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# OPTIMISATION HEURISTICS IN PATERNALISTIC PUBLIC POLICY

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*In this paper, Tony O'Connor examines the motivations of paternalistic public policy. In doing so, he uncovers the subtle role of heuristics, or mental shortcuts, on policy formulation. This understanding is then applied to common paternalistic public policies, such as banned markets, Pigovian taxes, and choice architecture, identifying those based on heuristics, along with those based on more rational desires to enhance current and future societal happiness.*

## Introduction

“De gustibus non est disputandum.”

“Over tastes, there can be no dispute”.

Many consider the above quote praiseworthy, primarily because it helps an individual avoid the inane and irresolvable argument that seeks to establish the primacy of certain tastes over others, particular regarding music, food and other simple goods. Thus the quote is both useful and enlightening when a difference in preferences arises between two individuals: the choice of one does not impede upon the happiness of another.

Alas, public policy is quite different in this respect. In the face of varying preferences, one who judges policy faces a sort of intellectual peril, for he never knows whether his judgement on policy is based on an objective truth regarding societal well-being, or simply his own preference for the shape and form of society.

Concretely, we shall see that while in many cases the motivation for policy stems from a desire to increase the happiness of both present and future generations, other policies arise from a very specific definition of ‘good’ that the individual concerned has become accustomed to over the course of their life and learning. It is this latter heuristic, or rule-of-thumb, disguised as a preference, that the policymaker must be vigilant of.

Optimiser Type	Dominant Preference
Present Utilitarian	Happiness of Current Generations
Future Utilitarian	Happiness of Future Generations
Libertarian	Individual Freedom
Classical Socialist	Equality of Outcome
Traditionalist/Reactionary	Social Stasis and Reversion
Doctor	Maximum Average Life Expectancy

Figure 1: A Brief Taxonomy of Optimiser Types and Corresponding Preferences

### Variance in the Sources of Preferences

In Figure 1, a brief taxonomy of different preferences are outlined. For each preference, a specific type of optimiser has been labelled who values that preference highly.

It is assumed here that those expressing preferences wish only to improve the present and future of human society. It is thus trivial to distinguish between a rational preference and a heuristic preference, by asking ourselves a question. If the single societal state that corresponds to the optimiser’s preferences was enacted, is there likely to be greater happiness than in the state arising from a flexible preference (that of increasing the sum of happiness regardless of what must be done in the process)?

The answer here should only ever be a neutral or negative one, for if a specific state results in the maximisation of the sum of happiness over time, then we would hope that a rational, open society, with broad criteria for a good policy, would adopt this state, in order to achieve the maximum level of happiness possible.

The Libertarian believes that the optimal state maximises freedom, and thus freedom is the heuristic he uses when evaluating policy. In the past, when the government was quite uninformed about the choices and behaviour of individuals, then this view would have correlated almost perfectly with those who simply wished to maximise happiness. I say almost, as it was lucidly demonstrated by Sen that in certain situations where individuals face a list of choices, and the happiness of each person is dependent on the action of the other, then it may be impossible to achieve a Pareto-efficient outcome, defined as that where the happiness of one person cannot be raised without

the happiness of the other person falling (Sen, 1970).

An interesting addition to the list is the Doctor. He values life expectancy above all else, as 'good' results are associated with a healthier patient. Having become accustomed to this interpretation of goodness, it soon becomes a heuristic, which he applies to the world in general, outside of the context in which it developed. There are many worlds where individuals could live longer by refusing to partake in certain activities, such as the consumption of alcohol and certain types of food, and dangerous, thrill-seeking activities. However, as individuals routinely partake in such activities, in full knowledge of the potential consequences, we can infer that people do make a trade-off between length of life and the happiness derived from it, thereby negating the validity of the Doctor's heuristic, in policy terms.

A heuristic similarly possesses the mind of the Reactionary. Such a person is greatly distressed by the rapid change inherent in society, and comes to view it as inimical to his interests, and somewhat detrimental to the moral fibre of society. He thus comes to believe that 'what is old is good,' and supports policies that arrest societal change, or that attempt to revert society to a previous state.

### **Policy Analysis**

We have thus concluded that a rational policy, in an open society, will have as its only preference the increasing of the living standards and happiness of future generations. We now analyse paternalistic public policy, dividing the concomitant policies into policies that are rationally motivated and those that are heuristically motivated.

### **Undesirable and Illegal Markets**

Certain markets are discouraged, and sometimes outlawed, by society, as they are perceived to sell goods that are damaging to the physical or moral health of the populace. Inherited societal values often play a prominent role here; a good example being the manner in which certain religions, such as Islam, prohibit alcohol. Where a large majority of the populace share these social mores, they are often enshrined in law.

Thus, as Hillman said, we can conclude that the markets that a society prohibits are expressions of community values, and are therefore heuristically motivated (Hillman, 2009). Contemporary examples in Western countries include prohibitions on markets for marijuana, prostitution, and organs.

*The Market for Drugs: A Policy Based upon Community Values*

Given that we know that such policies may be heuristically motivated, we must investigate whether they contribute to the greater good.

When banning drugs such as marijuana, the legislator may firstly consider the deleterious impact of drugs on the health and mental well-being of the addict and general consumer of drugs. Invoking a revealed preference analysis of the personal choice involved, it is most doubtful that an addict to drugs would say that if they were given the chance to go back in time, they would choose to become addicted once more. We can thus tentatively conclude that banning drugs does enhance the levels of happiness in the society in which it is implemented, specifically for potential users of drugs who would otherwise have become addicted.

However, the law is rarely successful in eliminating the market for drugs; rather, they push it into the underworld, and disadvantaged areas, where the strength of the law is tentative at best, nonexistent at worst. This creates an externality in that certain areas, usually disadvantaged ones, become havens of crime; this severely impacts on the well-being of the residents of those areas, who are not involved in such forbidden industries, but must tolerate the criminals and their lack of respect for both the law and the rights of other citizens.

A second externality occurs in the countries in which the drugs are cultivated. Money accumulated from the illegal sale of goods in the domestic country is used to finance illegal drug trafficking in the cultivating country; and using these revenues, drug cartels purchase weapons, political power and labour, thereby eroding the political system. The ongoing Drugs War in Mexico is a salient example of this externality.

Thus, although the overall effect on current and future happiness is uncertain and difficult to measure, it seems probable that the displacement effect of the externalities affects far more individuals from those who are 'saved' from the policy. As the ban benefits a small, specific group of individuals who would have been victims of their own choices, but disrupts the lives of many more who would not otherwise have been disrupted, it is unlikely that this policy is morally or practically justifiable.

*The Market for Organs: A Rational Paternalistic Policy Based Upon an Evidence-based Analysis*

Organ markets are outlawed as there are doubts over whether a market in organs would increase general welfare.

Firstly, if there were to be a market in organs and blood, there is a chance that the blood and organs supplied would be of a lower quality and

lower overall quantity. We may conclude this as the altruistic motivation for donating organs and blood would disappear. In addition, in the event that low income is correlated with poor health, then those with the greatest incentive to sell would be in possession of lower quality organs and blood (Hillman, 2009). However, this analysis ignores the fact that individuals may still donate their organs, and donate the money received to a fund to aid individuals in the need of organs, who cannot afford said organs.

The policymaker may also worry that, were organ markets to be legalised, then poor people would be quite willing to sell their organs for the immediate pleasure they would derive from the sale price of the organ. As would have discounted any future possible costs to their health, they would have concluded irrationally that the immediate pleasure is greater than the larger but distant and probabilistic cost, in the future, that could come from a lack of organs. This behaviour is known as hyperbolic discounting, and it implies that as time increases, so does the rate at which the future costs and benefits are discounted. A person 'suffering' from hyperbolic discounting will always undervalue future costs and benefits, and is thus not a very shrewd long-term decision maker (Hillman, 2009).

A striking example of this occurred in China where a teenager sold his kidney, in an illegal market, for the paltry sum of £2,000, which he subsequently spent on an iPad2 (Foster, 2011). It is thus not an unreasonable conclusion that the causes of welfare may be advanced by precluding market forces from the procurement and allocation of organs.

### **A Transient Analysis of the Policy of Compulsory Spending and Pigovian Taxes**

In the preceding analysis, it was implied that some individuals cannot judge objective probabilities of harm to themselves, as they may conclude from previous experience, in which they were unharmed, that there is little chance of injury or disease. This assumption is often used in the justification of compulsory spending, whereby the government requires individuals to purchase, directly and indirectly, safety equipment such as helmets for bicycles, seat belts for cars, and safety equipment in the workplace.

It may also be used to justify a Pigovian tax, which is a tax on unhealthy goods, intended to dissuade an individual from their consumption. It should be evident that both of the preceding policies would be encouraged by a Doctor-type optimiser, who cares primarily about the length of life, and less about the quality of it.

However, in a lucid paper, Viscusi provided statistical evidence that cast doubt on the earlier assumption that was used to justify both these poli-

cies. Concretely, he found that individuals overestimated the risk of lung cancer from smoking. He further mentioned that the overestimation of risks is associated with risks that are well-publicised, in this case lung cancer (Viscusi, 1990).

This undermines the case somewhat for paternalistic policy regarding individuals and risks, and also for Pigovian taxes, along with providing further evidence for the dubious nature of heuristically motivated paternalism.

### **Libertarian Paternalism: A Rational Policy**

Libertarian paternalism refers partly to constructing choices in such a way that inertia on the part of the individual will still result in optimal societal happiness. It is libertarian in that the individual is free to choose, and is paternalistic in that the choice is already made for you and stands if you take no action to change it. It is popularly known as 'nudging'.

A concrete example can be seen the case of organ donation. Thaler and Sunstein (1999) argued that to increase organ donations, a state could implement a policy of presumed consent. Under this, all citizens are presumed to be consenting donors. However, they could easily opt out if they wish. Thaler and Sunstein cited a study which demonstrated that when the default choice was changed from an opt-in to an opt-out, or presumed dissent to presumed consent, the number of people who consented to become organ donors increased from 42 percent to 82 percent. Where people were given no default, but simply asked to choose, the percentage choosing to donate organs was 79 percent (Thaler and Sunstein, 1999).

Thus, the policy of presumed consent resulted in a rate that closely approximated the preferences of the individuals concerned. The default would be that the organs would be donated. If the individual did not wish to see their organs donated, then they must opt-out.

The above example can be generalised to many areas where human inertia results in sub-optimal decisions, such as pensions, where a person intends to start contributing, but has never exerted action to that effect, due to inertia.

As can be seen, such a policy can do much to raise levels of current and future happiness; and it achieves this by taking no freedom from the individual, and evidently not based on any of the heuristics we have previously identified.

## **Conclusion**

To conclude, we can say that policies based on optimisation heuristics tend to be sub-optimal. The particular danger they pose is that they are liable to be interpreted to be an end in themselves, rather than simply as an avenue to ever greater happiness, which should always be the intended aim. Examples of such policies included the ban on the sale and distribution of drugs such as marijuana, Pigovian taxes, and compulsory purchasing.

However, though we pointed out that a number of paternalistic policies were motivated by heuristics, and were in this manner sub-optimal, we were careful to point out that paternalistic policies, in and of themselves, could be optimal policies, which contribute to the sum of human happiness both now and in the future. Examples here included libertarian paternalism and the ban on a market for organs.

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