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Plato, the designers and engineers

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“The Money Channel ... attracted 135,000 viewers a week on cable and satellite television. The channel's failure is likely to increase fears about the viability of the raft of small digital stations launched in recent months, each one competing for viewers and advertising revenues in an increasingly fragmented market”¹

Ways of life

Bruno Latour has talked about the *scientists'* role as one of socialising non-humans². Designers and engineers are also in the business of socialising non-humans. They play a role in integrating artefacts into everyday practices.

An artefact is much more than a physical object. Its identity is shaped by a collection of myths, stories, behaviours, roles, rules and inanimate objects. It is an amalgam of plans, meetings, prototypes, advertisements, instruction manuals, customs, traditions, regulations, laws, calculations, financial accounts, physical labour, exhibits, demonstrations and practices. For anyone, adopting a *new* artefact implies changes in ways of living. The designer or engineer of an artefact, presumably, believes that those changes in ways of life are beneficial and will press their claims accordingly.

Fabrication

The engineers and designers find themselves in a position of authority since their role is to influence products and services that other people will use.

Engineers and designers have a role in the fabrication of products but seldom will they be *directly* involved in what is commonly understood as manufacturing. Instead, engineers and designers create physical objects such as reports, prototypes, drawings, schedules, spreadsheets, databases, programs and plans and use them to influence production workers. Outside of the factory they will attempt use similar devices to influence financiers, marketing experts and so on.

The designers and engineers are thus specialists in the use of *visionary technologies* such as writing, drawing, theorising, prototyping, computer and mathematical modelling. On occasions they will use visionary technologies to diagnose apparent failings, by imaginatively constructing stories about the past, but they will also use them to convince people about potential futures.

In the first instance they will have to convince themselves and possibly their fellow professionals. Once they gain confidence they can exercise their persuasive skills to influence others who fulfil different roles in a product generating enterprise. Eventually, the product formed by an accumulation of visionary arguments, rhetoric, prototypes, designs and studies may be materialised. But, more likely, the embryonic product will be rejected and memories of the experiences of the budding product will linger and influence new conceptions.

¹ Ward, Andrew, Money Channel Switches Off, FT.Com Site; May 4, 2001

² Latour, Bruno, Pandora's Hope, Harvard University Press: London, 1999, pp.193–202 & p.261

Pleasure and Pain

Plato's *Gorgias* is a dialogue between Socrates and three characters. The most distinguished is Gorgias himself, who was a rhetorician — a self-proclaimed expert in persuasive talk. Socrates dismissed Gorgias' skills and thereby dismissed a familiar brand of political leadership, which can be, as Gorgias conceded, persuasive in front of a crowd³ but not “in front of an audience of experts”⁴.

Socrates preferred to portray an ideal world in which rational argument and expertise provide the foundation for action.

In the dialogue, Plato got Socrates to talk about degrees of pleasure. He talked about activities that bring immediate gratification and those that bring longer lasting benefit. He described the public arts like poetry and music where “if there is a whole crowd of people, it's possible to gratify all their minds at once, without considering what is best for them”⁵.

He likened the arts to cooking, which provides immediate gratification, but, according to Socrates, in cooking “[t]here's absolutely no expertise involved ... It's a completely irrational process ... which has become ingrained by habituation and past experience”⁶. Socrates makes it clear that he is disdainful of such customary activities. Socrates rates long lasting rewards more highly.

Experts, according to Socrates, can use their expertise to make predictions and thus can forecast whether an action will bring long lasting benefit or not. They can therefore evaluate different options and propose actions that are destined to generate good outcomes. Expertise, Socrates claims, allows experts to give reasons for their actions and an explanation for the outcomes⁷. Those who are not experts may have a skill but it only permits them to follow a routine and offer actions which may provide gratification, but which, unknown to them, may be outweighed by unanticipated, unpleasant future penalties.

Socrates declares that those who do not follow his recipe for moral improvement may ultimately be denied “happiness ... not only during [their] lifetime but after [their] death as well”⁸. As an illustration he described the “philosopher who minded his own business and remained detached from things throughout his life”⁹, who will eventually be amply rewarded.

Technocrats

Engineers and designers are experts and have specialist tools for exploring possible futures — tools that they often take for granted which are integrated into their specialist way of life.

In a *technocratic* scenario the technologists use the artefacts derived using their specialist tools to direct the people outside of their discipline. The experts are authorities who stipulate proper ways of living. The experts, then, are the policy-makers, who tell the public which artefacts they should make, which they should use and how they should act.

A notable omission from such a utopian politics is how people are to be persuaded to act in the ways that the experts dictate. Callicles, in Plato's dialogue, suggested that authority comes from

³ Plato, *Gorgias*, translated by Robin Waterfield, OUP: Oxford, 456c

⁴ *Gorgias* 459a

⁵ *Gorgias* 501d

⁶ *Gorgias* 501a

⁷ *Gorgias* 501a

⁸ *Gorgias* 527c

⁹ *Gorgias* 526c

strength, but then conceded that he means not stronger but better, and he qualified his remarks by saying that “[t]he superior people”¹⁰ are those who are “clever at politics and ... brave” and these are the people who should have power¹¹.

But Socrates’ insisted that rational argument should be the basis for action. He expected experts to arrive at their recommendations by avoiding irrational talk, since, he claimed, “it’s inconceivable that anything irrational involves expertise”¹².

Socrates was seeking the one universal way by practising his form of philosophy. In Socrates’ opinion “philosophy’s views never change”¹³, and he thought that, because of his adherence to his methods, he was “the only genuine practitioner of politics”¹⁴. Socrates, though, was not confident that he would be able to persuade the people, and he presumed that they would not accept that his harsh medicine would lead to eternal happiness¹⁵. Callicles was also sceptical of Socrates’ power of persuasion. He explained that “philosophers don’t understand ... how to address either political or private meetings ... they’re completely out of touch with human nature. When they do turn to practical activity, then, in either a private or a political capacity, they make ridiculous fools of themselves”¹⁶.

In practice, like Socrates, experts do often fail to persuade the public. They are unable “to get ... many people to understand in ... a short time”¹⁷. In the time they have available they can only hope “to produce conviction, but not to educate people, about matters of right and wrong”¹⁸.

Socrates would prefer people to consult experts, like him, to listen to their arguments uncomplainingly and accept their analyses. Specialists, though, can lose touch with the experiences, aspirations and pre-occupations of the people, or can simply fail to excite the public’s attention. The experts, for instance in a technocratic government, who follow Plato and despise rhetoric, may lose patience with the contrary and fickle opinions of the populace. When the public fail to follow the technocratic agenda, they may be branded as fools and be coerced to adopt the rationalised views of the experts. Violence may seem the only option with an unyielding public.

Democracy

Plato’s *Gorgias* is notable for the anti-democratic stance that Socrates adopted. Socrates declared, “I pay no attention to large numbers of people; I only know how to ask for a single person’s vote”¹⁹. In talking to Polus Socrates announced that, Polus would rely on “everyone in the world” (except Socrates) agreeing with him whereas Socrates was “satisfied” if he gained “the assent of just one person”²⁰. Socrates sought only a single witness to “testify to the validity of

¹⁰ *Gorgias* 491a-b

¹¹ *Gorgias* 491c-d

¹² *Gorgias* 465a

¹³ *Gorgias* 482a

¹⁴ *Gorgias* 521d

¹⁵ *Gorgias* 521e

¹⁶ *Gorgias* 484d

¹⁷ *Gorgias* 455a

¹⁸ *Gorgias* 455a

¹⁹ *Gorgias* 474a

²⁰ *Gorgias* 475e

[his] argument”²¹ He dismissed the democratically formed law when he suggested that it is made by “an assembly of slaves and other forms of human debris”²².

Socrates also undermines the notion of democratic representation when he derides attempts by politicians to be “inherently similar” to the people and to “abolish differences” between themselves and their constituency.²³

Socrates wanted to assign power to the self-confident experts. But, as Latour has shown²⁴, in doing so, Socrates ignored all the characteristics of practical politics, or at least, a practical politics which “balances the needs for peace, wealth and freedom” even when “conditions require that one of these goals be sacrificed to one of the others”²⁵. Indeed Socrates scorns practices of all kinds except theory use. The *Gorgias* therefore gives us clues as to what we should *not* do if we wish to encourage peaceful public involvement in technological choices.

Firstly, Socrates did not want to enter the Agora, mingle with the people and talk to them en-masse. He was dismissive of, for instance, popular oratory “addressed to the assembled population of men women and children all at once — slaves as well as free people”. It is, he reported, “a kind of rhetoric we find we can’t approve of”²⁶.

Secondly, Socrates wanted things fully explained. However, there are many things on people’s minds. The engineer or designer is competing for attention, there is never enough time to educate and never enough time to evaluate and explain all the consequences of a technological choice. The practical politician therefore convinces people but seldom gives them understanding. Explanations, anyway, are beyond the capability of the designer or engineer. They have their own specialist explanations, but in public they are confronted by a distributed, inconsistent knowledge beyond anyone’s comprehension. They have to speak in ignorance but with conviction in a public language and not an alienating, specialist dialect.

Thirdly, Socrates dismissed the public arts as being on a par with flattery²⁷. But potentially insecure self-images, or identities, are reinforced and stabilised through the public arts. The engineer or designer will have proposals for injecting a new product into people’s self-image and will need the public arts to portray their vision and gauge the public reaction.

Representation

If the public is to be involved in making choices about the technology that they have, then the technologists or their representatives have to be involved with the public, possibly by entering the political arena themselves and representing the interests of their products rather than remaining cloistered in their design studios or hidden behind their computers. The designers and engineers often enter into debate during the course of their design work but seldom outside confines of their workplace.

Alternatively, the technologists can support others who represent their designs but this presupposes that someone has already been persuaded to represent the product in a wider arena. Advertising departments fulfil this role once an enterprise has committed itself to a product.

Ultimately, in the agora, the product itself stands as the representative of the designers and engineers.

²¹ *Gorgias* 476a

²² *Gorgias* 489c

²³ *Gorgias* 513b

²⁴ Latour, pp.216–257

²⁵ Rorty, Richard, *Private Irony and Liberal Hope*, in Rorty, R., *Contingency, Irony and solidarity*, CUP, 1989, p. 85

²⁶ *Gorgias* 502d

²⁷ *Gorgias* 501d–502e

The product as representative

When the product stands as a representative it has to exhibit its attributes alongside other products. The electorate must make their preferences known by signalling their acceptance of some products and their disapproval of others. If any activity is to be called democratic, the public must be informed about the options, must make their judgements and they must be given the opportunity to cast their vote.

When the products are produced as part of a series, people can vote for their preferred option by selecting a product from the series of their choice. They vote for the product by consuming it. Because the product is one from a series, consumption does not prevent others from indicating a similar preference. With a surplus of goods, stocks accumulate and anyone can choose.

Where there are shortages people have no choice. They grab things when they are available and grab what they can. However economies, in some sectors, have shifted from dealing with shortages to dealing with surpluses. Developments in manufacturing technology mean that, at least for the time being, we *are* in a position to create an abundance of manufactured goods and the surplus necessary for consumers to signal their preferences.

Radio

The BBC is part of a consortium developing a new radio standard known as “Digital Radio Mondiale”²⁸. The BBC’s aim is to enable their broadcasts to “[r]each target areas some distance away without the unwanted intervention of gatekeepers”²⁹. Thus the BBC’s aim is to undermine the censors acting for existing political authorities. That subversion will only be successful if people choose to buy suitable receivers. Thus the BBC will be able to gauge their support by the number of people who buy receivers and tune into their broadcasts.

Purchase of the receivers is not enough to show sympathy for the BBC’s view of the world since people may buy receivers because the broadcast standard is “used by many broadcasters, both national and international” and the radios “boost ... sound quality ... reliability” and “user-friendliness”³⁰. If people endorse the standard by purchasing radios they will be paying tribute to the standard setters, manufacturers, designers and a spectrum of programme makers. Only if they tune into the BBC will they be endorsing the BBC’s offering.

Transfer of power

A choice is not enough. For a system to be democratic, power must accrue to the enterprise that generated the favoured artefact. The monetary system is the current common way of signalling an acquisition and awarding economic power. Money not only allows people to signal their preferences, but also to indicate the strength of their preference by the amount they are prepared to spend. A market economy in mass produced goods can, therefore, provide *some* of the mechanisms for the democratic development of products. However there are problems. For instance, a product’s supporters must accept the possibility of failure and loss of power while those who succeed can accrue great wealth and have a disproportionate influence. This may not

have worried Callicles who thought that natural rights allowed “the unequal distribution of goods, so the élite have more than the second-rate people”³¹, but it may dismay some who look for equality within democratic institutions.

²⁸ BBC R&D Annual Review, BBC Research and Development, Kingswood Warren, UK, April 2000-March 2001, p.49

²⁹ BBC, p.48

³⁰ BBC, p.49

³¹ Gorgias 488b

Supplanting politics

Markets overlay and even supplant conventional government. It has been reported, for instance, that some major United States suppliers of desktop computers obscure the country of origin of the goods. These computers are bought from Taiwanese companies, but the Taiwanese are increasingly sourcing components from their Chinese mainland subsidiaries. Thus, while diplomatic tensions ebb and flow between the three territories, US consumers purchase goods manufactured in China. Any attempt to halt this trade would damage all three partners. US citizens would not get the PCs that they wanted, and the Taiwanese and Chinese would not benefit from the trade³². This situation has been likened to the MAD (mutually-assured destruction) nuclear doctrine, which constrains the actions of territorial governments because "you can't hurt the other party without hurting yourself"³³. Thus the computer purchases by US citizens binds the people from the three territories together as they demonstrate their preference for cheap computers over diplomatic posturing. The computers act as representatives of what the Chinese people and Taiwanese designers have to offer and the US public can elect to support them. By selecting a particular computer they are showing their preference for the product of a particular group of designers and manufacturers and identifying with a group bound by a series of artefacts rather than a nationality.

Governments role

What democracy does is to displace judgement from a single individual or privileged group to the populace. Experts are therefore not expected to make judgements, but to offer and promote proposals. Experts with different views offer choices and democracy dies when no new views emerge. A lively democracy, therefore, requires incentives and opportunities for new and varied thoughts and new and varied products to enter the arena.

The government's role is to encourage the development of a wide variety of expertise, allow the various experts to inform and educate people so that they make their own individual judgements. A government can provide the mechanisms for expressing choice and subdue violent alternatives; it can ensure people are educated and informed, ensure that there is a wide choice and therefore a surplus of goods, and offer insurance against failure.

Television

Governments in a number of countries have been promoting digital television. In Britain, the British government has "announced its intention to switch over from analogue to all-digital broadcasting"³⁴ but also "pledged that it will not switch off the analogue signal until take-up exceeds 95 per cent"³⁵. Thus the power to abandon analogue broadcasts has been placed in the hands of the viewers.

³² Landler, Mark, Taiwan's PC Makers shift to China, New York Times, May 29, 2001

³³ Andrew S Grove, Chairman of Intel cited in Landler

³⁴ BBC, p.55

³⁵ Hargreaves, Ian, How to turn off the voters, Financial Times Feb 19, 2001

There has been some concern that unless further incentives are offered, the 95 percent figure will not be achieved. The reaction of some viewers is partly to blame since it is reported that “digital fails to meet some customers’ expectations”³⁶ and they return to the analogue transmissions. The government’s response is “to launch an information campaign about digital television ... to salvage plans to switch off the analogue signal”³⁷ and to discuss inducements. This caused a commentator³⁸ to remark, “it’s time to end the forced march to analogue switch-off” and he recommends “a policy that allows consumers to switch to digital ... because they want to”. It seems likely that the government will switch to all-digital TV but to do so they will need to make the option more attractive by responding to the viewers who made their opinions known by not taking up the original deal.

Capital Goods

Very large investments are hard to deal with since the waste involved in making unacceptable choices are substantial and delays that render investment obsolete are unpredictable. Large capital projects have often been controlled by governments, for example in the fields of territorial security, railways, roads, gas supply, medical facilities, telephone systems, electricity generation and steel manufacture. Often governments and their electorates have lost control of such investments. Experiments in preventing the build up of oligarchies are underway.

One option is to redescribe capital projects as services and to offer individuals services and to ensure there are competitive services — an approach used in the telecommunications business.

Another option is to avoid large centralised plant. For instance individuals could have their own electricity generating plants and choose between generating technologies. A further option is to make it easy for individuals to buy and sell shares in large plant and hence influence the policy of the plant operators. For example, Cable and Wireless, a telecommunication company not only operates a global network but also, to make it more attractive to potential shareholders, has an environmental and community policy which, symbolically, has led to support for Internet access in a boys’ home in Dominica.³⁹

Electricity

Markets in capital goods have had to be designed and constructed and those designs have not always proved to be democratic. For instance, in Britain in 1991 a wholesale electricity market was set up in the hope that “markets, not regulation, would ... set electricity prices”⁴⁰. The market arrangements were “designed and created through a nondemocratic process”⁴¹ and, according to the Director General of Electricity Supply “had created a ... market in which ... consumer influence was largely absent”⁴².

In this one-sided market, the Director General maintained, “there were many examples of manipulation by both large and small generators”⁴³ and “that generators and suppliers could

³⁶ Hargreaves

³⁷ Ward, Andrew, Drive To Combat Confusion Over Digital TV, Financial Times; Mar 23, 2001

³⁸ Adam Scorer of the Consumers’ Association cited in Ward

³⁹ Cable and Wireless Annual Review 2001, Cable and Wireless: London, pp.16–17

⁴⁰ Macgregor, Theo, Electricity restructuring in Britain: not a model to follow, IEEE Spectrum, June 2001, pp.15–19

⁴¹ Macgregor

⁴² Final report - AES and British Energy: A report by the Competition Commission on references made under section 12 of the Electricity Act 1989, Competition Commission: London, 2001, paragraph 9.21

⁴³ Competition Commission, paragraph 9.5

almost certainly find ways of exploiting the rules to their benefit”⁴⁴. He was concerned about “the generator’s power to control prices and their potential to abuse that power”⁴⁵. He noted that the “price manipulations by generators ... were detrimental to consumers”⁴⁶. The regulator attributed “unjustifiable price spikes” to “gaming techniques adopted by some generators”⁴⁷ and as a remedy, adjustments were made “to the scheduling software” and since then “the number of spikes has fallen”⁴⁸ but a report also mentions disadvantages of the “so called ‘quick fix’ to the Scheduler”⁴⁹ and that alternative changes to a specific “algorithm” would provide improvements that “supersede the quick fix solution”⁵⁰.

The regulator welcomed “initiatives aimed at alleviating the problem” but added the “Rules are so complex that alternative manipulative strategies will be devised”⁵¹. A commentator remarked that “power markets are too easy to monopolize and manipulate”⁵² and the Director general agreed that “the trading arrangements could not alter those physical and economic characteristics of ... electricity market that rendered it vulnerable to ... exploitation”⁵³. A new scheme has recently been introduced but the suggestion is that “far from simplifying pricing and eliminating regulations, more rules and regulations than ever existed before [which] have been designed and put in place without the full participation of those affected by them.”⁵⁴ Thus the designers of electricity supply systems have not been subject to the censure of consumers because of inadequacies of the electricity market. Consumers also cannot influence the design of the market. They cannot choose which market they patronise. There is only one and the design of that market is in the hands of the techocrats, who substitute elaborate, sterile rules for an absent moral history that recognises the use of electricity as part of people’s ways of life.

Explanations

The value of experts in the public arena is also their source of their weakness. Experts are specialists and therefore offer a partial view, which may not align with the views of lay people. Indeed, experts can differ amongst themselves. Socrates would view these differences as temporary and assumed that “a thing has to be informed by a particular orderly structure — the structure appropriate to it — to be good”⁵⁵ and that “a good artefact ... in an ideal form ... [arises from] not chaos but organization and perfection and the particular branch of expertise whose province the object in question is”⁵⁶.

Plato had in mind a common truth — a “true world” which Nietzsche proposed was a fable that we should abandon by not attempting to find “a single context for all human lives”⁵⁷.

For instance, the surplus implied in a democratic economy implies waste. There are various ways of dealing with waste

1. Accumulate it

⁴⁴ Competition Commission, paragraph 9.16

⁴⁵ Competition Commission, paragraph 9.20

⁴⁶ Competition Commission, paragraph 9.34

⁴⁷ Pool Price Decision Document, OFFER: London, May 1999, p.10

⁴⁸ OFFER, p.2.

⁴⁹ OFFER, p.6

⁵⁰ OFFER, p.6

⁵¹ OFFER, p.10

⁵² Macgregor

⁵³ Competition Commission, paragraph 9.5

⁵⁴ Macgregor

⁵⁵ Gorgias 506d

⁵⁶ Gorgias 506d

⁵⁷ Rorty, Richard, *The Contingency of Selfhood*, in Rorty, R., *Contingency, Irony and solidarity*, CUP, 1989, p. 27

2. Destroy it
3. Have an efficient recycling programme. Though this encourages a cycle of making and destruction
4. Improve just-in-time manufacturing to avoid a build up of potentially wasted stock.
5. Sell the vision first before making the product only in response to requests.

Each option is ideologically charged and will have its advocates. Committed democratic governments can either seek a mandate that permits the government to make a choice or it can find ways of encouraging the people to become involved in judging the merits of the possibilities and ways of allowing individuals to act in response to their judgements. What an avowed democratic government cannot do is ask a group of experts to decide — unless that is the wish of the people.

Public Arts

While Socrates requires a partner to test his arguments⁵⁸ he is disdainful of public presentations of music, poetry and oratory. However it becomes clear Plato's dialogue is itself an account of a public event when Chaerephon is recorded as saying "You can hear from the noise the people are making, Gorgias and Socrates, they want to hear what you have to say"⁵⁹.

Socrates wants his interlocutors to pay attention to his arguments, but Callicles became impatient and exclaimed "Just get the discussion over with, Socrates⁶⁰ ... Just get on with it, Socrates"⁶¹. At one stage Callicles politely agreed with Socrates' point merely to encourage Socrates to finish. "I'll grant you this, Socrates" Callicles said, "so that you can get on and finish the argument"⁶² and later Callicles, in the hope of escaping, asked "Can't you speak without someone answering your questions?"⁶³.

Socrates struggles to hold people's attention and towards the end of the dialogue he tells a story "just a story", he says, "but to my mind it does explain things"⁶⁴. It is then surprising that Socrates dismisses the tragedies in spite of their "delightful charm"⁶⁵ and he does not seem to recognise that his mission to bring about "moral improvement"⁶⁶ first requires the attention of others. Socrates thus simultaneously deploys and condemns popular cultural forms.

Without a means to grab the public's attention, designers and engineers too cannot make their options known to the public. Story telling, drama, music, verse, illustration and so on are a crucial part of making choices available and helping people to weave selected options into their stories of their changing identities. Armed with such stories people will make well-informed judgements that may not accord with the narrow judgements of some experts.

Vocabulary

Rather than adopt Plato's universal theory, Richard Rorty focuses on vocabularies. The principal function of vocabularies, Rorty explains, "is to tell stories about future outcomes which compensate

⁵⁸ Gorgias 487e

⁵⁹ Gorgias 458c

⁶⁰ Gorgias 506c

⁶¹ Gorgias 507a

⁶² Gorgias 510a

⁶³ Gorgias 519d

⁶⁴ Gorgias 523a

⁶⁵ Gorgias 502b

⁶⁶ Gorgias 521d

for present sacrifices”⁶⁷. “To retain social hope”, he writes, people “need to be able to tell themselves a story about how things will get better”⁶⁸. Rorty’s vocabularies can be extended to encompass the variety of visionary technologies that engineers and designers customarily employ, and the publicly accessible technologies employed in advertising, education, the theatre, the media and so on. A theory, even one claimed to be universal, then, becomes part of some people’s stories. Everyone and everything will have their own story but the hope is that those stories will resonate with one another. The designer’s hope is that the story that their design tells can be made to harmonise with the stories of other individuals.

Conclusions

The products or services that designers and engineers influence as part of their professional work represent their views. People can elect to adopt their service or product and thus identify themselves with particular designers or engineers provided there is a choice.

Designers can be adventurous but to be successful must identify themselves with the constituency in which they hope that their product will become the popular choice. They must also, if they wish to be assimilated into a democratic movement, be willing to paint a picture of the identity that they are striving for. In doing so they will become representatives of their designs and be helping to socialise the non-humans that they value. To participate in democracy, designers and engineers will have to take lessons from Gorgias and tell their stories in the most compelling way they can. They must design their products, too, so that they can stand as eloquent representatives.

⁶⁷ Rorty, Richard, *Private Irony and Liberal Hope*, in Rorty, R., *Contingency, Irony and solidarity*, CUP, 1989, p. 86

⁶⁸ Rorty, *Private Irony and Liberal Hope*, p.86