

The Conversation

Diane Coyle*

“We don’t really know where to attribute welfare in digital markets”

A conversation about the fair criticisms of economics, social norms and social capital, measuring GDP, and competition law and practice

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PWP: Professor Coyle, many economists write papers, not books. You do both.

Coyle: Well, I have always liked writing. As a teenager I used to dream of being a philosopher one day, sitting in a café and writing books.

PWP: You recently published a book with the flashy, intriguing title “*Cogs and Monsters*”.¹ Shouldn’t it be “*Cogs and Dragons*”?

¹ Coyle, D. (2021), *Cogs and Monsters: What Economics Is and What It Should Be*, Princeton, Princeton University Press.

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Coyle: That doesn’t work so well, does it? And while “dragons” would be more Tolkien², “monsters” is probably more historically accurate, it seems to me.

PWP: The subtitle is less mysterious. It comes with a punch: “*What Economics Is and What It Should Be*”. You are indeed quite critical of our academic field and profession.

Coyle: Yes, but I am entirely focusing on the fair criticisms of economics. That is the overarching theme of my book. I have written this for an audience composed partly of general readers and partly of academics, for those people who criticize economics and for economists who worry about these criticisms. There are some very persistent standard criticisms of economics that are totally off-beam and drive me nuts, such as: You use too much mathematics.

² Tolkien, J. R. R. (1954/55), *The Lord of the Rings*, London, Allen & Unwin.



Or: You make unrealistic assumptions about behaviour. As if that would make any difference to the insights we can get from the subject. But there are three criticisms that are reasonable.

PWP: *What are they?*

Coyle: One criticism is about the social make-up of the profession. For any discipline it would be a problem to be so biased as economics is. But for a social science, and particularly for one with considerable policy influence, I think it is a serious issue of legitimacy. This bias may prevent the discipline from asking the right questions. If you want to think about what the problems are that you want to analyze and that politics must deal with, you need diversity, different cultural styles and social backgrounds. But economics is currently a white, male, well-off, quite Anglo-saxon dominated profession. And that is really unhelpful.

PWP: *And the second criticism?*

Coyle: The second criticism is about the welfare-economic blindness that has taken root. It has given us the habit of saying that we're just plumbers, dentists, or engineers. We deal with practical problems, we go find the data, we come up with a solution, and then the most efficient outcome will result. All this seems like an analogy to engineering efficiency, of course, but the concept of efficiency in economics is Pareto efficiency, which is rooted in ideas about utility functions. So it is completely about economic welfare, and we don't acknowledge this. It is part of the reason for the political challenge to economic technocrats, or "experts".

PWP: *What is that challenge?*

Coyle: It is a challenge which revealed itself during the campaign for the Brexit vote, for example, in the famous quotation of the woman yelling "That's your bloody GDP, not ours."³ We weren't thinking about institutional questions – because, when you think about Pareto efficiency, you put institutions to one side, by definition. Of course, some people did think about institutions, but it wasn't the mainstream policy claim. We need to be thinking seriously about welfare again, trying to walk the fine line between being Adam Smith's impartial spectator, looking at evidence in an objective way, and at the same time acknowledging that in the end, there will be value judgements to any of these

policy questions. We cannot say that we will just set out the facts and the politicians have to make the value judgements. Because part of the analysis needs to be what values society brings to this and what is likely to be politically feasible. If you say that something is the best thing to do, is "optimal", but politicians will never implement it, then you simply got your analysis wrong. So that's the second element.

PWP: *And the third?*

Coyle: The third criticism speaks to the digital questions. If we are in an economy that has been completely transformed structurally, as we are, where increasing returns, network effects, tipping in markets and non-rivalry are pervasive as a consequence of the new digital technology, then you cannot simply start with the usual benchmark, with standard competitive equilibrium. We have a lot of tools available that help us analyze the structure of the economy now, the way these digital markets operate and the way people make decisions. We must use them, starting with understanding how the economy really is, then building the conceptual tools and the teaching methods around these facts so that they will enable policy economists in government service in ten years' time to be thinking more deeply about the significant coordination problems that we face in digital markets.

PWP: *You are critical, like many people, of the homo oeconomicus assumption, even if you seem to think that it is not enough of a nuisance to legitimize throwing out the approach as a whole. But how can we shed its narrowness – especially if, not least for normative reasons, we don't want to give up the underlying methodological individualism altogether?*

Coyle: Well, for example, we should think more about social norms and social capital. In economics, we can bring in more insights from the literature in sociology or political science, as the first female Nobel Laureate Elinor Ostrom did. We should bring in a much more diversified institutionalist perspective. Or you can start with game theory, ditching the usual individual utility maximization approach. And then you can build back from that, toward individual utility if that is what you want to do. There are many tools and many ways of doing this.

PWP: *But doesn't that mean, then, that the discipline of economics has already dealt with the criticism? That the problem is solved?*

Coyle: People often say to me that the academic frontier has changed completely, and yes, that is correct in macroe-

³ See Menon, A. (2016), 2016: A review, *UK in a Changing Europe*, available online at <http://ukandeu.ac.uk/2016-a-review/>.

economics and microeconomics alike. But there is a long life to the kind of economics that is done in the world of policy and to the kind of economics that is being taught. I really think we need to start with the way how economics is being taught. When you go to the government departments – in any country, I think, not just in the UK – you find that their default is what they read in their textbooks some ten years ago. And that is outdated. I will give you an example. A friend of mine campaigns on getting shops to close their doors in the winter so that they are not heating the city.

PWP: Sounds reasonable.

Coyle: We all walk past these open doors every day, with the heat streaming out. The shopkeepers don’t want to close their doors because they fear losing the impulse purchases. I talked to an economist in the relevant government department, trying to persuade them to introduce a regulation. But I could not get the economist to understand that it was a coordination problem. He kept saying that they if they do close the doors, they will save money on the electricity, so we can just let the economic incentive operate. He didn’t understand that no shop will be able to be a first mover. Similarly, in the UK we have free banking for accounts in credit, which is a barrier to entry because it gives the incumbent banks a large and immobile pool of low-cost money. This, too, is simply a coordination problem: no single bank can be the first one to start charging fees on these accounts. At any rate, it seems really obvious to me that we definitely do have the economic concepts and tools to understand these coordination problems. But that is not the way the policy world thinks about them. That means that the most important mission now is to bring these economists up to date.

PWP: Such reservations are surprising for a country where you even have a “Nudge Unit” created by a former Prime Minister.

Coyle: It is surprising, yes, but the misconceptions are really hard to shift. By the way, the so-called Nudge Unit has become quite controversial. People doubt its effectiveness, and if they think it is effective, they don’t always like it because nudges can seem like manipulation.

PWP: Isn’t it manipulation?

Coyle: Yes, it is manipulation. And there is an assumption in all of that literature, that some expert knows people’s preferences better than they themselves, which is problematic. I am not a fan.

PWP: But when you argue for a regulation that forces shopkeepers to close the door, you also pretend that you know better than they do.

Coyle: It is not a nudge question. It is not that the shopkeepers are being irrational; they are responding rationally to the incentive structure. There is no psychological “bias”.

PWP: But there is a discrepancy between individual rationality and social rationality.

Coyle: Yes, but as I said, that is just a coordination problem.

PWP: Talking of individual preferences, one of the blind spots of standard microeconomics is that preferences are taken as given. There is an important element of humility behind that: We economists consider that preferences are none of our business. But isn’t it also interesting to look at the way how people influence each other, which means to endogenize preferences?

Coyle: It is, I agree. I think the process of preference formation is really an important one. And obviously, it would matter enormously for public policy. But we have no idea how to go about incorporating that. I recently thought about the issue in the social media context, where obviously all kinds of unpleasant thoughts and behaviours are being expressed. My hypothesis is that it’s not the case that these thoughts and behaviours were always there. Instead, people seem to feel that they have somehow been given permission to edge towards conspiracy theories, simply because these have become public. They think they are ok. And this way, the medium itself is changing people’s behaviour by changing the public norm.

PWP: What is the role of the public media in the process you just described? You were serving as a member of the BBC Trust for a long time, but you are certainly nonetheless a critical observer.

Coyle: I did become more critical, indeed, because of the way it shapes competition in the media market. But my underlying, overall positive argument is that the presence of the BBC has guaranteed competition in broadcasting along many dimensions, not just a single one. All other public service media that are regulated are revenue-driven, which the BBC is not. In the case of the BBC, the quality and the range of the programs matters, and this fact has forced the others to compete along these dimensions as well. This is one explanation for the strength of the entire sector in the UK. I have tried the analogous argument that a public service



social media with a different business model, that wasn't driven by clicks for advertising, could also be a good innovation⁴. I don't know whether that is true but it seems possible.

PWP: Coming back to the criticisms aimed at economics as a discipline, you share much of the reservations against GDP, and much of your work has been on better measurement of wealth and welfare. What can we measure, and what do we want to measure?

Coyle: Where to start? Well, I got interested in the new thinking about sustainability, broadly understood, not just in environmentalist terms. In my book "The Economics of Enough"⁵, I ended up saying that the challenge is that we only measure flows of economic activity and don't have any sense of the balance sheet. And then my publisher urged me to do a follow-up book on GDP, and so I looked into the history of GDP and ultimately got into the "beyond GDP" debate. This questions about welfare measurement and about sustainability are obviously linked, and it is one of

the drivers of the "beyond GDP" movement. People often say that using GDP just to measure economic activity does not have welfare implications. There are two responses to that. The first one is that the minute you deflate nominal GDP with a price index that is a constant utility construct, real GDP is a welfare measure; it is just not a very good one. But you are indeed talking about welfare. The second response is that politicians all over the world use the change in GDP as their metric of success. If it is not a good metric of success, you need to think about a better welfare measure. And that takes us to these deeper questions about what is progress in human societies, and how you can conceptualize and measure that. The whole issue is also linked to the digital questions.

PWP: How?

Coyle: The two matters are actually kind of converging. The digital questions started as a separate issue for me, with the transformation in the way we spend our consumption time, and our time in general, our production activity, our business models – this entire big transformation has been totally invisible in the statistics, and we haven't quite grasped what has been going on there. I was dealing with both of these two sets of measuring questions, and then they gradually converged in my mind. They are in fact all "beyond GDP" issues. One set of questions is about asset measurement, including natural capital measurement. But more broadly, we have this range of assets that we think are important in the economy – are they the same kind of thing? Is natural capital, which is tangible in some ways, really the same kind of thing as intangible social capital? Can you conceptualize an exhaustive mutually exclusive set of assets in order to create a whole balance sheet? How do you value these? Is it enough to use exchange values, as we have been doing in national accounting so far? Should we also be publishing shadow prices or welfare values, and if so, how do we want to construct these and what methods should we use to estimate them?

PWP: That looks like a huge agenda.

Coyle: Absolutely. I am now also diverting into cultural and artistic capital, which merges into intangibles and intellectual property assets, including data. I was visited by a native Australian campaigner who is interested in this inclusive wealth concept⁶. For him, there is no difference between

⁴ Coyle, D. (2022), The public option, *Royal Institute of Philosophy Supplement* 91, pp. 39–52.

⁵ Coyle, D. (2011), *The Economics of Enough*, Princeton, Princeton University Press.

⁶ See <https://www.bennettinstitute.cam.ac.uk/blog/wealth-in-first-nations/>.

natural capital and cultural capital. If that is so, I wonder, does that change the way how I need to think about my own effort to build these national statistics? Should we put the value of Stonehenge on the national balance sheet, and if so, how? At any rate, thinking about those asset valuation questions is a way of thinking about sustainability and beyond GDP. Do we really want separate measures for well-being? I am a little bit skeptical that we do, but I think it is worthwhile to ask that question and to do some work on it.⁷

PWP: *And what about the second leg of your converged agenda, the digital questions?*

Coyle: The digital questions which I am thinking about are in terms of whether we have got our price indices wrong. We did a piece of work on telecommunications services⁸, and the range of indices you can get went from the official published figures at the time, which, deflated, should have been flat for ten years, to the unit value index which showed a 90 percent decline over ten years, and you can construct deflators in one of several ways that you want. There are some really deep economic questions in there about where you want to assign the economic value that has come about with the digital transformation and the fact that we are using data over the phone. Is it the telecommunications networks and the services they provide? Probably not, although they had amazing innovation. Is it infrastructure, is it the content providers, or is it the service providers who build packages on top of the data? I don't think we know how to measure anything apart from revenues in that bundle of economic activities. We don't really know where we want to attribute welfare in digital markets. So that is my agenda.

PWP: *What could the criteria be for deciding where to attribute welfare? And isn't exchange value quite a satisfactory approach, given that value comes from someone explicitly valuing something?*

Coyle: There is good information in exchange values. But it is basic economics that if you have got a non-rival good, as is the case with many intangibles, there is going to be a divergence between the exchange value and the welfare value.

⁷ See Fabian, M. et al. (2022), Respecting the subject in wellbeing public policy: Beyond the social planner perspective, *Journal of European Public Policy*, available online at <https://www.bennettinstitute.cam.ac.uk/wp-content/uploads/2022/06/Fabian-et-al.-2022-WPP-social-planner.pdf>.

⁸ Abdirahman, M. et al. (2022), Telecos deflators: A story of volume and revenue weights, *Economie et Statistique/Economics and Statistics* 530–31, pp. 43–59.

And that divergence has interesting information in it, for policymakers, for example. So it is worth thinking about the welfare value of data or intellectual property. That might give us some insights about whether you want to change some policies. We might want to have more open data policies and facilitate access to data for everyone because we see this as tremendous welfare value. I wouldn't throw away exchange values, but I think they convey a very incomplete picture.

PWP: *And how do you do go about estimating that wider welfare value?*

Coyle: Work in progress... At the moment, I am trying things like discrete choice experiments or stated preference surveys.

PWP: *The stated preferences surveys only yield an average, right?*

Coyle: The exchange value in GDP is also only an average. We live in a world of averages anyway, and it is clear that there is a lot of heterogeneity underlying it. You can think about distribution in both worlds.

PWP: *Wait – GDP is not an average, it is an aggregate, a sum.*

Coyle: Well, when I say that it is an average, I mean that it tells you the outcome in the market regardless of the distribution. And by the way, a lot of GDP data is collected and built on surveys, too. At any rate, discrete choice experiments or stated preference surveys provide some useful insights. But what they don't do is to give us a budget constraint. There is a fashionable strand of work at the moment which I have also done a paper⁹ on, looking at stated preference surveys for free digital goods. Some of them give quite high values for these. That raises two questions. The first question is, if you are doing that for free digital goods, then why not for public parks or other public services? What is your production boundary? And the second question is, what is the budget constraint? If you are doing this kind of exercise you need to somehow impose a kind of budget constraint. I could say, Facebook is worth a hundred pounds a year to me, and search is worth 3000 pounds a year, and so on, but I can't spend more than 24 hours a day using these services. So how do I impose that constraint?

⁹ Forthcoming in *Économie et Statistique* 2023.

PWP: *Time actually seems indeed quite an intriguing additional element in this whole evaluation exercise. Can we measure the value of time spent on different activities? People spend so much time on the internet nowadays – are we sure that this is a good thing?*

Coyle: No, we are not sure, are we? There has been a lot of thinking about time in production, particularly in an Adam Smith or Karl Marx tradition of the labour theory of value, but not so much in terms of the time you need to consume in the service economy. That simply doesn't usually get to be part of the microeconomic optimization problem, typically. Gary Becker's theory of household choice is of course relevant and influential in this context, but it is unfortunately not standard to think about these time constraints on consumption.¹⁰

PWP: *So what does that mean? Is the venture hopeless?*

Coyle: No, but it keeps me busy... And it has become a practical question. The “beyond GDP” movement has real policy momentum now. These critiques have been around for a long time now. Environmentalism started in the Seventies, the “Limits to Growth” by the Club of Rome¹¹ was quite a landmark. But I think it is post-crisis and post-pandemic that in the policy world, particularly in some small countries, but also more broadly, and in the statistical world, the current system of national accounts and the UN statistical process are looking to implement some of these changes. There is real pressure to come up with at least some partial answers how you can do these things better.

PWP: *Lots of new indices are floating around now, including items such as life-expectancy. I wonder what this does to political accountability.*

Coyle: Absolutely. There is the question of how you evaluate tradeoffs. The beauty of national accounts is that exchange values can be used to evaluate tradeoffs. That brings some kind of rigour around that. I think it is just an unanswered question how this recent development will affect and change political accountability. But it is pretty clear that there is so much dissatisfaction now with relying merely

on growth in GDP that this is going to change in a lot of countries. In the UK, we started publishing environmental accounts alongside the national accounts, and I think the US will eventually do something similar.

PWP: *It might indeed make sense to look at things like people's states of health.*

Coyle: Yes, and doing so would also speak to these questions people raise about capitalism: We have got food companies killing us by selling over-processed food, we have got financial service companies that are ripping us all off, we have got social media companies that are causing vast online harms and misery in people's lives, we have pharmaceutical companies that create severe addiction. That's what many people say. And frankly, it is not really surprising to see this dissatisfaction with the world that business and economics seem to have created, whether it is a fair allocation of blame or not.

PWP: *While many of these items such as health and life expectancy make sense for measuring well-being, it seems quite a daunting task to monitor a whole dashboard of such indices and to speak about the same thing, also in terms of comparability between countries. Everything gets more complex.*

Coyle: I agree. That is why I think we should stick with GDP and try to improve it. That is also why I like the wealth approach. There is economic rigour around the idea of a balance sheet, and people understand that. You have profit and loss statements, and you have a balance sheet. I think there is evidence in the corporate world that people can handle two or three concepts and indicators of success. And if you are interested in health, you go beyond GDP, and you look at health indicators.

PWP: *When it comes to social capital, things seem to be even more complicated. That begins right at the individual level: How do I measure and evaluate the fact that my social network may have been impoverished by the loss of two friends, for example?*

Coyle: I agree. I have changed my mind about social capital. I started out thinking about social capital as a form of intangible capital just like others, but I have come to agree more with my colleague Partha Dasgupta that it is an enabling asset, enhancing process efficiency in society, rather than an asset that you can capitalize in some ways.¹² Having said

¹⁰ Coyle, D. and L. Nakamura (2022), Time use, productivity, and household-centric measurement of welfare in the digital economy, in Centre for the Study of Living Standards, *International Productivity Monitor* 42, pp 165–86.

¹¹ Meadows, D. L. et al. (1972), *The Limits to Growth, A Report for the Club of Rome's Project on the Predicament of Mankind*, New York, Universe Books.

¹² Dasgupta, P. (2014), Measuring the wealth of nations, *Annual Review of Resource Economics* 6, pp. 17–31.

that, we do know from a lot of research that it makes a big difference in economic outcomes. Messy as the concept is, it therefore makes sense to think about how to measure social capital.

PWP: Quite an agenda. Seems that we economists won’t run out of work.

Coyle: No, the world is keeping us busy. In all kinds of ways.

PWP: Let’s talk a bit about competition at this point. After all, you were working on the UK Competition Commission for many years, before it was combined with what used to be the Office of Fair Trading and morphed into the Competition & Markets Authority (CMA).

Coyle: And I loved being a panelist on the Competition Commission. I learnt more about how markets operate than I had in years of study. The chairman at the time was Paul Geroski. He was wonderful. It was like having a masterclass in economics every time we had a hearing. The richness of detail about how different markets operate – that was very instructive. I am now interested in everything. I looked at rockfibre insulation material, at retail of videogames, all kinds of things, the whole breadth of the economy. It was just fascinating.

PWP: Since you are working on digital questions, and with your experience in competition issues, what is your assessment of competition law and practice in these markets?

Coyle: I think competition law and its practice was slow in picking up on these issues. In 2007, we had a case about videogame retailers at the Competition Commission. Two high street retailers wanted to merge. They sold new games and second-hand games. The market for new games was growing rapidly, with other sellers such as supermarkets and online, so there was no issue; but in terms of second-hand games, they were dominant in that market. What we needed, technically, was for the insights from multi-sided platform analysis, such as in the Rochet-Tirole paper¹³, to be brought into competition policy. But that took a while and was too new at the time. We needed to be thinking about how competitive the market is by thinking about price setting on both sides. Our group was split in two ways. Two of us said that the merger should not happen because



of the dominance in the second-hand games market, and the other two said that it could go ahead. I was the chair, and so I cast my vote and we cleared the merger. For two years, the profits of the merged company absolutely soared – and then it went bankrupt. So I don’t know who was right. At any rate, I think competition law and practice were slow in taking on board how digital markets operate.

PWP: Was it the fault of people or of the law? People in office usually have a status quo bias, and that’s true everywhere. They cannot do what the law doesn’t ask them to do.

Coyle: Well yes, I do think the reforms should have been faster than they were. The UK used to be a forerunner in these issues but is now behind because our government has been so chaotic and the legislation didn’t get passed quickly enough. Having said that, the CMA is taking some quite bold decisions in its market investigations these days. They have got bit between their teeth as an institution. It does take legislation though, because there is political power, especially when the big online platforms are involved. They are overseas domiciled, they are huge, they are highly valued and used by much of the population. So it is quite a political step to tackle these issues of online market power.

PWP: Talking of the big platforms – are you happy with the European Digital Markets Act, the DMA? It doesn’t apply in the UK any more, but maybe you have something similar in place?

Coyle: The UK government said it would implement everything in an analogous way, in spite of Brexit, and I think they should go ahead and do that. I don’t think they are doing enough, but the DMA is a big step anyway. It is still going to take courage to say that Apple, Google etc. cannot

¹³ Rochet, J. C. and J. Tirole (2003), Platform competition in two-sided markets, *Journal of the European Economic Association* 1(4), S. 990–1029.

have a monopoly in operating systems, or we might have to interoperate them. It was great working with technologies. We had the computer scientist Derek McAuley on our UK Digital Competition Expert Panel¹⁴. He made it clear that the decision for instant messaging platforms not to interoperate was a policy decision by the platforms, not a technical one. Technically, it was perfectly feasible.

PWP: *Competition issues and industrial policy are closely connected, and so let's turn to the current challenges there. In an era of geopolitical tensions and war, some degree of deglobalization may be inefficient, but nevertheless prudent, don't you think? Could it therefore be good policy to foster certain strategically important industries, notwithstanding that governments might want to begin by not doing the obviously wrong thing, as in Germany, with UNIPER – the creation of a national champion in the gas market, which government then, in the gas crisis caused by Russia's attack on Ukraine, ended up having to nationalize¹⁵.*

Coyle: I do agree with you, we cannot rely on open global markets in the way we used to. We have now learnt that the dependency may become just too great. But when thinking about appropriate industrial policy, the challenge is to know what the real bottlenecks are. And the problem is that, anyway, the existence of open markets is part of your resilience. If you cannot buy something from, let's say China, can you buy it from somewhere else? I'll give you an example. There is now a shortage of CO₂, ironically, in the UK, which is used for food processing and also for making beer. It turns out that there is only one company in the UK that produces fertilizer, and CO₂ is a by-product of that. This one company used to supply something like two thirds of all CO₂ to food processing and breweries in the country. And that company has now shut down because of high gas prices. Who knew? I had never heard of this company before, I must admit. My point is that there are bottlenecks in the economy that we simply don't know about. We therefore also don't know about all the necessities which should perhaps be turned into nationally supplied services. I think microchips are one, and I am in favour of investing in their fabrication in Europe. Even though that will cost a lot of money. But efficiency isn't everything.

PWP: *Chip fabrication in Europe is coming, actually.*

¹⁴ See Digital Competition Expert Panel (2019), *Unlocking Digital Competition*, March.

¹⁵ See <https://www.politico.eu/article/germany-nationalizes-energy-giant-uniper/>.

Coyle: Yes, and that is good. But what about photovoltaic panels? The scale of the Chinese market is such that they are way below us in terms of production costs. Is there national security involved? Could we get those panels elsewhere if China decided to cut us off? Getting to the detail of making such policies, as we now have to, we painfully realize that we just haven't thought about it enough. It's a difficult task.

PWP: *To conclude, tell us a little bit about the institute that you are co-directing, the Bennett Institute for Public Policy at the University of Cambridge.¹⁶ That is quite a new venture – but what is it?*

Coyle: It's a start-up, launched only in 2018, an academic enterprise very focused on research, but also offering a masters course in public policy. We also do a lot of policy engagement. The University of Cambridge had a donation to set up a public policy institute. They had the political scientist Michael Kenny in place as the Inaugural Director, but next to him they also wanted someone from another discipline, such as an economist – that turned out to be me. Our initial funding is an endowment which gives us sustainability. But we also win research funding. The Institute is part of the University's Political Science department; as we grow, and do research across many disciplines, maybe we will become a separate department. But not for the moment.

PWP: *How would you describe what the Bennett Institute does?*

Coyle: It is motivated by the drive to figure out how to make things better. The key principle is its interdisciplinarity, because no single discipline can fix big problems. We make sure that the research that we do is academically rigorous but also relevant for policy-makers. That's the concept. What we then actually do is a bit serendipitous; it depends on our own individual research interests and on which research outputs are successful. So we have set up four themes which are quite broad, so that we can plug different bits of research under these themes.

PWP: *What are they?*

Coyle: Place, progress, productivity and decision-making. Very broad, as I said. I now often work with computer scientists and engineers – I think that this kind of interdisciplinarity is essential. Similarly, to work on climate change you need economists, engineers and environmentalists talking

¹⁶ <https://www.bennettinstitute.cam.ac.uk/>.

to each other. Interdisciplinarity is both key and really hard to do within given university structures. My own focus at the Institute is two-fold, it is technology on the one hand, which is a long-standing interest of mine, but on the other hand, it is also this question we have been talking about: What does it mean for policy to make things better? That implies a turn to the more fundamental questions of welfare economics. That field was taught in the 1970s and 80s, but has by now vanished from the curriculum. Tony Atkinson wrote a fantastic paper on the “strange disappearance of welfare economics”¹⁷. We should rediscover it. We need to think more explicitly about welfare, about what is it that we want, about the values that should inform policy.



Diane Coyle was interviewed by Justus Haucap und Karen Horn. The pictures of Diane Coyle were taken by Nick Saffell, Karen Horn was photographed by Johannes Ritter.

¹⁷ Atkinson, A. B. (2001), The strange disappearance of welfare economics, *Kyklos* 54(2–3), pp. 193–206.

The Person

Diane Coyle: Data, Technology, Welfare

Karen Horn

Diane Coyle, born in 1961 in the English town of Bury near Manchester, has always loved writing. That's why, after leaving school, she followed her older brother's recommendation to study "Philosophy, Politics and Economics" (PPE) at Oxford: "I fancied it being something like Simone de Beauvoir sitting in a Parisian pavement café writing books", she says. One of the tutors at Brasenose College, Oxford, then convinced her that economics was an important subject if you wanted to understand what was going on in the world, if you had a social conscience and aspired to make things a little better. Consequently, she specialised in economics when she went to Harvard University in the United States for her doctorate, on a scholarship.

There, in the beginning, her focus was more on calculating than on writing: "I had to learn a lot in my first couple of years, matrix algebra, more advanced calculus, and also using computers," because there were still some gaps after her PPE studies. Nevertheless, Coyle is still happy about her choice of PPE today: being familiar with philosophy and political science also gives her a valuable breadth. She also first had to familiarise herself with the use of computers: In the seventies, people did not have much experience with it. "The computer brought a radical transformation in the way how people can do economics and econometrics". However, as she comments, the downside is that people nowadays just download the data from the internet, and they don't worry how they are constructed.

At Harvard University, Coyle worked with Benjamin M. Friedman and Mark Watson on macroeconomic time series analysis. In her dissertation, which consisted of three essays, she tested labour market models and tried to track down the procyclical pattern of productivity that could not be explained by the prevailing real business cycle models.¹⁸ It turned out that the pattern was by no means uniform, but varied greatly depending on the industry. In this respect, the aggregate macroeconomic data showed an incomplete, even misleading picture. With this realisation, which sparked her interest in developing more meaningful



economic measurement methods, Coyle moved away from macroeconomics towards microeconomics.

After her doctorate in 1985, Coyle returned to England: the "American way of life" was not for her in the long run; she longed for Europe, for home. And when a job offer came up at the UK Treasury, she seized the opportunity. "I was 24 years old, had no idea what I wanted to do, and here was a job that paid money – so I took it". Again, there were many exciting things to learn, this time in the field of statistics, data sources and measurement methods. It was an interesting time, with Margaret Thatcher as Prime Minister and Nigel Lawson in the Treasury. "It was the dying days of monetarism." Innovations in the financial market were rapid and the government had decided to deregulate the City. "One of my jobs was to write briefing notes for the ministers, explaining what derivatives were," Coyle says. It also involved defining new targets for monetary aggregates – the old ones were regularly missed and could no longer be

¹⁸ Coyle, D. (1985), *The dynamic behaviour of employment (wages, contracts, productivity, business cycle)*, PhD thesis, Harvard University.

maintained. "I took linear combinations of short-term monetary aggregates and minimised their growth rates. I think I invented M4."

Coyle however found none of this really satisfying, and so after only two years she moved to the private sector – to Data Resources Inc. (DRI), a private-sector forecasting institute once founded by the entrepreneur Donald Marron and the German-American Harvard economist Otto Eckstein, which now belonged to the publishing house McGraw Hill. There the learning continued – about data, but also about the predictions themselves: "There is this pressure of not straying too far from what everybody else is saying. Because if you are wrong, you look very silly. But if you are wrong and everybody else is wrong, that's ok."

After two more years, Coyle redirected her still young career and rigorously turned to her favourite activity, writing: She first completed a six-month internship at "The Economist", then worked for four years at the financial magazine "Investor's Chronicle" and subsequently for eight years at the daily newspaper "The Independent". During this time, she became increasingly interested in the emerging field of information technology, which she quite presciently expected to be transformative, and wrote an entire book about it¹⁹. All in all, she spent 13 years in journalism. In retrospect, she sees this as another important period of learning: she was able to build up a large network and gained deeper insights into the mechanisms of politics.

She also learned how to express complicated things as simply as possible and explain them in an understandable way. "Writing is like teaching," she says: "If you can't communicate, it's a sign that you might not understand it." Striving for comprehensibility is still extremely important to her today: "Economics is an influential subject, it affects everybody's lives. I think we have a duty to communicate with the public." For her, communication is not only about announcements, but also about listening: this is the only way to find out what people are concerned about, and the only way to recognise and clarify misunderstandings.

After the turn of the millennium, Coyle again reinvented herself professionally. She went into business with

"Enlightenment Economics"²⁰, her own private consulting firm on technology issues. Her company's clients are mainly international organisations and large companies. Coyle has also been sitting on a number of important public bodies. Among others, she was appointed to the UK Competition Commission in 2001 and to the UK Digital Competition Expert Panel in 2018. She was also a member of the BBC Trust for many years. She has served on the National Infrastructure Commission, an advisory body on migration issues, and the Industrial Strategy Council, among others. "All these experiences have been incredibly educational". She also very much enjoys the annual Economics Festival in Bristol²¹, an event for the general public, which she co-founded in 2011 and has helped to programme ever since.

The public visibility associated with these posts, her expertise and her critical but always constructive economic positions then gradually led Coyle back into the academic world. The University of Manchester brought her on board in 2014 because, as she recalls, there had been great resentment among students in the economics faculty for some time: "The students were very vocal about not having been prepared to understand the financial crisis. They wanted some real-world economics." Coyle developed a novel course on economic policy that took many of the criticisms of prevailing economics into account, particularly from the younger generation – and later turned the material into a book called "Markets, State, and People"²². In early 2018, she finally moved from Manchester to the University of Cambridge as co-director of the newly founded Bennett Institute for Public Policy, which is based in the University's political science department but works across disciplines.

The pen – or rather the keyboard of her laptop – hardly ever rests. In addition to her current research, Coyle continues to publish newspaper and blog articles – and books, most recently "Cogs and Monsters"²³, again with a critique of an outdated economics. Coyle has received many awards for her work, including the Commander of the Most Excellent Order of the British Empire (CBE) and honorary doctorates from several British universities.

¹⁹ See Coyle, D. (1997), *The Weightless World, Strategies for Managing the Digital Economy*, Cambridge, M.I.T. Press.

²⁰ <http://enlightenmenteconomics.com/>.

²¹ <https://www.bristolideas.co.uk/>.

²² Coyle, D. (2020), *Markets, States, and People: Economics for Public Policy*, Princeton, Princeton University Press.

²³ Coyle, D. (2021), *Cogs and Monsters: What Economics Is and What It Should Be*, Princeton, Princeton University Press.