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The global economy as illustrated by Gibbet Hill Road: Coordinating our way towards economic recovery

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Imagine if you will Gibbet Hill Road, the university's stately entrance, and how it might look if no government rules existed to coordinate its use. Which side should drivers use, left or right? How fast should one drive? How should pedestrians cross safely? Clearly, coordination of the rules at work is necessary. Otherwise the ride to and from the university would be chaos.

Gibbet Hill Road provides us with a metaphor of the conditions facing so many nations as they contemplate how to steer the best course toward economic recovery. Is it best to steer toward the left or right? How fast should we reduce government spending? What is the best way to make markets successful and economies productive, while not producing a wild ride of ups and downs?

The fraught situation cries out for policy coordination, a matter that often has been overlooked. As recent events in Greece so painfully illustrate, the problems there are not Greece's alone. They are problems for us all. Indeed, only a few weeks ago, EU leaders met and moved toward ways to strengthen budget disciplines and economic policy coordination among the 27 member states to contain a euro zone debt crisis. A levy on banks blamed for the current economic crises requires, furthermore, a coordinated approach for this to lead to the desired effect.

These are global crises, and they demand the coordination of economic policy across the globe. The best economic minds debate how nations can effectively balance the twin needs to reduce government debt without harming economic recovery. But in times such as

these, in which a Lehman Brothers bankruptcy can send repercussions around the globe, the importance of having a coordinated policy cannot be overstated. The policies that can best help individual nations will be the ones that stem from the coordinated efforts of many nations.

Coordination in the arena of financial regulation has been discussed, but many other avenues ought to be a more prominent part of the world conversation. A variety of environmental problems now affects our entire world. As globalization continues and the earth's natural processes transform local problems into international issues, few societies are being left untouched by major environmental problems. Some of the largest problems now affecting the world include global warming, water pollution and rain forest destruction. It is true that these conversations are contentious, bringing up matters where the sovereignty of a nation and the interdependence of many nations are potentially on a collision course.

Again, Gibbet Hill Road comes to mind. Traffic coordination has resulted in a university entrance in which drivers stay to the left, speed limits are set and pedestrians use a lighted crosswalk. Despite these measures, there are times when the traffic is, far from ideal, crawling along at a maddeningly slow pace.

All of which suggests that coordination does not solve all of what ails us on Gibbet Hill Road, or in the worldwide economy. In light of how the traffic would look absent these rules, however, it does suggest that coordination is a necessary foundation.

Lessons on university quality gleaned from the Nazi era

Analysis by **Fabian Waldinger** of the Nazis' dismissal of Jewish professors reveals the important role faculty quality plays upon PhD students' careers, and offers insight for fashioning policies to foster research excellence.

In the early 1930s, mathematics departments in German universities had gained unrivalled world renown for cultivating enclaves of successful academic research. But when the Nazi government seized power, it immediately dismissed all Jewish and "politically unreliable" professors from German universities. Between 1933 and 1934, about 18 percent of all mathematics professors were expelled, among them some of the most eminent mathematicians of the time, such as Johann von Neumann, Richard Courant, and Richard von Mises.

Some mathematics departments, those that had not employed Jewish or "politically unreliable" academics, were unaffected, but others were decimated. The then-premier Göttingen University, for example, lost nearly 60 percent of its mathematics personnel. The dimensions of the situation were underscored dramatically in a chilling exchange from a 1934 banquet, where Nazi education minister Bernhard Rust chatted with David Hilbert, one of the most influential mathematicians of the early 20th century. "How is mathematics in Göttingen now that it has been freed of Jewish influence?" Rust asked. Hilbert's reply was stark. "Mathematics in Göttingen?" he said. "There is really none anymore."

My research analyses detailed data from this

unprecedented chapter of German history as a way to examine the role faculty quality plays on PhD students, in creating their dissertations and in influencing the arc of their careers, a subject that is almost impossible to study in a modern context.

The Nazi dismissals had far-reaching effects on university quality which continue to this day. It also had profound effects on individuals, the PhD students caught in the throes of the turmoil of that era. The academic achievements that outline and define a career—the likelihood of getting a dissertation published, the odds of becoming professor, the number of lifetime academic citations—all were affected to a striking degree by the calibre of the faculty, and the chain of events that started with the Nazi policy of "cleansing".

For my analysis, I used a large number of historical sources, including a compilation of the universe of students who obtained the PhDs in mathematics from a German university between 1923 and 1938. I find that students with access to high-quality faculty in this period were more successful in all the ways that are key in determining academic success. Specifically, my research shows that an increase in faculty quality by one standard deviation led to a 13 percentage point increase in the

probability that a former PhD student published a dissertation and a 10 percentage point increase in the probability of becoming a full professor. An increase in faculty quality by one standard deviation led to 6.3 additional lifetime citations, a significant number given that the average former PhD student has 11 citations.

University quality is believed to be one of the key drivers for a successful professional career of university graduates. This is especially true for PhD students. Attending a better university is likely to improve the quality of a student's dissertation and will provide superior skills and contacts. Estimating this effect is very challenging because inherently better students typically graduate from better universities. Observing a positive correlation between university quality and PhD student outcomes, therefore, does not necessarily mean that university quality *causes* student outcomes to improve.

The Nazi policy's effect on students lasted a lifetime, influencing the odds of publishing a dissertation, of becoming a professor, and of earning many academic citations

Economists often look for so-called natural experiments that come close to optimal experiments that are impossible to run, and this is why the data from the annals of this chapter of Nazi history offer such potential research value. The change in university quality in the affected departments was not related to student attributes. Therefore, it can be used as a natural experiment to measure the effect of university quality on PhD student outcomes. The departments without dismissals serve as a control group with which the changes in PhD student outcomes can be compared.

Before the dismissal of professors, students in departments which would later be affected always did better than students in departments which did not experience any dismissals. After 1933, student outcomes in affected departments dropped sharply. In departments without dismissed professors, however, PhD student outcomes remained constant.

A new economics equation: Worker + happiness = improved productivity

In a series of experiments, **Andrew Oswald**, **Eugenio Proto**, and **Daniel Sgroi** explore the powerful interplay of human emotion and worker productivity.

Nothing contributes more to a society's well-being than productivity. Economists have long analysed ways to boost productivity through improved skills and education, changing technologies and uses of capital. Our recent research investigates an important but often overlooked ingredient, that of human emotion. Our research, simply put, asks the question: "Does happiness make people more productive workers?"

Our findings respond to this question with a resounding yes. We find that human happiness has large and positive causal effects on productivity. Positive emotions appear to invigorate human beings, while negative emotions have the opposite effect. We find that happier workers' effort levels go up, while their precision is unaltered. At the same time, we find that unhappiness stemming from deaths or serious illness of family members reduces productivity to a striking degree. Happier workers, our research found, were 12 percent more productive. Unhappier workers were 10 percent less productive. We also find that the recent divorce of parents of university students did not affect happiness levels or students' productivity.

In our research, we conducted randomized trial experiments involving paid piece rate work. In one experiment, we "assigned" happiness in the laboratory, to

These findings have implications for present-day policy, particularly in an era in which many nations facing budget constraints are reducing funding for higher education. It is widely agreed that inventions of scientists are important drivers of technological progress and economic growth. Therefore, it is important to organize scientific research, including the training of PhD students, in an optimal way.

The findings suggest the best policy course is to establish large PhD programs in a small number of high quality universities

My research shows that the most efficient way of training PhD students is to have large PhD programs in a small number of very high quality universities. In pre-World War II Germany, Göttingen and Berlin, the two leading universities, jointly produced more than 20 percent of all mathematics PhD students. The best five universities produced about 28 percent of all mathematics PhD students at the time. Today the best five universities in Germany produce only about 8.5 percent of all mathematics PhD students. In fact, none of the best five German mathematics departments (according to the faculty's research output) is among the top five producers of PhD students today. In the United States, however, the best research universities are also the main producers of PhD students. My findings suggest that this is a very productive way of organizing PhD training that should be further encouraged by science policy makers.

Publication details

"Quality Matters: The Expulsion of Professors and the Consequences for PhD Student outcomes in Nazi Germany" is due to be published in an upcoming edition of the *Journal of Political Economy*. It is available at: http://www2.warwick.ac.uk/fac/soc/economics/staff/academic/waldinger/research/mathematics_phds_4.pdf.

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see whether happiness induces better intrinsic motivation or instead promotes less careful behaviour. In a second experiment we took advantage of real-life shocks, stemming from bereavement and family illness, to measure any difference unhappiness makes in worker output. In a third experiment, we explored whether university subjects' productivity was affected by their parents' recent divorce.

A happiness "treatment" raised productivity by 12 percent; traumas, such as a family member's death or illness, lowered it by 10 percent

The subjects of our experiments were Warwick University students who were asked to add a series of five two-digit numbers in 10 minutes. The task is a simple one, but taxing under time pressure. It might be thought of as representing an iconic white collar job, though admittedly in a highly stylized way. Both intellectual ability and effort are rewarded. The subjects were paid a show-up fee and a performance fee based on the number of correct answers.

Some subjects were shown a 10-minute movie based on comedy routines enacted by a well-known British

comedian. The comedy movie clip succeeded in raising the reported happiness levels of those who saw it, as compared with those who did not see a film or who saw a “placebo” film, a clip depicting patterns of colour sticks. Among the subjects who reported higher happiness levels after seeing the comedy, productivity was significantly higher, 12 percent higher than the productivity of the other subjects, for both men and women. The subjects who watched the movie but did not report higher levels of happiness did not demonstrate higher levels of productivity. As a result, the increase in productivity seems to be linked to the increase in happiness, not merely to the watching of the comedy movie per se.

Productivity of students whose parents had recently divorced was unaffected

Furthermore, we show that this increase in performance is exclusively achieved through an increase in the number of attempted additions, while the probability of being correct when carrying out each addition is unaffected. Hence, we argue that the effect on productivity works through increased effort rather than ability.

This distinction is of interest. It might be viewed as one between industry and talent, between the consequences of happiness for pure effort compared to effective skill. In our second experiment, we asked our subjects to complete the same tasks, and then to report whether they had experienced a death or illness in their families. Those who had experienced a death or illness in their families within the past two years performed 10 percent worse than others, our data show. Given the extraordinarily homogeneous sample of our subjects, the difference in productivity was unexpectedly striking.

One exception to our findings concerns the subject of parental divorce. Though the effects of divorce have been widely studied, we believe our experiment is the first to probe the influence of parental divorce on the productivity of university students. Students whose parents have

recently divorced did not report being less happy than others in the study, and they did not demonstrate reduced productivity. Though we do not know why this was the case, we surmise that divorce may well be harder to classify as a “negative life event” in the sense that it might have been perceived by our subjects as a release from a more difficult situation and may also have been a longer-term issue granting additional time for the subjects to get used to the situation.

Our results on these fronts should provoke thought among scholars in psychology and economics and in the business community. If happiness in the workplace brings increased returns to productivity, then human resource departments, business managers and the architects of promotion policies will want to consider the implications.

Publication details

This article synthesizes aspects of three papers:

“Happiness and Productivity”, IZA (Institute for the Study of Labor in Bonn, Germany) Discussion Paper No. 4645, <http://ftp.iza.org/dp4645.pdf>;

“Are Happiness and Productivity Lower among University Students with Newly-Divorced Parents?” IZA Discussion Paper No. 4755,

<http://ftp.iza.org/dp4755.pdf>;

“Happiness, Priming and Life Satisfaction: A case for the reliability of subjective wellbeing indices,” The Warwick Economics Research Papers no. 935,

http://www2.warwick.ac.uk/fac/soc/economics/research/workingpapers/2010/twerp_935.pdf.

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The outsider effect

Research on the UK’s influential Monetary Policy Committee reveals a divide, with insiders behaving as fiscal hawks while outsiders evolve into doves. **Michael McMahon** and **Stephen Hansen** explore the phenomenon and consider the implications for a world that relies on such panels for most important economic policy decisions.

Only days after the UK’s parliamentary elections in May, the coalition government’s Chancellor of the Exchequer announced the creation of a new, independent committee to produce the economic forecasts that underlie the nation’s fiscal policy. The decision represents a historic departure for the UK, where the government’s economic forecasts have long been fashioned in an atmosphere lacking in transparency and ripe with political influence. The announcement provided a timely example of a dramatic change that has occurred over the past two decades as governments around the globe increasingly hand over important economic policy decisions to committees of experts.

Our research attempts to gain insight into the dynamics that can affect the decisions of these increasingly influential economic policy groups. Our work examining the voting patterns of the UK’s Monetary Policy Committee (MPC) finds striking and unexpected differences emerge between members depending on the nature of their appointment, as an insider or outsider. Surprisingly, our research finds very little support for the idea that outsiders begin to take a different stance because of learning and increased expertise gained over the early part of their tenure. Instead our research suggests that the outsiders begin favouring lower interest rates as the result of a changed philosophy. A likely source of their evolving view appears to be long-term career interests of the outsiders.

Despite similar backgrounds and expertise, MPC insider and outsider members vote differently. After a year on the panel, outsiders favour lower interest rates

The MPC was established in the wake of the 1997 Labour party landslide, when Gordon Brown, then the new Chancellor of the Exchequer for Tony Blair’s administration relinquished his power to set interest rate. The goal of the MPC was to make monetary policy less arbitrary and less susceptible to election cycles. Its objective is to maintain price stability and enhance growth and employment. In practice, the committee seeks to achieve a target inflation rate of 2 percent, based on the Consumer Price Index. If inflation is greater than 3 percent or less than 1 percent, the Governor of the Bank in England must write an open letter to the Chancellor explaining why. Missing the target in either direction is treated with equal concern. Members are urged to vote for the interest rate they believe is most likely to achieve that target.

The Chancellor of the Exchequer appoints four of the nine MPC members from outside the Bank of England—the external members. The five internal members come from within the central bank. All members have expertise in economics and monetary policy. Each member is

independent in the sense that no one represents any interest group or faction.

Our analysis of the MPC's voting record uncovers an unusual pattern: We find that after a year on the panel external members start to vote for lower interest rates. Thus, the outsiders evolve into "doves," while the insiders remain "hawks," wanting to control inflation at all costs.

This divergence is especially surprising because members of the committee often have such similar backgrounds and expertise that they could plausibly serve interchangeably in either role. This striking "delayed dovishness" is present, even when we take account of any differences in members' backgrounds, age, education, as well as the current macroeconomic environment. The nature of one's appointment, as insider or outsider, determines the course a member takes. Thus, our findings underscore that the composition of the committee can have important and unexpected effects.

Surprisingly, the outsiders' voting pattern is unrelated to on-the-job experience. Instead, long-term career concerns seem a likely cause

One possible explanation of the external members' change in voting behaviour relates to the external members growing in expertise. After a year on the panel, they may feel more comfortable about expressing an opinion or more confident in voicing divergent opinions. Another explanation relates to a change in their underlying view of the necessary interest rate to achieve the inflation target. As they serve longer on the committee, external members may begin to believe that lower interest rates are compatible with inflation at the target rate. This explanation suggests that something affects external members' preferences or philosophy.

In order to try to disentangle these effects, we use a simple model that provides a prediction about how each member is likely to vote. Our model predicts that voting behaviour responds differently depending on whether the choice of interest rate is clear-cut or subject to greater uncertainty. Using market information collected in the days before the decision, we examine the voting behaviour of external and internal members under different degrees of decision "straightforwardness."

When we compare our estimated voting behaviour with the predictions of our model, the result is clear. Surprisingly, there is limited evidence to support the learning explanation. The voting behaviour of the externals strongly suggests the effects of a change in preferences, or of economic philosophies that underpin their view of the situation.

One plausible reason for an evolution in outsiders' philosophies appears to be career concerns. The external members may wish to signal their expertise or their economic philosophy. Members may be concerned by the effects of their votes on their reputations. For example, they may want to signal particular preferences to the private sector in order to "line up" more opportunities for themselves at the end of their time on the MPC.

The worldwide trend toward consolidating economic influence among multi-member panels raises a basic and as-yet unanswered question: What is the ideal group? No one yet knows what the optimal composition of committees such as the recently formed Office for Budget and Responsibility, which will be chaired by Sir Alan Budd and will include two other members, all independent of the Treasury.

Yet, as our findings underscore, the composition of the committee matters, and matters a great deal. Better understanding the forces at work and how they sway individual members' outlook could affect policy and design of the MPC, the OBR, or other similar committees.

Publication details

This article synthesizes aspects of two discussion papers: "Delayed Doves: MPC Voting Behaviour of Externals," London School of Economics, Centre for Economic Performance discussion paper no. 862,

<http://cep.lse.ac.uk/pubs/download/dpo862.pdf>, and

"Dynamic Voting Patterns on the MPC,"

http://go.warwick.ac.uk/michaelmcmahon/research/mpc_paper_june_2010.pdf.

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