Astroturfing Infotopia

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**Introduction.** The deliberative approach reigns in democratic theory. Yet, the institutional recommendations of deliberative democracy do not go far beyond the injunction to increase group discussion, in its sites, in its duration, and in the number of persons and issues involved. Actual deliberation, let’s say, is an institution of group discussion generally expected to yield benefits, in terms of all relevant values, more worthy than the costs. Who could be against that? Increasing *discussion*, however, is not the same as increasing *deliberation*: group discussion can have quite undesirable effects, or if positive in effect can still cost more than it’s worth. Thus, theoretical and empirical attempts to clarify the benefits and costs of group discussion in democratic politics are welcome. So far, the empirical results are mixed (Delli Carpini et al., 2004, Mendelberg 2002, Mutz 2006, McCubbins and Rodriguez 2006, Steiner et al. 2004, and others). Cass Sunstein’s *Infotopia* (2006) adds to worries about the benefits and costs of group discussion, and identifies novel methods of information aggregation that might usefully complement it in political democracy and elsewhere.

Habermas’ ideal speech situation is an animating idea of deliberative democracy: where discussion is public and open to all, participants argue sincerely, each enjoys an equal right to participate, as Sunstein (2006) says, and, among other things, where there is an open agenda, no time and cost constraints, always the option to move the deliberation to a more reflective level, and unanimous agreement. Habermas devised the ideal in one form as the criterion of truth in another form as the criterion of moral validity. The hypothetical situation serves as a critical platform from which to identify error in actual procedures and outcomes.

Deliberative democratic theorists propose that actual democratic institutions should mirror and approximate some version of the ideal speech situation. The problem is, as we know from the theory of the second best, that mirroring and approximation may strongly diverge in their recommendations (Estlund 2008, ch. 10). The theory of the second best says that if it is not feasible to satisfy the optimal value of one or more of
some set of conditions required for attainment of some first-best ideal state, then attainment of the second-best state may require departure from the optimal value(s) of one or more of the remaining conditions. To mirror the ideal speech situation in an actual institution would be to approach each of its several conditions separately as closely as is practical. The ideal speech situation requires a unanimous conclusion, thus mirroring would recommend an actual decision rule closest to unanimity. The ideal speech situation suspends power, and mirroring would thus recommend responding to power not with power but only with sincere argumentation. And so on. To approximate the ideal speech situation in an actual institution would be to approach its several conditions together as closely as is practical, with sensitivity to problems of the second-best. The ideal speech situation is atemporal, with no status quo; in our actual temporal world, however, there is a status quo, and adoption of a unanimity rule would wrongly entrench it. In the actual world, with its status quo, the best approximation of unanimity is majority rule. In the actual world, it may be better to respond to power with belittling mockery than with earnest argumentation.

*Infotopia* is an excellent book. It digests much new and exciting information, and presents it in clear and simple prose. It is usually balanced in its evaluations, fairly listing the pros and the cons of the alternative institutions it compares. The last chapter, on implications and reforms, is a gem of practical wisdom. *Infotopia* alleges that the hazards of actual group discussion would also affect ideal deliberation, but I dispute that claim. Further, I argue that the book’s evaluation of group discussion is too pessimistic, that discussion’s supposedly perverse effects have alternative explanations, and that the experiments cited about discussion probably mismeasure the effects of persuasion on attitude change. Its evaluation of prediction markets is too optimistic, and such devices should not substitute for political democracy, I say. Wikis, open-source software, and blogs, aggregating information on the internet, although marvelous and amusing, have their own problems. Astroturfing is the use of paid agents to create falsely the
impression of popular sentiment (the grass-roots are fake, thus the term astroturf, which is artificial grass). The comparative democratic egalitarianism of the internet is itself the fragile product of public policy, and is threatened as power and wealth turn their force towards astroturfing infotopia.

**Hazards of Group Discussion.** *Infotopia* identifies four big problems with actual group discussion. Would these problems of discussion arise in ideal deliberation? Surprisingly, *Infotopia* says yes.

The first problem is that a human deliberator is subject to various heuristics and biases. Heuristics are rules of thumb, innate or learned, tacit or express, useful for making quick decisions. Decisions are costly, both in terms of deliberative effort and in terms of opportunities foregone. Heuristics do err, but it is rational to use them if the cost of error is generally less than the cost of engaging in more systematic processing. Some heuristics do not err randomly, but are systematically biased. Actual human discussion, according to empirical evidence presented in *Infotopia*, tends to amplify rather than attenuate such biases. If so, this fact would not detract from ideal deliberation. There are no cost constraints on ideal deliberation, and thus no need for heuristics. The reflexivity of ideal deliberation allows participants to examine the influences of innate and learned biases on individual and collective judgments, and to propose and adopt measures to neutralize them. An individual, for example, can keep in mind that a stick dipped in the water at an angle is not really bent but is still straight. This is nothing new. There is a long human tradition of identifying and attempting to avoid seductive logical fallacies, for example. In contrast, if actual group discussion followed by decision in some arena yields errors that are too costly, all values considered (information, autonomy, fairness, stability, and other costs), in comparison to some better decision-making alternative in that arena, then ideal deliberation is justified to delegate decision to the generally better decision-making alternative (always subject to deliberative review).
A second set of hazards to group discussion, according to *Infotopia*, is hidden profiles and the common knowledge effect. A hidden profile is a piece of information held by an individual which for some reason is not offered to the group. The common knowledge effect occurs when information held by all group members has more influence on the outcome than information held by a few of the members. A human-subject experiment shows the existence of the common knowledge effect, but the account neglects an important alternative explanation. A common heuristic is that the more people who report a claim, the greater is its credibility. In the experiment’s common-knowledge condition, a piece of favorable information about a candidate is repeated across several subjects (strengthening its credibility). In the hidden profile condition, the same piece of favorable information is held by only one of the subjects (weakening its credibility). Since repetition across sources bolsters credibility, it is no surprise that repeated pieces of information are more persuasive than unique pieces of information in the experiment: the common-knowledge effect is not as shocking as it seems. The repetition heuristic is fallible; a more costly requirement to offer and consider reasons for each bit of information is more likely to yield a better group judgment than intuitive tallying of their frequencies of mention. And, the heuristic would be neutralized in ideal deliberation. Another problem is that individuals with unique information may be fearful of the social consequences of disclosing it. This problem would be neutralized in ideal deliberation. In actual discussion, deliberators could be on guard against such errors: organized majorities and minorities, or a chair who actively recruits dissents, or other such devices, might mitigate the hazard. The costs of mitigation should be weighed against the benefits of better decision. The costs and benefits of actual group discussion should be weighed against actual alternative decision-making procedures; no damage is thereby done to the deliberative ideal.

Informational cascades and reputational cascades are a third type of hazard to group discussion. If information is reported sequentially, and if each individual
conditions the credence of his information on prior reports in the sequence, then an incorrect initial report can cascade through the sequence. The outcome of the cascading process could differ from a plainly more accurate process, such as for each individual to report her information independently rather than condition on the reports of others. Fads and fashions in medical diagnosis and treatment may be due to informational cascades. Generally, however, they are easy to design against: avoid cascading processes! And, a cascade result is fragile to the truth: rerun the process with a different sequence, or report information simultaneously, and the cascading outcome is thereby discredited. In a reputational cascade, individuals believe they know what is true, but do not report it, in order to maintain the good opinion of others. In this way, a majority could publicly endorse a falsehood, even though each privately knows of its untruth. This is more of a problem, I think, but there are remedies, for example: socially sanction those who would sanction truth tellers, or allow for anonymous reporting of information, as on many internet blogs, or on the new Wikileaks (providing a public platform for untraceable mass document leaking critical of the governments and corporations of the world).

A fourth hazard is group polarization, the tendency for a group to become more extreme rather than more moderate in its views following joint deliberation. I suggest that group polarization is also connected to the simple heuristic that the more people who report a claim, the greater is its credibility. The heuristic is generally useful, but is subject to error, even in purely individual cognition. Advertisers seek to propagate to individuals not just a message, but a massively repeated message: they seem to be exploiting the heuristic. Thus, the comparison is not between individual judgment free

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1 Wikileaks was temporarily enjoined from displaying its webpage upon motion of an exposed “private banking entity” on the Cayman Islands.
from the repetition heuristic, and group judgment burdened by it. Both individual and
group enjoy its advantages and suffer its disadvantages.

I also suggest that group polarization is more a manifestation of rationality than
of irrationality. First, since information search is costly compared to benefit gained, it is
often rational to rely on the repetition heuristic. Second, human judgment does not and
can not proceed from the repeated aggregation of thousands of atomistic evaluations.
Individuals and groups seek radical shortcuts, among them tacit or express theories which
conveniently relate holistically and summarize those thousands of atoms. Social
scientists, for example, don’t just list data, rather, they seek the simplest useful theory
capable of explaining the data. Individuals aspire to coherent moral codes. A prevailing
theory is unique if constrained by observations that are multitudinous, less ambiguous,
and less inconsistent. Ordinary perception, walking into the yard in the daylight and
seeing a tree, is strongly constrained by observations. Wittgenstein’s duck-rabbit, or the
Necker Cube, where perception flips back and forth from one conclusion to the other,
permits two theories consistent with the observations. A multitude of observations
permits the unique conclusion that the earth circles the sun. At one point in our history,
observations were fewer, and permitted for a time two coherent theories, the Ptolemaic
and the Copernican. Textbook physical science, not on the frontiers of investigation,
pretty much settles on one theory coherent with the observations. Even so, anomalous
observations crop up, and as they accumulate, one theory can displace another. Social
science and social policy are built on fewer, more ambiguous, less consistent
observations; and, as with the duck-rabbit, although many theories and policies are
unacceptable because not coherent with the observations, it may be that more than one is
acceptable because each of them is coherent with observations. Unaccepted theories are
almost inaudible, but the clash of the few acceptable theories is noisily conspicuous.

Generally, given costs, it makes sense to rely more on holistic theories than on
atomistic observations. When observational constraints are strong, a consensus theory
prevails. When constraints are weaker several theories are rationally acceptable, such as left and right in American politics. When people with similar theories deliberate, they receive corroboration of old theory-consistent observations and introduction to new theory-consistent observations. The initial theory is bolstered: group polarization emerges. If a group were to deliberate on the location of the earth in the solar system, we would say that group polarization towards the heliocentric view is a good thing. When more than one theory is acceptable, it’s not necessarily a bad thing for a variety of publics each to develop, to refine, to polarize its theory. We do so in American court system: rather than jury and judge investigating facts and law on their own, two quite adversarial parties present polarized theories about what should be done. We do so in parliaments: majority and opposition. The contest among several competing theories is much more informative than the buzzing confusion of thousands of atomistic observations. Polarization also promotes accountability. Two years ago, one could find housing-bull and housing-bear blogs, each side talking mostly to itself and holding the other in contempt. It turns out the bears were right, and now we know to assign more credence to those blogs and their leading members on evaluations of the housing market, and perhaps on related economic issues. The remedy to polarized theories is not their abolition, but a variety of adjudicating mechanisms: scientific communities, public opinion, legislative determination, and realized predictions.

The several experiments about group discussion reported in *Infotopia* also likely fail to properly measure attitude change following from persuasion. If a person’s attitudes are connected in a coherent network, then persuasion targeted towards a single attitude is likely to fail in the short run. Even if evidence against a single attitude is overwhelming, its many connections to other still well-supported attitudes can render it rational to resist revision of the single attitude, just as when a well-developed scientific theory rejects an anomalous observation as likely mistaken. You can’t turn someone around one shoulder at a time, as American politician Gary Hart says. If the network
account of attitudes is correct, then we would expect that minor attitude change would often be latent, indirect, or delayed, and that major attitude change would depend on an accumulation of changes in many connected individual attitudes, and would be long-delayed but relatively sudden upon occurrence (many examples come to mind: consider U.S. Republican speechwriter Peggy Noonan’s suddenly expressed disillusionment with the younger Bush). I develop all this in another essay (Mackie 2006), where I lay out evidence from the minority influence school of social psychology, unmentioned in *Infotopia*. Majority influence and minority influence differ in process and result. Majority views tend to activate a comparison process; the individual compares his response to the majority's response; since the majority is likely to be correct or not worth contestation, the result tends to be individual *compliance*, public agreement with the majority view regardless of individual acceptance, fertile ground for cascades. Minority views tend to activate a validation process; the minority is presenting an innovation that must be compared to the reality in question; since the innovative minority view must be thought through to be understood, the result tends to be individual *conversion*, a shading towards the minority view regardless of individual awareness. The minority-influence experiments show no manifest, direct, or immediate attitude change in response to persuasion, but robustly show latent, indirect, and delayed attitude change. The deliberation experiments in *Infotopia* look for manifest, direct, or immediate changes in single attitudes, and thus are likely to miss entirely deliberative change in attitude networks.

After review of these four problems, *Infotopia* concludes that “even under ideal conditions, emphasized by proponents of deliberation, group members can be led to err, not despite deliberation but because of it” (102). I have argued that none of the problems affect ideal deliberation; that the experimental evidence concerning actual deliberation is largely mismeasuring persuasion and attitude change, that to the extent that the problems are relevant there are devices available to mitigate their harms; and that ultimately ideal
deliberation for a particular arena of decision, taking all costs and benefits into consideration, may supplement group discussion with other devices or substitute for it entirely, as appropriate.

*Infotopia* next proposes, as substitutes or complements to group discussion, prediction markets, wikis, open source software, and blogs. In the following section, I warn that information-aggregation devices generally, including prediction markets, are vulnerable to opportunistic manipulation. After that I detail prediction market failures.

**Soviet Power Plus . . . Prediction Markets?** A story is told in introductory methodology about the producer auditioning two opera singers. The first sings so horribly that the producer chooses the second unheard. We know of several weaknesses of group discussion from natural experience and scientific study, but we know very little, either in experience or scientific study, about these new devices. Not all enthusiastically introduced innovations work out well. Lenin said that communism would arrive with “Soviet power plus the electrification of the whole country” (Lenin 1920/1966). The accuracy of scientific polls’ election predictions initially seemed miraculous compared to preceding efforts (e.g., readers submit predictions to a magazine), and it was counterintuitive to many that a minuscule random sample would outperform a huge biased sample. Polls even displaced widespread political prediction markets (large-scale gambling on elections in late 19th century America, Rhode and Strumpf 2004). Polls have been in use for eighty years, and we are still discovering important new insights about their limitations (Althaus 2003). And otherwise scientific polls may be abused by the guileful who frame leading questions, or who misinterpret results to the public. We now know that it would have been a huge mistake to alienate authoritative decision to the public opinion poll.

Undoubtedly these new information-aggregation devices will develop and become widely used; and we can expect many more presently unimaginable innovations. I do not dispute the use of these devices in private settings, nor as advisory supplements
to binding public decisions, but I do dispute the proposals of some to turn them into
substitutes for political democracy. Even to use them as supplements, we must test the
devices, in theory, in experiment, in practice, before concluding that bliss in this dawn is
turning over the country’s politics to prediction markets.

Further, there is a perpetual arms race between general-interest institutions and
opportunists aiming for special-interest manipulation of those institutions. Opportunists
know well how to manipulate group discussion, but have not had long to figure out how
to manipulate these new devices. Sooner or later, they will figure it out, especially when
the stakes are high. Already American public opinion and public policy decisions are
manipulated by billions of dollars worth of effort in public relations, lobbying, campaign
contributions, and a revolving door between public and private employment.
Unfortunately, these manipulations don’t all cancel each other out, but systematically
favor the powerful and wealthy. Would designers, administrators, and participants in a
prediction market on reforming the U.S. health care system be immune to the improper
influence of immense power and wealth? If a prediction market were a decision device,
or presumed strongly influential on a public policy decision over whether the U.S. should
create a national health service, would the 295 billion dollar health care industry and its
13.5 million employees refrain from distorting the prediction market? Health insurers
would be willing to make losing bets up to anticipated losses from the policy switch, and
potentially redundant paper-shufflers could be mobilized as well. Could a decision
market be designed that would prevent manipulation concerning a shift from
pharmaceutical patents to open-source drug research and development?

Prediction markets do well in aggregating privately held information, tending to
be better than surveys, group discussions, or ordinary voting, *Infotopia* claims. The book
(Sunstein, 106) at one point says that they may serve as complements to group
deliberation, which is fine and perfectly within the deliberative spirit, but also as
substitutes, which is not consistent with political democracy. Later, *Infotopia* advocates
prediction markets only as a complement to democratic decision (Sunstein, 145), although others are more favorable towards decision markets as substitutes for determining public policy (Hanson 2003). It would be wrong for a democratic entity to substitute entirely prediction markets for deliberation and voting, for the simple reason that there must be an opportunity to deliberate reflectively about the meaning, the scope, and the limitations of the prediction market and its results (perhaps it was poorly designed, perhaps participation was too thin, perhaps there was identifiable manipulation, perhaps the question was wrongly specified). Also, it would be wrong for a political democracy ever to alienate final decision authority to a bureaucracy, an expert, or a prediction market. Delegation is helpful given that decisions are costly, but democratic accountability requires that authority ultimately remain with the delegator. It’s most unlikely that the CEO of a major corporation would alienate decision authority to a prediction market, and there are even more reasons why a democratic citizenry should not do so.

Infotopia proposes that aggregation of expert judgment could be adapted “for use in determining public policy” (41), and offers Lomborg’s Copenhagen Consensus exercise as a model, qualifying immediately that the results of the Lomborg exercise are not necessarily correct and that experts may be systematically biased. The much larger problem, however, is agenda control in the design of expert aggregation. In the Lomborg exercise ten prominent economists met for five days, and were asked to rank 15 given world projects on the assumption that $50 billion extra was available for expenditure over the next five years. They examined pro and con presentations and papers. Major publicity about the results emphasized that three global warming proposals ranked last (although with benefits exceeding costs), and control of HIV, micronutrient distribution, trade liberalization, and malaria control ranked at the top. Many commentators celebrated the results as uniquely “rational,” for example, a Wall Street Journal editorial writer: “Prioritization, cost-effectiveness, efficiency -- these are the ultimate in rational
thinking. . . . They are also nearly unheard-of concepts among the governments, international bodies and aid groups that oversee good works” (Strassel 2006). Cost-benefit analysis, however, is not equivalent to rationality; nor is mere tallying of expert conclusions. Rationality is the exchange of sincere arguments backed by reasons. The results of cost-benefit analysis, and of the Lomborg exercise, cannot even be understood without understanding a great many background arguments, none infallibly certain, and some quite controversial and unsettled. The Lomborg exercise asks what rankings would be for expending on global problems a mere $50 billion within the next five years. Naturally, small expenditures for huge and quick benefits, such as HIV and malaria control, rank high given the assumptions. Moreover, the economists discounted future benefits to net present value using rates premised on individual preference for a smaller benefit now over a larger benefit later. The benefits of reducing global warming lie far in the future, but costs might start to be incurred now; and a standard discount rate makes it always irrational to care anything about humanity more than 100 years into the future. Such discounting may be defensible in planning an individual life, but may not be a defensible approach to intergenerational justice. This is a genuine values debate, one that economists can contribute to, but one also requiring the involvement of philosophers, ethicists, and citizens. Finally, two of the participants publicly complained of agenda control in the exercise. Robert Mendelsohn, a conservative Yale economist appointed in the exercise to be the devil’s advocate against William Cline’s paper in favor of strong action on global warming, now worries that “climate change was set up to fail” (Economist 2005). Thomas Schelling, one of the ten panelists, “told us last January that the climate ‘option’ was very inadequately presented, and that Lomborg’s setting-out of the briefing on climate change was misleading…. ‘I unsuccessfully argued that we should delete the reference to climate change… in the end he [Lomborg] had his way’” (Andreadis and Smith 2007).
If the Copenhagen Consensus, sundered of justifying arguments for and against its conclusions, had been used to determine public policy on global warming, a great wrong would have been done. Authority must not be entirely alienated to such devices. Because these devices are new and complicated, it may be more difficult for ordinary persons and even for many experts to detect agenda control and other manipulations, than it is to detect them in more familiar settings such as discussion. Also, notice that if authority were so alienated, all the positive and negative pressures now directed at politicians would be redirected at those with influence over the outcomes of the new decision mechanism.

Here are three more problems with prediction markets. First, trader subversion of events. When I was active in local politics I won a small prize from the weekly newspaper for the best prediction of local election results (34 out of 36 contests). My predictions were based on published polling information, understanding of elections and campaigns, knowledge of candidates’ strengths and weaknesses, gossip, and long immersion in the local scene. Had there been a prediction market I would have bet a lot on it, and I would have made a lot of money. Now, suppose that some ruffian has his girlfriend bet $5,000 against State Senator Chinwattle, picks a fight with him in a crowded restaurant while the moll anonymously calls the police and the local media, then collects his winnings a few days later. Believe me, the story is not farfetched.

Second, exploding contingencies. Prediction markets fare well making simple predictions in the near future, all else held equal. The prediction markets said to be conducted by Google and Microsoft include only simple questions in the near future. Chicago’s Mayor Bilandic is believed to have lost the 1979 election because the city failed to respond to a massive snowstorm. A prediction market held before the snowstorm would not have predicted her loss, unless one of the bets was contingent on the city failing to respond to a massive snowstorm. But who would have thought to create a market including the dual contingencies of a) a rare storm and b) failure by the
city to respond? The more contingencies one considers, the more markets there must be, explosively, and as the number of markets increases the more each thins in participants and thereby becomes nonpredictive.

Consider a prediction market on the best trade policy for the United States. What is the goal to be achieved? To increase GNP? Hurricanes do that, as does breaking up families so that nonmarket household activities are moved into the marketplace (Folbre 2001). Who defines the policy goal? Choice of policy goal largely predetermines choice of policy; and agenda control finds a new channel. Second, who defines the markets? Of the trillions of conceivable contingencies, who decides which few deserve a prediction market? Agenda control creeps back in. By emphasizing some contingencies and neglecting others, the market administrator could influence the policy prescription in an opportunistic manner. Is this a reason not to use prediction markets? No. But it is a potential flaw to be taken into account in comparative institutional design.

How about a prediction market about the general accuracy of prediction markets? That just pushes the problem back one step. What contingencies are considered? Who decides on which markets to be held?

Third, market bias. Would traders themselves be systematically different from the general population on dimensions other than believing that they have good information? Casual inspection at any major university shows that graduate students in women’s studies, or philosophy, or business, or economics, differ in nonrandom ways from the general population in areas other than education and intelligence, accounting for some of the stylistic differences between disciplines. Many American economists, for example, seem to have nonempirical beliefs about the universality of self-interest and the absolute superiority of market mechanisms. Would an actual policy market attract those unjustifiably enthusiastic about substitution of markets for political democracy and nonmarket institutions, or those identified with the interests of the richer strata of the population? A prediction market advocate would say that, if so, those lacking a market
bias could make a lot of money. Those lacking a market bias, however, are less likely to bet on a market; people who are satiated with money rewards pursue other goals in life. Also, market fundamentalists would be willing to put their money where their mouths are on a prediction market, but their sincere beliefs could be quite self-deceptive in evaluating policy alternatives. It is difficult to imagine them endorsing anything but a wasteful and inequitable private health insurance system in the United States. The policy decision market would be based on some set of outcomes twenty years hence—infant mortality, longevity, absenteeism, dollar costs—twenty years out the fundamentalists would lose their bets, but meanwhile the country would be stuck with rotten policies. Market fundamentalists also tend to praise unbounded immigration, unregulated international trade, ever more outsourcing, and minimization of global warming or public response to it; all open questions, but questions also demanding prudence and practicality lacking in the utopian’s toolkit. I would dread a libertarian 1917.

**Prediction Market Failure.** The infotopians suggest we should trust in prediction markets because they are superior to public opinion polls, but both generally and anecdotally they do no better than polling data. It would be unwise to alienate public policy to prediction markets: they were as duped as opinion polls by false claims that Iraq posed a threat to the U.S.

It is now a commonplace that political prediction markets generally outperform public opinion polls (Berg, Nelson, and Rietz forthcoming; Sunstein, 110), but that commonplace itself is likely the result of an information cascade. The miraculous accuracy of markets is far overstated. Prediction markets ask participants to forecast the election-day outcome. Public opinion polls ask respondents whom they would vote for if the election were held today. The two exercises are significantly different. When polling data for recent U.S. presidential election contests are properly adjusted to account for the difference, daily poll projections are superior to Iowa Electronic Market prices. Adjusted polls are more accurate than winner-take all prices 87% of the time, and do far better than
prices in the period more than 90 days before the election (Erikson and Wlezien forthcoming: “our results suggest the need for much more caution and less naïve cheerleading about election markets on the part of prediction market advocates”). In a casual blog commentary, Emile Servan Schreiber, principal in a major prediction market firm, adds that “the superior accuracy of markets over polls when predicting elections may be a U.S. artifact that isn’t so easily reproducible elsewhere,” continuing that in France and Holland prediction markets don’t generally beat (adjusted) polling data (http://www.midasoracle.org/2007/11/15/justin-wolfers-dreams-of-a-prediction-market-land-where-exchange-odds-are-cited-but-not-the-polls/).

The political prediction market’s alleged superiority to other aggregation devices is supposed to be due to its superior incentive to reveal private information. That superiority is not apparent in real settings, however, where the market seems to function merely as an aggregator of polling data and other public information: “these are less futures markets than immediate-past markets. The price movement tends to respond to conventional wisdom and polling data; it doesn’t lead them” (political journalist Daniel Gross 2008). An experimental study by principals of the Iowa Electronic Markets found that predictions based on market prices and predictions based on an average of the forecasters’ predictions were generally not statistically different (although the variance of market predictions was much smaller, which could be due to traders updating after observing the initial market price; see Gruca, Berg and Cipriano 2005). Chen et al. (2005) find no statistically significant difference between market prices and the average opinion of experts concerning the outcome of 210 American football games in 2003 (Chen et al. 2005).

That the prediction markets are poll-followers rather than poll-beaters can be seen in their behavior on November 2, 2004, election day. When the news media reported rumors that exit polls were running in Kerry’s favor, both the Iowa Electronic
Markets and Tradesports raised Kerry’s odds to above two-thirds (Gross 2004). The herd stampeded upon hearing the squeak of a mouse. The Iowa Electronic Markets predicted Dean as the big winner of the Iowa Democratic Caucus in 2004, and Kerry as a big loser, but Kerry beat Dean. *Infotopia* (Sunstein, 134-136) provides further examples: markets for predicting a Bush nomination for the Supreme Court, and Patrick Fitzgerald’s decision over whether to indict Karl Rove were not informative, but merely tracked the latest media rumors. Popular financial blogger Barry Ritholtz worries that thin prediction markets populated by a biased sample of the population (“higher income, better educated, leaning more [Republican]”) could yield bad forecasts (http://bigpicture.typepad.com/comments/2008/01/prediction-mark.html).

We have proof positive that prediction markets are not immune from manipulative propaganda (Gardiner 2003), on a hugely important issue: weapons of mass destruction in Iraq, the stated rationale for one of the most costly decisions ever made by the U.S. In December 2002, 86% of respondents in a PIPA poll of U.S. residents believed that Saddam Hussein had the capability to use biological or chemical weapons against American civilians in the United States, and 87% thought that if the U.S. took military action against Iraq it was likely he would transfer weapons of mass destruction to terrorist groups for use against the U.S. (Kull 2002). The Carnegie Endowment reports that before 2002, U.S. intelligence agencies had accurately concluded that Iraq probably had no nuclear program since 1998, and had not sought to procure uranium. The October 2002 National Intelligence Estimate dramatically reversed those judgments, with the exception of the U.S. State Department’s Bureau of Intelligence and Research (INR). The Carnegie report hypothesizes that the establishment in 2002 of an independent intelligence agency at the Pentagon, and unusually intense pressure by Bush political appointees, accounts for the reversal (Cirincione et al. 2004). Hans Blix, chief U.N. weapons inspector had found no evidence of chemical or biological weapons on the eve of the U.S. invasion in 2003; and
Mohammed el Baradei, chief U.N. nuclear inspector found no plausible indications of nuclear weapons or a nuclear weapon program (CNN 2003c). Baradei at the same time disclosed that the documents backing the U.S. claim that Iraq had clandestinely obtained uranium from Niger were “not authentic”; the IAEA’s investigation included merely googling the names of alleged Niger officials appearing in the forged documents. In June of 2003 Blix, normally a bland diplomat, told the press that the Bush administration had leaned hard on his inspectors to write a more unfavorable report, and he denounced unnamed Pentagon officials for their campaign of professional and personal smears against him (Smith 2003). Later, Baradei’s phone was tapped by the U.S., in search of material that would detract from his reappointment as head of the UN nuclear weapons agency (Baradei was clean, and the attempt failed, Linzer 2004). In March of 2004 Blix and Baradei publicly reiterated that invasion of Iraq in March of 2003 was not justified by the evidence at hand at the time (CNN 2004).

Scott Ritter, a U.N. weapons inspector in Iraq from 1991 to 1998, a Republican who had voted for Bush in 2000, and an ex-Marine, stated repeatedly in the months preceding the U.S. invasion in March 2003 that Iraq possessed no WMDs. Ritter’s credibility was also systematically attacked. It was revealed on January 26, 2003 by anonymous federal prosecutors that Ritter had been arrested in 2001 under New York state law, but not charged, for internet solicitation of sexual activity with a policewoman posing as a 16-year-old female, a class B misdemeanor, a case in which records had been sealed (CNN 2003a). Wolf Blitzer of CNN convened a panel on the same day to discuss Ritter’s claims, but did not include Ritter or any war critic (all information from Greenwald 2007). Blitzer began by repeating the sex story. Donna Brazile, Democratic apparatchik and war promoter declared that this information destroyed Ritter’s credibility. War promoter Robert George of The New York Post added that Ritter had received hundreds of thousands of dollars from Saddam Hussein (actually, from an American citizen of Iraqi descent) for making a film about Iraq, and was thus Saddam’s
paid misinformation agent. War promoter Peter Beinart of *The New Republic* said that Ritter had no credibility before the sex leak, and had even less after. Compared to Ritter, the panelists had absolutely no scholarly or practical expertise on Iraq or WMDs. In May 2003, the French Ambassador to the U.S. issued an unusual public letter condemning the spread of false information about France by U.S. administration officials (Levitte, 2003).

On September 6, 2002, Knight Ridder Newspapers reported a story headlined, “Lack of Hard Evidence of Iraqi Weapons Worries Top U.S. Officials” (FAIR 2007). On September 19, the Washington Post published an article titled, “Evidence on Iraq Challenged: Experts Question if Tubes Were Meant for Weapons Program,” the article reported that its source “contends that the Bush administration is trying to quiet dissent among its own analysts about how to interpret the evidence” (FAIR 2007). In September 2002, the French intelligence service dismissed U.S. claims of an Iraqi nuclear threat as “phony” (FBIS 2002). On October 8, Knight Ridder published a story reporting interviews with a dozen military and intelligence officials who charged that, “the administration squelches dissenting views and that intelligence analysts are under intense pressure to produce reports supporting the White House’s argument that Saddam poses . . . an immediate threat to the U.S.” (FAIR 2007). Later in October, Russian President Putin dismissed the U.K. dossier on Iraq, stating that, “Fears are one thing, hard facts are another... Russia does not have in its possession any trustworthy data that supports the existence of nuclear weapons or any weapons of mass destruction in Iraq and we have not received any such information from our partners as yet” (White 2002). Hans Blix (2005) reported that before the war Chirac expressed doubts to him about WMD intelligence claims, and that Blix himself realized in January 2003 that Saddam Hussein’s failure to disclose weapons might have been due to their absence. On February 24, 2003, France, Germany, and Russia submitted a memorandum to the U.N. Security Council, stating that “no evidence has been given that Iraq still possesses weapons of mass destruction or capabilities in this field” (CNN 2003b). These three members of the U.N. Security
Council refused to sign on for the war. On March 3, *Newsweek* reported that Iraqi defector General Hussein Kamal, previously alleged by war promoters to have provided strong evidence for the WMD charges, had actually told UN weapons inspectors that after the first Gulf War Iraq had destroyed all chemical and biological weapons and the missiles to deliver them (FAIR 2007). After WMDs failed to materialize, Charles Krauthammer (2003, emphasis added) wrote in the Washington Post that, “*Everyone* thought Hussein had weapons because we knew for sure he had them five years ago and there was no evidence that he had disposed of them. The weapons-hyping charge is nothing more than . . . a way for opponents of the war . . . to change the subject and relieve themselves of the shame of having opposed the liberation of 25 million people.”

The factual claim that *everyone* was mistaken was just another piece of the same propaganda operation. The Center for Public Integrity (2008) obsessively documents 935 false statements about the national security threat posed by Iraq made by George W. Bush and seven of his top officials in the two years following September 11, 2001.

An alert observer would notice that prior to the invasion in March 2003 individuals a) most likely to have the best information, and b) most neutral in orientation, declared that there was no evidence of WMDs or of ongoing WMD programs. An attentive student would notice that many of the war propagandists – Cambone, Khalilzad, Kristol, Libby, Rumsfeld to an extent, Schmitt, Shulsky, Wolfowitz – share an esoteric political philosophy notably alleged to endorse deception of the masses (Drury 1999). An inquisitive citizen would notice that an overlapping set of individuals constituted as the Project for a New American Century (PNAC), headed by Kristol and Schmitt, sent a public letter to President Clinton in January 1998, *five years prior* to the invasion, emphasizing that Saddam Hussein could obtain capability to deliver weapons of mass destruction and demanding that Clinton pursue military action and remove the Hussein regime from power; 12 of the 18 signatories went on to join the Bush administration foreign-policy apparatus. PNAC sent further public letters to Bush, with respect to Iraq
centering on the threat of its weapons of mass destruction and demanding military action, on September 20, 2001; April 3, 2002; January 23, 2003; March 19, 2003; and March 28, 2003 (all PNAC documents at http://www.newamericancentury.org/). A sophisticated analyst would notice that central evidence, about whether there was “a smoking gun that could become a mushroom cloud” (Bush 2002), had been revealed by the United Nations before the invasion as forged; and that all serious parties who questioned the WMD propaganda were systematically bullied and smeared by the war propagandists, suggesting that they had something to hide. How did prediction markets respond to such information? With abysmal failure.

As of May 1, 2003, the market predicted about a 60% probability of WMD discovery before a month had passed. As of May 1, the market predicted about an 85% chance of WMD discovery before two months had passed (no better than the poll finding that 86% of U.S. respondents believed in WMDs), and about an 80% chance before five months had passed (Wolfers and Zitzowitz 2004). Notice the manifest irrationality: the market declared that the odds of finding the weapons within a longer time span were lower than finding them within a shorter time span. As of about June 30, after Hans Blix had loudly and publicly complained of manipulation, bullying, and smearing, after Wolfowitz and Rumsfeld publicly hedged about the existence of WMDS, and after the WMD claims were widely denounced in Europe as “complete and utter lies” (AP 2003), the market was still around 50% for finding WMDs by October 1. According to a Harris poll, as of June 2003, and excluding by my calculation not sure and refused, 60% of U.S. respondents believed that the U.S. government accurately presented reports of weapons of mass destruction, and 40% believed it deliberately exaggerated such reports (Harris Poll, 2004). The prediction market result was not much better than the poll result, and both were quite wrong.

What say prediction-market advocates? Wolfers and Zitzowitz (2004) suggest that, “the public[?] information on the probability of weapons of mass destruction in Iraq
appears to have been of dubious quality, so it is perhaps unsurprising that both the markets were as susceptible as general public opinion to being misled.” *Infotopia* (Sunstein, 135) offers a similar explanation: that traders were convinced by the apparently strong arguments of the Bush White House and the market lacked dispersed information that traders could use to form a contrary prediction.

These explanations fail. Investors in a prediction market are supposed to judge whether or not information is of dubious quality. In a prediction market, as contrasted to a poll, traders have an incentive to do excellent research and analysis, to pay close attention to detail, and to ignore the conventional wisdom, in search of profits; and those with private information, sometimes anonymous insiders, are rewarded. The few astute price makers are supposed to crowd out the noisy mass of uninformed or irrational traders. So the story goes. As I have outlined, there was plenty of evidence, dispersed information if you will, before and after the onset of the war, that the WMD claim was doubtful, even false. True, this information was bobbing around in a sewer of contrary propaganda, but it was in plain view. Those with eyes and ears closest to reality – Blix, Baradei, Ritter – and of unchallengeable credibility – INR, Blix, Baradei – unmistakably declared a lack of evidence. That the disinterested messengers were bullied and smeared by zealous war propagandists only added credence to their claims. France, Germany, and Russia were not convinced, and said so. But the prediction market was hornswoggled. It may be hard to manipulate a prediction market as a trader, but it is dismayingly easy to manipulate the market as a propagandist.

Prediction markets and similar innovations are wonderful intellectual developments that, properly applied, would improve human lives. I simply urge prudence, and warn especially against alienating public policy to manipulated devices like the Copenhagen Consensus. The existence of WMDs in Iraq was the critical test of prediction markets for public policy. They failed the test.
Astroturfing Infotopia. So far, I have argued that group discussion is treated too pessimistically, and that prediction markets are treated too optimistically. Wikis, open-source software, and blogging are three further realizations of infotopia, each aggregating information on the internet. I respond that the comparative democratic egalitarianism of the internet was due to a first-mover advantage to its pioneers, an advantage that may recede as corporate actors more actively respond with astroturfing and other stealth devices. Also, the popular nature of the internet is an artifact of public policy, and may be worn down or disposed of by state regulation.

The public relations industry routinely refers to what it calls third party technique: deceptively hiding special interest appeals behind masks appearing to be more neutral or trustworthy than the true source. Astroturfing is an instance of the technique. Public relations are quickly catching up with the internet revolution, and we can be sure that enormous resources will be devoted to astroturfing infotopia for the benefit of the powerful and wealthy.

Young public-relations personnel have launched an anti-astroturfing campaign (http://www.thenewpr.com/wiki/pmwiki.php?pagename=AntiAstroturfing.HomePage). Several possible instances of internet astroturfing are reported there. For example, a folksy blog by Jim and Laura has them driving their recreational vehicle across America, overnighting in Walmart parking lots, and reporting on the firm’s happy employees. They neglected to mention that Working Families for Walmart, an entity formed by Walmart’s public relations firm, paid for the whole thing. When exposed by Business Week, the firm acknowledged an error (Gogoi 2006). An election campaign public relations firm, Advantage Consultants, is now offering rent-a-trolls to infest political blogs. Their advertisement in a campaign consultant magazine says: “Get ahead of your opponent with professional blog warriors. Be prepared to ‘flood the zone’ with comments from professionals who are ready to put your talking points on the blogosphere...
24/7. Why wait for the attack? Launch your attack with a battery of blog and forum comments aimed at all local media and blog sites in your district” (Lunkhead 2007).

In 2002 a paper was published in *Nature* claiming to find artificially-modified genes in the heartland of native Mexican maize. Transgenic corn is forbidden in Mexico, and thus the finding would suggest that such modifications widely spill over onto unconsenting parties. A campaign by the biotech website Agbioworld.org claiming that the paper’s methodology was defective resulted in the unprecedented withdrawal of support for the paper by the journal. The paper’s authors say that retests vindicate their conclusion, and the Mexican government published independent but non-peer-reviewed reports of measured contamination. The paper’s authors say that retests vindicate their conclusion, and the Mexican government published independent but non-peer-reviewed reports of measured contamination.² Agbioworld’s forum Agbioview posts media and other reports about the benefits of genetically-modified food crops. Sixty of the first postings on Agbioview objecting to the *Nature* paper were by two named but unidentifiable people. One was reportedly traced to the Bivings Group, a public relations firm specializing in internet advocacy, which on its webpage reports biotech giant Monsanto as a client. The other could not be traced, but she frequently referred to the Center for Food and Agricultural Research, an organization which yields no google hits except for denunciations as fake by critics (Platoni 2002). Before it disappeared, the CFFAR website was reportedly registered to a member of the advocacy and outreach department of the Bivings Group (Fedup, 2006). The Bivings Group denies that it employed the two mysterious individuals. A 2002 essay on viral marketing on the Bivings Report website removed the following passage shortly after the AgBioWorld controversy.

There are some campaigns where it would be undesirable or even disastrous to let the audience know that your organization is directly involved. ... Message boards,
chat rooms, and listservs are a great way to anonymously monitor what is being said. Once you are plugged into this world, it is possible to make postings to these outlets that present your position as an uninvolved third party.

The essay now states that one should “make relevant postings to these outlets that openly present your identity and position.”

These are a few examples of exposed astroturfing, and wide exposure neutralizes such an attempt. By definition, however, we do not know of successfully concealed astroturfing of the internet. How much is there? How much more can we expect? Who has the resources to pull ahead in an arms race between concealment and detection?

“Do-no-evil” Google was recently embarrassed when infosurfers linked to the following entry in its new Health Advertising Blog, about Michael Moore’s movie, *Sicko*.

. . . . Moore attacks health insurers, health providers, and pharmaceutical companies by connecting them to isolated and emotional stories of the system at its worst. Moore’s film portrays the industry as money and marketing driven, and fails to show healthcare’s interest in patient well-being and care. Sound familiar? Of course. The healthcare industry is no stranger to negative press. . . . Many of our clients face these issues; companies come to us hoping we can help them better manage their reputations through “Get the Facts” or issue management campaigns. . . . We can place text ads, video ads, and rich media ads in paid search results or in relevant websites within our ever-expanding content network. Whatever the problem, Google

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2 I could not find peer-reviewed confirmation of those claims; but the main point here is astroturfing by an asymmetric power.
can act as a platform for educating the public and promoting your message. . . .

(Turner 2007a)

For newspapers or search engines to carry advertising lowers their costs for their consumers, which is a great thing. Google issued two vague clarifications. In one, the original poster explains that she was stating her own opinion, not Google’s, about the film, and that, “Whether the healthcare industry wants to rebut charges in Mr. Moore's movie, or whether Mr. Moore wants to challenge the healthcare industry, advertising is a very democratic and effective way to participate in a public dialogue” (Turner 2007b). We all have worries about regulating political speech, but let’s not pretend that a process favoring the interest with the most money, rather than the equal interest of each citizen, is democratic. The poster’s boss says that Google is interested in health care reform: they have some (money-making) ideas for improving health care information, and they have improved health care for their own employees (Krasner 2007)! Unlike human individuals, corporations such as Google and health insurers have only one purpose: to maximize profit to their owners. Reputation management – a different craft than sincerity – is practiced by Google for itself and for its clients only for that purpose. It serves the public interest for profit-making firms to compete in providing us with goods and services, but it does not serve the public interest to delegate public policy to them. Google also recently hired the right-wing DCI Group, a notorious astroturfer, as its DC lobbyist (Doctorow 2006). Fortunately, the free and fair flow of information is in Google’s competitive interest, so far.

Except in China. Google and other internet companies acquiesced in the censorship of internet searches by subjects of that autocratic regime.³ Maybe this was the choice of a lesser evil, and maybe the presence of American companies will help

³ For a large selection of articles on the topic, see http://blogs.pajamasmedia.com/china_syndrome/
liberalize China’s politics in the long run. For the larger American business community in China, however, liberalization arguments vanish when revenues are ever so slightly in doubt. A legislative proposal to strengthen employment and labor protections for Chinese workers met with stiff opposition from these lovers of freedom, who threatened to disinvest from China in response (Global Labor Strategies, 2007; Google had no position on these matters). The first wave of utopianism, the borderless internet, rejoiced that it would undermine and transcend the territorial state. But the desire of marketers for geographic segmentation of advertising stimulated invention of methods of internet geoidentification. As the borderless internet became bordered, it came more under the control of territorial states (Goldsmith and Wu, 2006). The second wave, of infotopian democracy, depends on a regulatory environment subject to state revision, and is vulnerable to covert and overt subversion by the powerful and wealthy. Who will bet that Wikileaks will survive?

I have disputed a few points, and have urged more optimism for the old, and less for the new. My critical reservations are outweighed, however, by Inftotopia’s many accomplishments.
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