# Power

## Recap

* Tutorial groups should be pretty set now. If you’re waiting on a change it should still go through, but if that happens after the subgroups are assigned you’ll need to let me know.
* This one will be shorter, and then we can talk a bit about the assessment.
* So after last week’s Responsibility, this week we’re covering the second important concept that relates to everything else on the course: Power.

## What is Power

* Your ability to see your will made manifest in the world. That is, if you want to do something, how easy it is for you to do it. To naively put this in Informatics terms, you could think of it as the weight associated with a person’s node in a network.
* Because we live in a world of systems (political, legal, cultural, organisational, social), this isn’t so much a trait of the individual but of those wider systems.
* A lot of it is tied up in how those systems are designed. And a lot of *that* is dependent on who they were designed for, or by. Because, intentionally or unintentionally, people tend to design things for people like them.

## Traits of Power

* It doesn’t have to be explicit. In common usage we talk about powerful people as those with particular positions or titles (a monarch, elected official or company CEO), but this kind of clearly named power is only really a small subset and shouldn’t be confused for the wider concept.
* Power does not have to be wielded intentionally. The powerful do not need to be vindictive to harm those with less power. Whenever their goals are at odds, the less powerful are more likely to lose out.
* It isn’t a single axis. Someone can have power in some interactions and very little in others. But it is certainly correlated. There are some people and groups with power in a lot of different ways, and by the nature of power it tends to let you more easily accrue *more* power.
* Power also doesn’t have to be *active* at all. As in, someone doesn’t have to be doing something to or with another person for the power dynamic to come into play. A system can just be set up such that one of them has an easier time moving through it than the other. Like they’re travelling two different roads, but one of those roads is well tended and the other is filled with potholes. In some places, this isn’t even an analogy.
* This can be thought of as what people are talking about when they talk about Privilege. Privileged groups are the ones by or for whom society’s systems have historically been designed, and as a result people in those groups tend to hold more power.

## How does this relate to Tech?

* What we produce are tools of Power, in one of maybe three ways:
* First is amplifying the ability to do something (reduced costs, increased scale, increased reach). This is a multiplicative effect on existing power, because people who already had superior capacity to do something will be able to take advantage of the scaling more. For example, the use of robots in factories speeds up or reduces the cost of production, but the larger your factory operation the more able you are to benefit from this. So small scale producers, or indeed the people working in those factories, have little to no chance of benefiting.
* Second is entrenching the power in existing systems by taking them from something informal, administered by humans who can understand nuance, adapt to different circumstances, and be questioned, to something rigid enshrined in rules, administered by unassailable machines. We see this in the COMPAS case study, where the part of the decision being made by the algorithm isn’t transparent to the judge or to the accused, so even if it was making similar decisions to a human in the same role, there is no opportunity to dispute or appeal.
* Third is providing a new capability that wasn’t available before at all. This is maybe just a special case of number one. But something like DeepFakes, which are starting to allow convincing footage or audio of people to be created without their involvement, might only allow this to be done by the people with large compute capacity and plentiful training data (or the ability to acquire these things).
* It is worth noting that these aspects are also the reasons for the great *potential* of technology. Being able to make these kinds of impacts can drastically improve people’s lives, by redressing existing power imbalances.
* The internet, while is has ended up coming with many of its own problems, has given regular people in much of the world access to information and to each other on an unprecedented scale, enabling things like mass organisation of regime-ending protests.
* Prosthetics can give physical freedom to people who have been denied it.
* The automation of factories that may culminate in those job-stealing robots has, for now, made the people who still work there generally much safer.

## Readings

* As a final note, I just wanted to link this in with some things we see in the readings.
* Of which there are two (short ones) this week.
* We’ve gotten to the stage now that tech is providing so much power that, inevitably, some of the companies responsible for providing it have become incredibly powerful themselves. This is partly because they obviously have prime access to their own technology, but also because they are brokers of it for the other groups who rely on it for their power.
* An issue we see coming out of this is that these big companies start behaving like some other powerful companies have in the past and they use their power to further increase their influence. Then because they’re more powerful than a lot of smaller or developing countries, the people of those countries are often left with very little recourse against whatever it is the company wants.
* That said, I want to finish by reemphasizing that these power relations exist at all scales in society, and that while we definitely shouldn’t look away from the big global abuses of power, most of us probably do not have an easy remedy for them.
* What we have more control over are the multitude of other interactions in our work where we hold some power or privilege over other people who might be affected by the artifacts we produce, as well as making sure that those artifacts are not further unfairly taking power away from people.

## Assessment

* Despite essays being somewhat unfamiliar to most of you, they are a good way of assessing broad topic understanding and argumentation skills.
* To help make them more directly relevant to you, both of the essays for the course have a task that reflects something you might be faced with doing when you go out into the world.
* For the first essay, this is anticipating and warning about potential harms from a project you are working on.
* This grounding in your personal experience is also intentional.
* Partly so that you’re talking about something you are more familiar with, and can therefore hopefully talk about on more easily.
* Partly because it helps you reflect on how the issues raised on the course are relevant to your own work, not just other people’s.
* I assume the default here is going to be ILP for most people, but do think about whether there are other pieces of uni work or an internship that you could draw on.
* --- What is ILP this year?
* If for no other reason than to save the markers from millions of drone essays
* The piece of work you choose doesn’t have to be an actual fully deployed or deployable project; you can take a small subsystem you’ve worked on as part of a coursework and imagine the rest of the use case where it is actually going out into the world. It’s rare to be the *only* person who worked on a system anyway.
* So the general structure of the essay will be roughly a paragraph introducing the project,
* Followed by several paragraphs introducing, discussing, comparing, some of the key potential harms
* Followed by a conclusion drawing the threads of the argument together.
* The word limit is a strict 1000 words, and you will almost certainly find part of the challenge is keeping it to this level. Concision is a good skill to learn, and most people when they start writing will write too much.
* Most people I know in writing heavy fields will write an initial draft and then cut it down.
* I view the three main tasks of this essay to be as follows, in order of increasing difficulty
  + Describe concisely
  + Anticipate and argue for attention
  + Reflect on your own role
* What I mean by increasing difficulty, is that most people will do well on the first and least people will do well on the last. The marking scheme reflects this, with reflection contributing more to the “excellence” marks.
* Speaking of the marking scheme.
* This will follow the university’s common marking scheme, and that means most people will probably get a mark in the high 50s or 60s
* That reflects a “Good” or “Very Good” essay.
* Notably, basically any mark in the 60s should convert to a First at the end of the course.
* So just a warning to calibrate your expectations and not be disappointed with “Very Good”
* You should be doing some independent reading to support this work, and that where a lot of the time spent on the essay will come in.
* Obviously, it should be linked back to course readings.
* But more importantly, you should demonstrate that you have read and understood sources beyond that.
* Most commonly, that’s likely to be discussions of similar projects that can be contrasted with, or other discussions of the kinds of harms you are raising.
* --- Do you get taught how to search for articles, say with Google Scholar?
* Just a couple of mistakes I see essays make each year
* First is focusing too much on technical problems, like the potential for bugs, shoddy coding, or other bad engineering practice. Some of this often relevant, but it should be in service of talking wider social implications
* Secondly this first essay is not asking you to provide recommendations, that is left for the second essay.
* Again, that doesn’t mean you 100% won’t mention anything that could be done differently, but you should only do it if it is in service of talking about the harms or their importance.
* Finally, I imagine this isn’t much of a surprise on this course, but I do not think you should use chatGPT in your work.
* Leaving aside the impact on your learning, or the general unethicality of the tool, it also writes pretty mediocre essays poorly supported by existing literature.