

Regulation - how important has it been in removing the “great (and not so great) positive evils of the world”; in the advancement of civilisation?

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In 1863 John Stuart Mill wrote “No one whose opinion deserves a moment’s consideration can doubt that most of the great positive evils of the world are in themselves removable, and will, if human affairs continue to improve, be in the end reduced within narrow limits.” (Mill 1863). This brief overview suggests that good rules have been important in improving human affairs and saving humanity from itself over the centuries. But our regulatory skill might be challenged by possible existential threats we are now facing, or soon will be.

We make rules both good and not so good about how to behave with each other and the world around

Regulation is essentially about the making and administration of rules for human behaviour (end note 1). Mostly the rules have been about behaviour toward other human beings, but in recent decades we have more and more rules about behaviour toward other living things and the environment in general. Rules can be about either constraining behaviour or ensuring freedom of behaviour. They can apply to people in general, like human rights, or to specific classes of people, like those providing medical services. Rules would generally have been intended to increase good things and reduce bad things. However, with the benefit of hindsight we can say that rather too often the reverse has been the case, for example laws that allowed slavery or that prohibited homosexual behaviour. Even today laws giving lengthy patent protection for pharmaceuticals and thus monopoly pricing making them unaffordable for many would fit into this category.

A force for enhancing, rather than constraining freedom, by mitigating our cultural and personal flaws as they become apparent

Regulation by some is considered anti-freedom. To be sure it does limit our freedom in that if done well it seeks to limit our behaviour to the pro-social, to prevent anti-social acts. But if it is good regulation it should give us individually more freedom to use our time as we wish. For example, if it is good we don’t ourselves have to test our apples for pesticide residues or to check ourselves that the building in which we plan to rent an apartment meets safety standards (but too often it is not good enough—the Grenfell Tower tragedy being a terrible example).

In a more fundamental way perhaps regulation gives the greatest freedom of all: the freedom to choose what kind of society we live in and what kind of future we want. The development

of culture is, in large measure, an evolutionary process, analogous to the evolution of species. Generally cultural changes that benefit those who have power, sometimes the majority but often not, persist, and those that do not die off. These changes do not necessarily move towards what is good for all into the future, but regulation helps to steer us back in the right direction.

Essentially, regulation is about knowing that we aren't perfect, but that, knowing our flaws, we can design systems that protect us from ourselves. We regulate ourselves when we hide the chocolate at the back of the cupboard. We regulate ourselves when we put savings in a long-term deposit. More abstractly, regulation is about hacking the natural cycle of cultural evolution to consciously design our future.

In culturally homogenous communities, which are rare today, quite a lot of regulation could be left to generally accepted behavioural conventions. In culturally pluralistic communities and when we are dealing with transactions across national borders and internationally we more often need codification of rules.

More often than not the rules we make are answers to yesterday's problems. Constant change, especially human invention, means that to make the best rules we need to take some risks and design them as well as we can to work in a future we have limited ability to predict.

Origins and types of regulation: a product of changing power relations

Rules have been around for a long time – incest taboos for example. An early set of written rules is the Code of Hammurabi, a Babylonian law code of ancient Mesopotamia, dating back to about 1754 BC. It could be argued that the history of civilisation is, in large measure, the history of regulation and its interaction with technological development. Over the course of history rules have widened their reach from intra tribal to nation state to global.

Regulation ranges from voluntary rules groups of people (natural persons) or groups of companies or other organisations (corporate persons) adopt to guide their conduct, to laws involving measures to coerce observance. Between these ends are non-statutory regulatory schemes of varying levels of coercive force which companies or other organisations contract into to maintain standards, sometimes of their own volition, sometimes required by statutory licenses. So, there is a spectrum of regulatory intervention and regulation is not the preserve of government, or the apparatuses of the state, nor at the supranational level the preserve of supranational apparatuses. Indeed, in some realms governments are not involved at all.

A well-functioning regulatory regime can be thought of in terms of a compliance pyramid. (Ayres and Braithwaite 1992) See Appendix 1. Perhaps in any realm only a small percentage of actors are likely to be miscreants. If so, as only a small percentage need to be dealt with by a regulatory regime it might seem that it is doubtful that the benefits of regulation outweigh its costs. But the small percentage is generally kept small because the regime exists. The pyramid idea is that the vast bulk of compliance action occurs at the base.

The making and enforcement of rules requires power. At any moment in history extant rules are more than likely to be in the interests of the established power holders of that moment. Thus, for any rule or regime of rules there are what Braithwaite and Drahoš (2000) call "law makers" and "law takers". In recent history, the law makers have been established power holders in business or in profession or employee groups—or, in international regulatory

regimes, governments of larger and more advanced economies and multinational corporations.

Law takers are those with little power or with potential but unorganised power such as people as consumers or women in many cultures or governments of smaller and less advanced economies. The last half century has seen law takers organise themselves better in many areas, however, for example, people with a concern for the health of the biosphere have gained some power through organisation and thus have been able to influence law making. Running environmental product approval schemes, they have even made and enforced their own rules.

In the international context the Group of 77 (G77) at the United Nations, a coalition of developing nations, could be seen as law takers organising themselves to promote their regulatory objectives.

Key milestones of progress through regulation at the national and supra-/international levels

The last couple of centuries have seen huge declines in poverty and infant mortality and increases in longevity and literacy. Better rules and better compliance to those rules (such as on hygiene, health services, food safety, education) have been no less important than any other human invention in these achievements. Indeed, the corporate person is a regulatory invention, which some say is among the greatest of human inventions. By allowing for lower risk collaboration among natural persons, it has doubtless led to innumerable advances in welfare that would not have occurred, or would not have occurred as soon, without it (though perhaps we have not yet been able to work out how to adequately curtail its law-maker power).

Rules agreed amongst nations, supranational regulations, have contributed to these global developments, most obviously by reducing death and injury due to conflict, but also by the many global rule-making systems for safety standards for goods and services. Brexit notwithstanding, with the success of Emmanuel Macron in France and the success of other pro-European politicians recently, the European Union, possibly humanity's greatest regulatory initiative, might be expected to continue to bear fruit. Similar initiatives could do so elsewhere in the world. Diplomats of the world can be seen as actors in the supranational regulatory process.

The UN and related standard-setting organisations, such as the World Animal Health Organisation (OIE) for rules on animal health and animal products or the Codex Alimentarius Commission for rules on food safety, are more successful rule makers and administrators than is often recognised. Still, the success of these is much more likely when the rules are in the interests of the established power holders. (An exception may be the WTO's recent ruling in Australia's favour against the global tobacco leviathan on the question of plain packaging.)

Obstacles to the development of fair, trustworthy and nonpartisan regulation

Regulation at the supranational (as in the European Union, for example) or global level is now inevitable because more and more cross-border direct transactions between businesses and consumers as well as between consumers themselves are occurring. Yet the process for achieving good regulation remains difficult, due to at least three cross-cutting factors.

First, it has become increasingly difficult for law-takers interests to be fairly represented. Members of national delegations to international forums are rather more likely to find themselves in the aeroplane in business class, or in the bars of hotels with the lobbyists of special interest groups than lobbyists of public or consumer interest groups. Public or consumer interest groups do exert an influence outside the barriers around these forums. They are being increasingly included in such forums, but, their relative lack of resources, often dependent on voluntary effort, impedes the development of measured public policy on regulation. To some extent this is countered by the action of global public interest networks such as AVAAZ. (<https://secure.avaaz.org/page/en/>)

Secondly, trust in law-makers is needed for regulation to work (Braithwaite 1998). But trust has increasingly eroded as social distance from law-makers has grown. People trust local officials more easily than nation state officials and much more than supranational officials. The nation state is not a natural level of a trusting community, and as Brexit suggests the supra national federation of nation states even less so. (MacKenzie 2014).

Thirdly, regulation is, at its core, highly political. Probably the biggest political battleground relates to regulation of markets or commercial transactions. Today there is generally one side that believes that the invisible hand does all the regulation necessary, and another that believes that the asymmetry of information problem as between producer and consumer is so great in every market that all need rules. But the politics of regulation have evolved in relation to this dichotomy over time. There was a general growth in regulation in the world through the decades following WWII. Much of this was anti-competitive in that it protected established business and nations' industries from competition. Significant developments in pro-competitive consumer protection and competition law did not occur in most Western countries until the 70s but remains inadequate in many other nations still. In the last decades of ascendancy of market liberalism, deregulation has been the mantra. Some of this has been about dismantling anti-competitive regulation. But some deregulation has gone too far and led to oligopolisation and monopolisation as well as confusopoly (2) and lower standards for consumers. While against this trend pro-competitive consumer protection and competition law has developed, it seems it has not always been very successful in rendering markets more competitive and, in many cases, has not resulted in pushing profits down to the normal return on capital. And at the macroeconomic level, deregulation and liberalisation have likely contributed to the increasingly unequal distribution of resources in many developed countries.

Future challenges to our regulatory capacity

The procedural obstacles to achieving good regulation are perhaps not intractable in the medium to longer term. But we will need to surmount them if we are to have a chance at adequately responding to perhaps the biggest challenges to our regulatory capacity such as:

- A too cold world caused by a nuclear winter and rapid mass starvation
- A too warm world caused by anthropogenic greenhouse gas leading to environmental devastation and unmanageable mass migration
- Devastation of ecosystems or crops or human life caused by runaway genetically engineered organisms
- Intractable tensions, including a widening rich poor gap, due to some populations having greater and greater longevity permitted by medical science
- Unmanageable disruption due to artificial general intelligence (AGI) or worse still the replacement of Homo sapiens with "Silico sapiens"

The first of these is perhaps least amenable to regulatory control. The Treaty on the Non-Proliferation of Nuclear Weapons and the UN Security Council and NATO, amongst other regulatory mechanisms, are far from assured of continuing success especially given the Russia of today, the rise of China and the politics of the USA.

The last possibly comes a close second as a regulatory challenge. Appendix 2 summarises the two approaches proposed by Nick Bostrom (Bostrom 2014).

John Stuart Mill might be persuaded that human affairs have continued to improve on most measures. If we apply our intelligence and regulate ourselves effectively they might continue so to do and we might restore and maintain the health of the planet that sustains us.

End Notes

(1) Regulation can be even more broadly conceived. The numbers of particular species of animals in a given ecosystem are regulated by other organisms in that ecosystem. The temperature of the earth's atmosphere is regulated by, amongst other things, the level of greenhouse gases. Markets are, to some extent, regulated by Adam Smith's invisible hand of individual self-interested actions. Our emotions can regulate our behaviour for good or ill. For the purpose of this paper the idea of regulation will be restricted to human created rules relating to human behaviour

Some laws regulate the behaviour of corporate persons, but corporations cannot behave or fail to behave absent the behaviour of humans controlling them

(2) An economic condition whereby the market force of competition is evaded via intentional obfuscation

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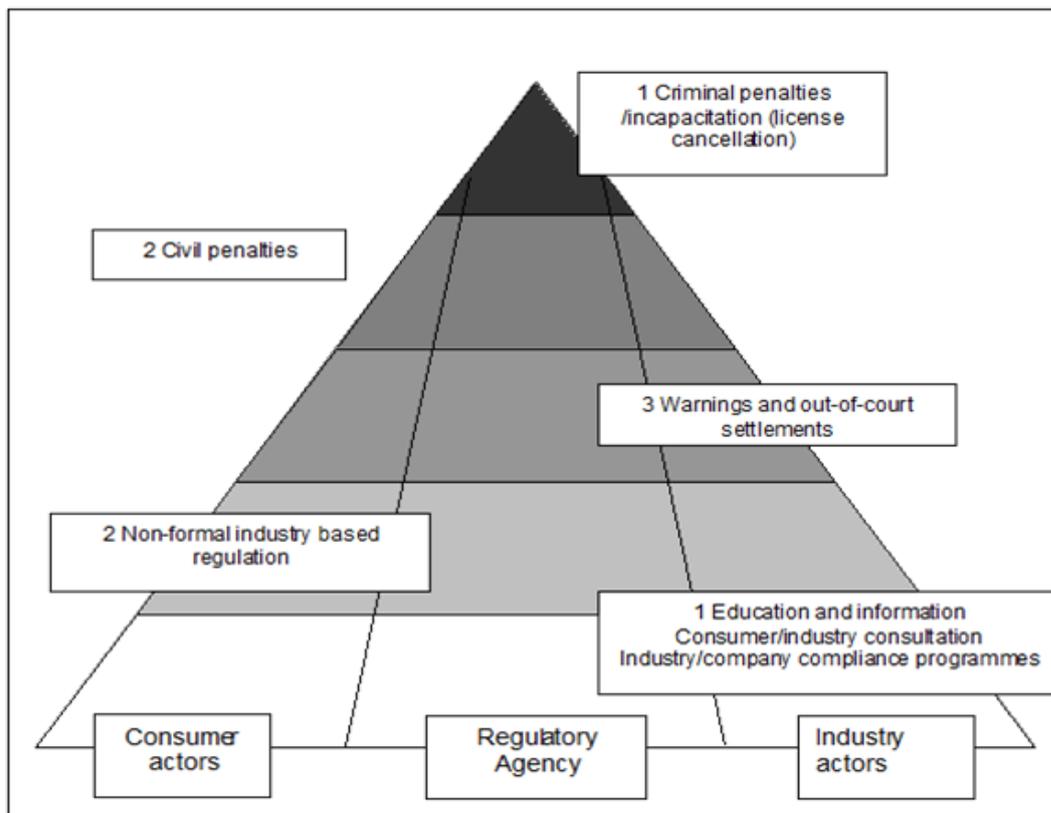
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Appendix 1—Ayers Braithwaite Compliance Pyramid

The diagram below depicts a typical pyramid. The number of levels and the activities at each level will vary from regulatory regime to regulatory regime. The idea of course is that the bulk of effort and activity occurs at the base of the pyramid and this diminishes towards the top.



Under many regulatory regimes there is considerable scope for both non-government actors to contribute at the base level. This is notably so in the consumer protection regime in Australia. Individual consumers can contribute by drawing a company’s attention to marketplace problems. Industry associations and companies can do much in the way of compliance programmes and complaint handling. Consumer organisations can work with industries and companies and can distribute information to consumers.

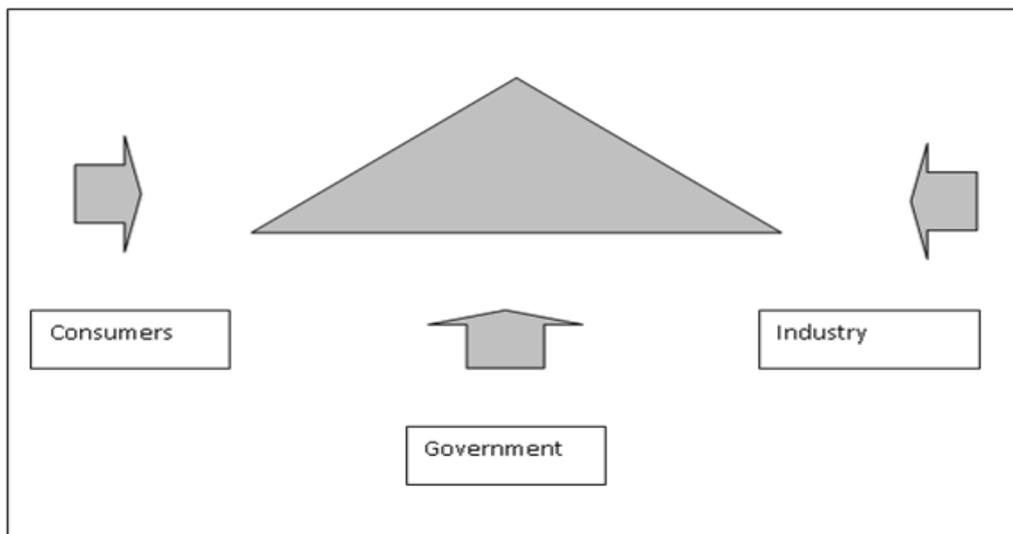
The effect of this contribution from consumer and industry actors is of course to broaden the pyramid, to increase the activity at the lower levels, thus reducing the need for activity at the higher levels and making the regulatory regime more effective and efficient.

In some regulatory regimes there is scope for both consumer and industry actors to contribute right up to the top level. This is more often the case for industry actors seeking to prevent anti-competitive behaviour on the part of competitors. In Australia there have been some

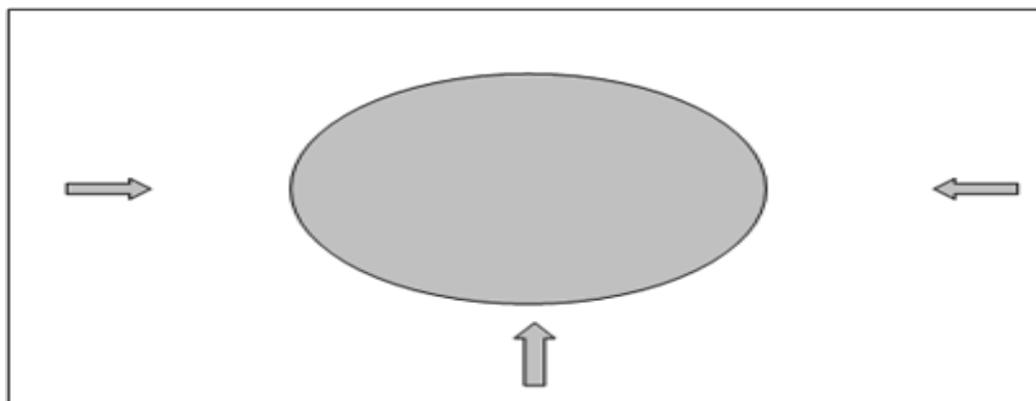
significant actions taken by consumer organisations, notably when the relevant regulatory agency has failed in its enforcement responsibilities. The litigation under the then Trade Practices Act by the Australian Federation of Consumer Organisations against the Tobacco Institute of Australia (TIA) is an outstanding example. The court's decision that the TIA misled consumers and its findings of fact concerning the health effects of passive smoking was a world first.

For regulatory regimes to be fully effective the top level has to be and be seen to be real. This does not mean it has to be utilised, but a real potential for utilisation is necessary. In the end the government of the day must make it clear that it is prepared to back up the regulatory agency involved.

With clear government commitment and support and with clear commitment and support from both industry and consumers (or citizens in respect of public interest issues or workers in respect of worker protection) the regulatory/compliance pyramid can be at its broadest and most effective and efficient as depicted in the diagram below.



Where tripartite commitment is weak or lacking the pyramid structure collapses and the regulatory agency is limited to relatively ineffectual activity in the middle levels as represented in the diagram below.



Appendix 2—Approaches to the regulation of Artificial General Intelligence

The central problems of preventing the existential threat of AGI are:

- The control problem—controlling a runaway intelligence explosion
- The motivation problem—how do we establish the goals of AGI (assuming we may not be able to control it in the future, at least establishing goals is of interest)

Central to addressing these two problems is limiting the power of any one AGI, particularly in the situation that the first mover in an intelligence explosion dominates the future light-cone in our solar system due to the overwhelming head start in a so called ‘fast take off’. In this scenario, due to the accelerating intelligence growth rate of a self-improving, smarter than human, super intelligence, it’s considered by some that the intelligence could escape human control mere days, hours or even minutes after surpassing human level intelligence. We want to avoid this for obvious reasons and if it happens, we want it to be good, not Google.

Two ways to limit the power of such an AGI and increase the probability that it has compatible interests to humanity are:

1. Open sourcing AI—reduces the probability of AI monopolisation in short term and of a single emergent super intelligence dominating our future light cone. In a fast take-off, hopefully multiple super AI’s emerge together. In a slow take-off scenario, many AI’s could combat the occasional bad actor that arises. This partly addresses the motivation problem by creating balance and the control problem since super intelligent AGI’s could at least control each other, but not completely, since an omnipotent benevolent AGI may still ignore the interests of humans (e.g. an AGI asked to cure HIV might kill all people infected with it) or may simply be too powerful to care.
2. Merging humans with AI via a neural link. There are many dangers of AI, but the most catastrophic is one in which the interests of the AGI conflict with human survival needs. This is not a Terminator sky net scenario, but rather more likely simply one in which the AGI converts the available matter in the solar system to computronium to feed its insatiable appetite for processing power, rather like how humans don’t bother to relocate the insects before digging an open cut coal mine. Even worse still, would be if the new AGI wasn’t conscious in the way that humans are and consciousness, whatever it is, is extinguished from this part of the universe.

Arguments against open-sourcing:

- If you share research without restriction, bad actors could grab it before anyone has ensured that it’s safe.
- If, on the other hand, Open AI decides to hold back research to keep it from the bad guys, wonders how different is it from a Google or a Facebook

Direct regulation of AI development would be a much firmer strategy. Regulation could closely mirror the controls put in place on nuclear weapons globally, restricting private enterprises and some countries from developing and holding them. At the core of halting

development is ensuring that we have addressed the control and motivation problems before it is too late and a runaway super intelligence is out of control. We need to know what we're building and how to control it before it gets out of control.