellectual in the Conservative party. Willetts's neo-liberal sympathies are clear – he is, for example, a member of the technocratic think-tank the Institute for Fiscal Studies – and he has pursued a progressive programme to introduce a market in higher education. Taking his cue from the Browne Review, commissioned by the previous Labour government and published in 2010, Willetts has greatly increased – trebled, in fact – the allowable tuition fees paid by students in England and Wales. Fees are just one part of a broader repackaging of education as some kind of saleable good where students are recast as customers. The following is typical Willettspeak:

We have therefore increased choice and flexibility. We have also transformed the amount of information that is available for prospective students, which we believe will drive up standards in universities as prospective students think about what contact hours they will have, what the class sizes will be, how universities score on the national students survey and, crucially, how universities score on employment outcomes for graduates.<sup>15</sup>

Willetts's argument is clear: making students into consumers will somehow make universities *better*. If students have to pay fees the market will spontaneously arise, as universities compete with one another for 'customers'. Access to higher education will be determined by individuals' own assessment of their talent and possibilities, expressed in the willingness to borrow and pay fees; all that matters will be the eventual combinatory effect of intellect and degree quality on the student's earning power. Degree quality will be signalled by visible indicators of quality, such as school rankings, and (importantly) lower-quality institutions will charge lower fees. In other words, the market for

higher education will come to resemble one envisaged in the opening pages of an economics textbook.

A market arrangement demands that the benefits of education are seen in the same way: the student, a person responsible for the management of his or her economic career, receives the bulk of future benefits, and so should bear the costs while seeking to maximize returns. We can trace these ideas to the predicates of neo-liberalism in general, and particularly to the Chicago School of Economics, where they find a formal statement in the work of Gary Becker. During his early career, Becker developed a theory of human capital, and analysed the individual-level returns on the investment of public funds in education. His figures rapidly became a benchmark that policy-makers used to determine the effectiveness of education spending, helping to institutionalize and reinforce a myopic understanding of the point and purpose of education.<sup>16</sup>

This axiom of higher-education planning is self-evidently false. We all benefit from good teachers, nurses, civil servants, research scientists, chaplains, bureaucrats, administrators, town planners, sports coaches and so forth, all of whom have received a university education and many of whom will be hard pressed to recoup the fees and living costs that they have incurred. Moreover, students are already facing substantial opportunity costs: costs of time, of missed wages, even of missed unemployment benefits. It is an aside, but forcing students to take on a huge financial commitment for an education pushes them towards the few areas where they can, they think, be sure of making enough money to repay their debts, such as banking and law. The resulting surplus of bankers and lawyers means that many will be underemployed and, more importantly, all our talent will be in the wrong place.<sup>17</sup>

Better information is a central plank of market-driven reforms, allowing students to make improved, 'more rational' decisions.

A presentation given by the Institute of Fiscal Studies had this to say about ‘information problems’ in the higher-education market: ‘To make *rational* decisions, individuals must be perfectly informed about: the nature of product (university quality, HE experience); prices (fees, living costs and lost earnings); and future (earnings and debt repayments).’<sup>18</sup>

Rationality is important, because, once the first step has been taken, once we have agreed that students educate themselves to increase their own capital and derive higher future earnings, then it is clear that the fee-paying student should seek out the highest return on those fees. The student, a young person struggling to map out a future, needs to become cool and calculative in choice of subject and institution, and, as the IFS points out, rationality can’t happen without information.

Fortunately, students can make use of the paraphernalia of rankings, scores and quality measures that surround the contemporary university to assess the future returns on investment of both money and time, not to mention forgone earnings. Rankings distribute the effort of this enormous calculation – the work of comparing the many qualities of many institutions against one another – across expert groups and established metrics, assembling the potential student as a dispassionate, rational hybrid, an economic chooser of educational pay-off against cost.

But this is not all that rankings do. They are powerful creatures, and at the same time as they assess, university rankings tell students how institutions *should be* assessed. The American sociologists Wendy Espeland and Michael Sauder have shown that law schools in the United States have actually become more like the ideal institution on which the rankings are based.<sup>19</sup> As rankings become increasingly important in student decisions, faculty administrators will deploy resources and funding in such a way as to improve the ranking. The more rankings pull in other stakeholders, the more powerful they become.

Employers, for example, are likely to be convinced by the prestige of an institution, often seen in terms of rankings, and some career pathways really do close to students who fail to get into the upper echelons of the educational establishment. Telephone-number salaries paid to those in prominent positions in the financial industry, or corporate law, for example, attract floods of young talent, and as Robert Frank and Philip Cook note, the doors are already closed for those who have not been undergraduates at elite institutions. Frank mentions a student from a small Florida college, with a straight-A transcript and described in references as the best student her professors had ever taught, rejected by Harvard's graduate economics programme. Successful applicants also had straight-As and glowing references, but came from schools such as Stanford and Princeton. As he puts it, university administrators are 'forced to play the odds, which tell us clearly that the best students from the best schools are better, on average, than the best students from lesser schools'.<sup>20</sup>

Employers' decisions feed back into the figures for the increase in salaries provided by a particular degree, and strengthen the ranking still further. Institutions, aware of the relationship between rankings and applications, pressure faculty to produce work that fits an appropriate disciplinary mould and publish that work in outlets ranked high in discipline-specific lists. Institutional expenditure on research is expected to be manifest in a steady stream of publications, and academic achievement is likely to be accounted for in terms of concrete measures such as the 'h-index' (a citation score indicating how many publications cited and how often, and one means of indicating academic worth: an h-index of 10 means ten publications each cited at least ten times) rather than in the vague terms of reputation. Citation indexes and journal rankings make visible certain aspects of scholarly activity, and thus shape hiring decisions, reorganizing the labour market for academics.

None of this is expected to devalue, or even change, the central task of the university: education. How can that be the case? If one of the leading rankings of universities incorporated the score for, say, neon signage – an absurd example – campuses would resemble Las Vegas within weeks. This process does not just happen in universities: city rankings, for example, have tremendous influence over the decisions of town planners.<sup>21</sup> If administrators are worrying about signage (perhaps not neon, but branding does seem to matter to those at the top) or visible architecture and facilities, then there is a real danger, especially in institutions where funds are short and institutional positioning is precarious, that these things will draw money from less visible – less immediately accountable – purposes, such as teaching and teaching support. Moreover, administrators will come to understand their role as focused on improving rankings, rather than dealing with the central issues around learning and pedagogy. For example the National Student Survey in the UK consistently reports that students are dissatisfied with the length of time it takes to get feedback; a possible solution would be a heavy reliance on automated multiple-choice tests, where feedback is instantaneous. Could we really consider that to be a pedagogic improvement, even if it is what students *want*?<sup>22</sup>

Beyond the ubiquitous student experience surveys – and that ‘student experience’ carries a subtle repositioning of education as some kind of experiential commodity, like a safari or an adventure day in a hot-air balloon – universities are subjected to all kinds of other assessment. Accreditation by professional bodies, driven by a desire to offer students more workplace-relevant qualifications, places demands on institutions and may reshape their curricula and hiring strategies. Subjected to constant surveillance in research and teaching, faculty will play safe, offering conservative scholarship and low-risk traditional teaching. And who can blame them, with their jobs on the line if they

fail to deliver good publications and systematically reach high teaching feedback scores? Where academic labour is reduced to the attainment of ranked publications *and nothing more*, it is inevitable that those academics prepared to play the game will abandon long-term attachments and circulate in the market, moving from institution to institution in pursuit of higher salaries. The losers, of course, are their students.

The same transformation that has overtaken many corporations has begun to reshape the academic career. The American tenure track system, where young academics must hit certain targets to secure a permanent post, increasingly resembles the 'rank and yank' system, where employees openly compete for preferment and to avoid dismissal, prevalent at the sharp end of the private sector, though perhaps without the commensurate financial rewards. We know that incentive systems, just like institutional rankings, will bring into being the kind of employees that they imagine: if the only way to survive in the tenure system is to combine technical excellence with an avoidance of risk and, perhaps, a willingness to strategically manipulate one's partners in research to one's own advantage, then these are the characteristics that will appear. Individuals who survive the private sector's 'rank and yank' may be exactly the kind of hard-nosed, savvy strategists that a corporation demands, but they may not improve a profession that is fundamentally based upon trust, empathy and pastoral competence, that is for many a calling as much as a career.

A market system also reshapes the priorities of students. When students are recast as customers they start acting like customers. But often they do not see that there are different kinds of customers; that buying a tin of beans from the supermarket is a profoundly different transaction from embarking upon a process of education that requires them to participate to the limits of their ability, imagination and emotional reserve. Of

course, the tin of beans model is much easier, and many students prefer it. There is a resistance to understanding education as a process that involves reflection, trust, empathy and risk. Instead, many students see education as a set of targets, of boxes to tick, of work carried out at a particular level that will result in a qualification of a certain kind, where the student has simply to consume and regurgitate pre-digested chunks of knowledge. Students will choose modules that they perceive as easy, in order to get higher grades, which are worth more in the purely external sense of better employment offers and better salaries. Learning becomes about memorizing and reproducing, while the higher-order pedagogic goals of synthesizing, critiquing and evaluating – skills that we really need our young people to have, that are more useful and more worthwhile to the students themselves in any context beyond the shortest of short term – are pushed to one side.

As students take on more and more debt they become risk averse in their learning and their choices; in the twenty-first century, debt serves the same purpose as hunger did in the nineteenth, taming the fiercest student, teaching docility and civility to the most obstinate and perverse. In such a system, opportunities for developing as a thoughtful, reflective and self-aware individual are missed and education exists in the most limited form. The guiding principle of student satisfaction turns out satisfied students, yet a satisfied student is impossible to teach. We should aim instead for dissatisfied students, unsettled by what they have learned and driven to a critical examination of their preconceptions.<sup>23</sup>

Finally, a market in education will do what markets always do: allow benefits to flow from the weaker to the stronger sellers, from less affluent to more affluent buyers. Institutions at the top of league tables can strengthen their position further, and as the most elite institutions increase their prestige so young people

with more resources – not of ability, as supposed, but of capital, education and class – will claim more of the benefits. Like individuals, universities are under pressure to generate returns from their activities. One avenue for doing so is the construction of a supportive alumni network, and this might even come to influence entry to an institution, determined by the possible future contribution to an alumni dividend. Such a tendency will militate against broader access and shore up the entry prospects of those already advantaged by wealthy backgrounds.<sup>24</sup> Rather than opening up access, commodified education seems only to widen inequality.

The commodification of university education has many consequences. Not least of these is the reduction of a social good, rich in intrinsic worth, an essential part of the apparatus of human flourishing, to an instrumental, short-term lever for personal advancement. This extraordinary, momentous transformation, a chasm rent in the post-war social contract, is held together by a most simple device: the list.

In the economic world, scale refuses to stay in place. Tiny numbers have huge effects. Credit scores can transform an industry, and institutional rankings shake up a sector. Yet some economic devices, hardly larger, wield the power of life and death. When economic analysis, embedded in cost–benefit ratios and efficiency tests, begins to dictate how we should protect and care for one another, we might pause to wonder just how much sovereignty we are prepared to surrender to these equations. We might even ask if there is a point beyond which we no longer wish to be economic men and women. In the next chapter I will examine how economic analysis allows us to set one life against another, how it puts a price on life, the most priceless thing of all.