

What do the British public think of inequality in health, wealth, and power?

Key words:

Health inequality; public opinion; political inequality; income and wealth inequality; different conceptions of inequality

Abstract

Given the importance of public opinion for policy formation and the salience of inequality as a political issue, little attention has been given to the public's views about the desirability of equality, not only in health but also in economics and politics. We report the results of an on-line survey of attitudes to equality carried out in late 2016 in Great Britain (N=1667 with a response rate of 35-50%) across these different domains. The survey allowed for testing whether public opinion is sensitive to different conceptions of equality across two other variables: absolute versus relative (everyone should have the same versus inequality should be reduced) and bivariate versus univariate (inequality in one domain, e.g. health, is judged in relation to inequality in another (e.g. income) versus inequality in a domain is judged independently of other domains). It also allowed us to see, across those conceptions, the extent to which support for equality in one domain overlaps with support for equality in another domain.

We find that for health, economic and political equality a relative conception of equality generally attracts more support than an absolute conception, and that for health and political equality a bivariate conception attracts more support than a univariate conception. We also find that conceptions of equality affect how much overlap exists between support for equality across different domains, with a bivariate and relative conception resulting in much more overlap than a

univariate and absolute conception. We also find evidence of support for Michael Walzer's 'complex equality' theory in which we tolerate inequality in one domain as long as it does not determine inequality in another. In Britain, respondents object not so much to economic inequality itself as to its determining both political inequality and health inequality.

Introduction

Public opinion about health policy is rather more important for the long-term direction of policy than sometimes admitted (Jacobs, 1993, pp. x-xi). The same is arguably true for public policy more widely (Burstein, 1998) (Bok, 2001, pp. 356-363). Although it is theoretically possible for policy initiatives to make their way through the process without any visible public support, for example by the operation of 'garbage can processes' (Cohen, et al., 1972) (Kingdon, 1994), in a system of government with claims to be democratic, attempting to do good by stealth in any field of policy constantly runs the risk of exposure, revolt and rejection (Green, 2016). But even policy-makers, or would-be policy-makers, who understand that public opinion is important do not always act as if they do. This seems particularly so for health inequality and health disadvantage. Researchers in the field, increasingly frustrated at their lack of purchase on policy, have started to see themselves as advocates of change and have begun to take an interest in the policy process itself, but calls in that context to 'listen to and engage with the public' seem to come only as an afterthought and without any scoping of the size of the task (Smith, et al., 2016). Instead, policy formation and discussion about health inequality sometimes assume that the public believes in an argument that can be reduced to a syllogism in the form: all inequality is wrong; health inequality is a form of inequality; therefore health inequality is wrong. The Marmot Review, for example, begins by asserting that 'Reducing health inequalities is a matter of fairness and social justice' (Marmot, 2010), as if this were by itself a conclusive argument against it.

But is the assumption warranted that the public accepts that all inequality is wrong? Even some politicians of the left seem to think not, having concentrated on health inequality precisely because they think voters reject a wider egalitarian agenda and so can only be persuaded to support egalitarianism on a narrow front (Lynch, 2017), a situation that seems unlikely to change (Kellner, 2017) (Kelly & Pearce, 2016). The efficacy of promoting health equality as a lever for wider egalitarianism can itself be questioned, given how easy it seems to be to divert concerns about health inequality into campaigns concerned solely with individual behaviour (Lynch, 2017). But if one is genuinely concerned about health inequality in its own right, and not as a proxy or a lever for a wider political agenda, the accuracy of the Marmot syllogism remains important. If it is incorrect, policy-makers would need to revise how they talk to the public about health inequality.

In particular, questions arise about whether supporters of health equality should be re-framing the way they talk about equality. First, does support for equality in health rise or fall by talking about it 'univariately', that is, without any reference to economic inequality? Secondly, does support for equality depend on whether the public is thinking in absolute terms, that the goal should be perfect equality, or in relative terms, that the goal should be to make the situation merely less unequal? And thirdly, does support for health equality rise or fall by linking it to other forms of equality not often referred to in the literature, for example political equality?

We present here some survey results that suggest that whether Marmot's syllogism reflects public opinion depends on how one conceives of equality, and that the answer to the subsequent three questions might be linked. Framing the aim of policy as the complete eradication of health inequality, as sometimes occurs in political debate (McGarry, 2016, column 1105) (Unison Scotland, 2016), both reduces support for the policy and decouples it from other forms of inequality. In contrast, framing the policy aim more modestly as reducing health inequality makes not only for greater popularity but also for greater overlap with support for equality in other fields. Univariate formulations of equality seem to reduce support for equality not only in health but also in politics.

Relative formulations increase support compared to absolute ones. More speculatively, the results suggest that British respondents might think of health equality in a way similar to the way they think about political equality: that economic inequality, while not itself illegitimate, should not lead to inequality in other aspects of life; and that entitlements to health are an aspect of citizenship.

Previous work

This project brings together disparate topics and so a comprehensive review of all the relevant literatures would have been disproportionate. We concentrated on fields relevant to the forms of equality and inequality in which we were interested and the possible relationships between different forms of equality. These fell into six topics: what counts as health inequality, what is known about public opinion on health inequality, what is known about public opinion on economic inequality (including the difference between support for absolute equality and reducing inequality), what is known about public opinion on political inequality, and the concept of different value spheres. Literature in adjunct fields was not systematically surveyed and so although we have covered substantive results in the field, we might not have covered all possibly relevant conceptual work.

What should count as 'health inequality'?

In the international empirical literature 'health inequality' has been used descriptively to refer to differences in health achievement, in contrast to 'health inequity', which is an inherently normative concept (Kawachi, et al., 2002). Within the UK – the focus of this article – 'inequalities' seems in contrast have merged with 'inequities' (Whitehead, 1992) (Smith, 2018).

A great deal of effort has gone into finding the determinants, social or otherwise, of observed inequality. But that work presupposes that we know how to measure health inequality in the first place. One view is that it should be thought of as 'bivariate': it concerns the chance that living a long and healthy life varies systematically with another variable, usually an economic variable such as wealth or income (Marmot, 2013) (Braveman & Gruskin, 2003). But that view has been challenged

by those who say that inequality is itself a 'univariate' concept (Wolfson & Rowe, 2001; Murray, et al., 1999). On the univariate view, the question is the extent to which the chance of living a long and healthy life itself varies across a population, regardless of how it varies with some other variable.

The bivariate-univariate distinction is very useful. It specifies different types of inequality without importing assumptions about the causes of inequality (Murray, et al., 1999). Indeed, it clarifies some issues about how causal questions might be researched. For example, if we are interested in whether income inequality makes health inequality worse (and whether health inequality makes income inequality worse) defining health inequality bivariately in a way that already incorporates economic inequality adds to the complexity of the analysis and might even introduce an element of circularity. A univariate definition of health inequality avoids that problem. Of course, even then, the possibilities of bi-directional causation or common causation mean that precise effects might be difficult to tease out, but at least we are not adding to the difficulties by our choice of definition. The distinction also clarifies different causal questions that might be asked about the relationship between inequality and population health. One question is whether economic inequality adds to the total burden of ill-health (Lynch, et al., 2004; Pickett & Wilkinson, 2006). Another, different, question is whether univariate health inequality adds to the total burden. A third, distinct, question is whether bivariate health inequality, combining the two, itself adds to the total burden.

But in some respects, the distinction needs further clarification. One aspect of the bivariate-univariate debate is that the univariate view is said to concentrate on inequality across individuals, whereas the bivariate view is said to concentrate on inequality across groups or classes (Asada, 2013). In fact, the connection between univariate and bivariate measures on the one hand and individual and group inequality on the other is not straightforward. Bivariate measures have two distinct features, namely the comparison with another variable and the use of that other variable to define the groups to be compared. One can in principle separate those two elements. For example, one can ask whether average life expectancy by country or neighbourhood correlates with average

income by country or neighbourhood (Preston, 1975) (Marmot, 2010, p. 38), or one can compare the life expectancy of members of different income groups and ask whether the scores of those groups are different (Marmot, 2010, p. 44). The former ignores social class. The latter consciously brings in analysis at group- or class-level (Bolam, et al., 2004).

Another complication is that, in a sense, equality can never be an 'individual' matter. It is inherently a property of categories of people, not of individuals. Univariate measures only work if one posits some category of person over which to measure equality. If that category is based solely on geography, the result is similar to what one research tradition calls an 'ecologic' approach (Morgerstern, 1982). It is important to note, however, the geographical areas usually chosen are not random. They are often political and legal units. The univariate measure answers the question 'what kind of country is this?' where 'country' is a political, not just a purely geographical, unit. It is therefore 'individual' merely in the sense that it ignores all bases for categorisation other than being subject to the relevant political authority. It is also important to note that although univariate inequality is a property of countries, views about whether a country should be more or less unequal are the views of individuals, and so as long as we are analysing those individual views themselves, the standard warning about ecologic analyses that correlations at a geographical level are not the same as correlations at an individual level (the 'ecological fallacy') does not apply.

The bivariate view can also be accused of building in a normative judgment about equity, that health differences by income automatically import the notion of an unjust distribution (Asada, 2013; Murray, et al., 1999). The univariate view resists this smuggling in of normative judgments. Whether univariate inequality is unjust is a matter for an assessment separate from reporting the extent to which it exists. Admittedly, the same separation could also apply to bivariate inequality. It is possible for researchers to believe, normatively, that specific degrees or types of bivariate inequality are acceptable. In practice, however, it seems that researchers in the field rarely take this view, arguing instead that eliminating health inequalities is a moral imperative (Marmot, 2010) (Marmot, 2013).

Evidence on public opinion about health inequality and its determinants

Little work seems to have been done directly on the issue of whether the public finds health inequality acceptable, and if so, to what extent. The 2010 Marmot review carried out 'informal polling' on the issue, reporting that 'A general response was to regard as unfair the fact that some sections of society have worse health' (Marmot, 2013, p. 284). This polling has not, however, been published. Most previous work on public opinion on health inequality concerns a different question, namely 'lay' views of the *causes* of health inequality (Blaxter, 1997) (Davidson, et al., 2006) (Kirst, et al., 2017) (Lofters, et al., 2014) (Macintyre, et al., 2005) (Macintyre, et al., 2006) (Popay, 2003) (Reutter, et al., 2002) (Reutter, et al., 1999). Some inferences can be made from these studies about the broader question of acceptability by looking at the extent to which inequality is attributed to causes other than the respondent's own behaviour, but that is a risky procedure, in danger of assuming its own conclusions. Just because a difference is believed to have an external cause does not automatically make it unacceptable (a point on which the whole 'social determinants of health' tradition has been criticised (Weinstock, 2015)), and just because it is believed to have an internal cause does not automatically make it acceptable. In any case respondents, like experts, often give a mixture of causes. A quantitative survey-based study done in the West of Scotland, for example (Macintyre, et al., 2006), found that a high proportion of respondents rated as 'very important' influences on people's health individual factors such as 'habits' (75.3%) and 'self-care' (64.5%), but more than 60% also mentioned contextual 'environmental' factors and 20% of respondents cited 'money'.

Moreover, it seems unlikely that one can generalise from the West of Scotland. Evidence for differences between countries is not difficult to find. Public opinion in Canada, for example, seems more willing than in the USA to accept 'structural' explanations health inequality (as opposed to 'behavioural', 'drift' or 'artefactual' explanations (Black, 1980) (Kirst, et al., 2017) (Lofters, et al., 2014) (Reutter, et al., 2002) (Reutter, et al., 1999).

One potentially important aspect of the causation studies for a survey of attitudes is whether differences in views exist across social categories. The West of Scotland study found no difference across socio-economic groups, gender or age about the degree to which respondents attributed health inequalities to environmental factors, but found that lower socioeconomic groups and older people were less likely to associate inequality with 'habits' and more likely to associate it with family relationships. More women than men thought that 'self-care' issues were important. (Macintyre, et al., 2006). Earlier, mainly qualitative, studies often found that people on higher incomes were more willing to attribute ill-health to economic or environmental circumstances. Older people on low incomes were particularly unwilling to attribute ill-health to poverty or inequality (Blaxter, 1997) (Macintyre, et al., 2005) (Popay, 2003). One explanation was that 'to acknowledge inequality would be to accept an inferior moral status for oneself and one's peers; hence, perhaps, the emphasis on "not giving in to illness", which can be seen as a claim to moral equality even in the face of clear economic inequality' (Blaxter, 1997) Not all studies, however, found this effect (Davidson, et al., 2006). A further complication is that the effects of inequality and poverty might be different and separate (Marmot & Wilkinson, 2001) (Kawachi & Subramanian, 2014).

[Evidence on public opinion about economic inequality](#)

The International Social Survey Program, the World Values Surveys and a number of other comparative research programs (Aalberg, 2003) have all attempted to measure public opinion on economic inequality. In the UK public opinion seems more concerned about high incomes at the top end of the scale than low incomes at the bottom. Fewer people support redistribution of high incomes through state action than object to the gap in pay between rich and poor (Orton & Rowlingson, 2007), a reminder that objecting to inequality is not the same thing as approving of state action to reduce or eliminate it. Support for reducing inequalities might be a necessary condition for supporting redistribution but it is not sufficient. Other factors are relevant, such as whether citizens believe state institutions to be legitimate and effective and whether they support specific policies (for example welfare payments as opposed to education spending) (McCall, 2013,

pp. 186-218). Furthermore, attitudes in the same country are not necessarily stable over time (Lippl, 2003).

As with health inequality, research has concentrated less on public approval or disapproval of economic inequality than on what the public sees as the *causes* of inequality, or of poverty (Park, et al., 2007), or the conditions under which they might support redistribution (Sefton, 2005). Again, one might attempt to infer attitudes to inequality from attitudes towards what causes it, but doing so is risky, importing a number of assumptions that might not be justifiable. One exception is Bamfield and Horton's study of the UK (Bamfield & Horton, 2009, p. 41), which carries out a cluster analysis of attitudes before attempting explanations of them.

Attitudes to economic equality vary by socio-economic status but not in a simple way. One might expect the poor to favour and the rich to oppose equality (Koh, et al., 2016). This is sometimes the case, but not always. In the US, for example, one study found that low-income residents of more unequal areas were more likely than average to reject meritocratic explanations of income inequality (e.g. that wealth is a reward of effort and talent) than high-income residents. But, surprisingly, in relatively equal areas, no significant differences about meritocracy could be found between high- and low-income residents (Newman, et al., 2014). Also in the US, contrary to the expectations of some theorists (Meltzer & Richard, 1981) (Bénabou, 2000), increased inequality is associated with falling support for redistribution in all income groups, not just in the rich (Luttig, 2013).

Evidence on public opinion about absolute equality versus 'less inequality'

Most work on public opinion about equality concentrates on the question of whether differences should be reduced or limited, as opposed to eliminated altogether (though see (Bell & Robinson, 1978) for an early small-scale study that concentrates exclusively on equal shares). The World Values Survey includes a standard question that asks respondents to place themselves on a 10 point scale from agreeing that 'Incomes should be made more equal' to 'We need larger income differences as

incentives for individual effort' (World Values Survey, 2012, p. 7) (a question whose utility is limited because it seems to presuppose a specific theory of why respondents might favour inequality), but it does not include a question on whether respondents agree with the proposition that incomes should be equal or a question about what they regard as an ideal distribution of income or wealth. Similarly, the International Social Survey Programme asked respondents about whether income differences were too large but not whether they should be equal or conform to any other specific pattern (Smith, 1989).

Some studies do, however, ask both about reducing inequality and eliminating it. Some are single country studies, particularly of the USA (Alves & Rossi, 1978), where support for absolute equality is very low (at around 5%) although support for reducing inequality is higher (Miller, 1992). Attitudes in the US, however, are not typical, even of the developed world (Smith, 1989). The International Social Justice Project (ISJP) covered a dozen countries (Swift, et al., 1995) (Arts, et al., 1995). The datasets from the ISJP studies have been published (Wegener, Bernd; International Social Justice Project, 2010) and allow some retrospective analysis. They show wide variation across countries. As of 1991, levels of support for everyone having an equal share of income and assets (strongly agreeing plus agreeing) varied from 37% in Japan to 11% in Estonia. Levels of support for the statements that income differences are too great or much too great varied from 91% in Slovenia to 59% in East Germany. The figures for Britain were that 29% agreed or strongly agreed that everyone should have an equal share and 75% said that income differences were too great or much too great.

A later stage of the ISJP looking solely at Germany put support for equal incomes and assets at 23% in the ex-West Germany and 30% in the ex-East Germany (Schrenker & Wegener, 2007, p. 11), levels lower than those agreeing that the state should redistribute incomes, not by much (40% in the ex-West, 56% in the ex-East) but by enough to constitute another example of support for government redistribution and support for reducing inequality not being the same thing.

Evidence on public opinion about political equality

Surprisingly little work seems to have been done on public opinion about equality of political power and influence. Opinion polling carried out in the USA in the 1950s showed overwhelming support for the proposition that 'Every citizen should have an equal chance to influence government policy' (Prothro & Grigg, 1960), but the question is not one often asked since or elsewhere. It does not appear, for example, in the World Values Survey questionnaire as one of the nine essential characteristics of democracy. Interest in political egalitarianism exists but is mainly restricted to specific issues, such as the role of women (Norris, 1985) or the views of politicians (Putnam, 1973). Work on political equality, especially that originating in the US, largely assumes that the public supports the idea that each citizen should have an equal voice and concentrates on asking whether it is achieved in practice, either as measured by equal electoral turnouts across social groups (Verba, et al., 1978) (Verba, 2003) or equal participation in other types of activity aimed at influencing political decision-makers (Lehman Schlozman, et al., 2012).

Conceptual work in other fields, especially law, is more promising, but as far as we know has not yet inspired any attitudinal studies. For example, writing on the law applicable to political campaign finance, Lori Ringhand distinguishes between 'equality of arms' (the resources available to political parties and candidates), 'equality of influence' (the influence citizens have over politics) and 'equality of access to the market-place of ideas' (the ability to influence opinion indirectly through the media, think-tanks and research) (Ringhand, 2002). Of these, the second, equality of influence, looks eminently suitable for investigation through further attitudinal studies.

Value spheres

One further scholarly tradition needs to be mentioned. The idea that egalitarianism about income or wealth implies egalitarianism about health or politics, and vice versa, fails to consider the possibility that people might be able to keep separate different domains of their lives and to adhere to different values and norms in each. Max Weber described different 'value spheres' each following its

own internal logic and subject to its own ultimate values (Weber, 1948). Isaiah Berlin thought that many ultimate values are incompatible, even incommensurable (Berlin, 1990). Even more pertinent, Michael Walzer talks of 'complex equality', in which inequalities might develop in one sphere of life, for example in politics or in wealth creation, but they would not threaten overall equality as long as advantages in one sphere do not spill over into the others (Walzer, 1983).. Maintaining complex equality implies blocking exchanges across the different spheres. Being able to buy a better car than other people might be legitimate but buying an election is not.

Developing measures

The first step in studying how public opinion might vary across different ways of conceiving of equality and different dimensions of equality is to develop ways in which we might capture the views of the public in a meaningful way. We need to cover bivariate and univariate equality and absolute and relative equality for both health equality and political equality. We also need to set out how we propose to measure attitudes to economic equality.

Measuring bivariate and univariate health inequality

A bivariate question on health equality is, in rough terms, are you happy for a citizen's chances of good health to vary systematically with their economic position? In other words, is it acceptable or unacceptable for poor people to have worse chances of living a long and healthy life than rich people? A standard way of measuring opinion on the issue is to ask respondents what they think is an acceptable difference in life expectancy between the richest 5% of the population and the poorest 5%. Although this question has the drawback of referring to percentages, which are not universally understood, at least in the UK (OECD, 2016, pp. 48-49), it captures a sense of differences between 'rich' and 'poor', albeit with some arbitrariness as to where the lines are drawn. It also represents a compromise between the individual and group conceptions of the bivariate measure. It is not quite individual, since life expectancies are expressed in terms of those in categories (the

‘richest 5%’ and ‘poorest 5%’) but those categories are not otherwise socially defined groups or classes.

Support for univariate health equality is not so easy to measure. The basic idea is that in a society in which no univariate health inequality existed, each person would have the same chance, whatever it was, of living a long and healthy life, whereas in a very unequal society a small number (or even one individual) would have a much better chance of living a long and healthy life than everyone else.

That idea is similar to that behind a Gini coefficient, in which a perfectly equal population would score 0, because no difference exists between the members of the population, and a perfectly unequal society would score 1 because the maximum degree of difference exists in the population (Bowles & Carlin, 2017). On that basis one might ask respondents to imagine a society in which everyone has the same chance of living a long and healthy life and another where only one person has a good chance of living a long and healthy life and everyone else a poor chance, and then to ask respondents to say where on a scale between the two they think their country falls or should fall.

A more elaborate version of the question might specify whether the ‘same’ chance was better or worse than ‘good’ or ‘poor’, so that we might obtain some idea of respondents’ trade-offs between equality and health. That would, however, risk interfering with the respondents’ understanding of the question. The simpler version implies that the ‘same’ level lies somewhere between ‘good’ and ‘poor’, which is sufficient for the purpose of inquiring into opinion about univariate inequality in health. In any case, studying the trade-off, if any, between equality and health would require a completely different research design. A stated preference method incorporating a discrete choice experiment might be appropriate.

Absolute and relative health inequality

Asking about attitudes to absolute equality seems straightforward but a complication exists for relative equality. Simply asking people whether they would like more equality risks prompting respondents into agreeing with the proposition given to them. One can reduce the risk by asking

respondents what they think the current situation is (itself an interesting question since one can compare it with what is known to be the true position) and then separately asking them what they think the position ought to be. One can then compare the two answers to see whether the respondent wants more equality, less equality or is satisfied with the current situation.

Political Inequality

How does one measure opinion on political equality? Much of the existing literature on political equality takes equality to be related to, or at least to be measurable by, turnout at elections or participation in specific activities such as contacting elected representatives: if turnout or the other activity varies systematically with economic equality, one can say that political inequality exists. That approach, however, has two drawbacks. First, it is inherently bivariate. If we are to compare views of political inequality with views on health inequality on both a bivariate and a univariate basis, we also need to be able to measure views on political inequality on both bases. Turnout at elections seems an implausible basis for a normative univariate measure since it would collapse into asking respondents for their views on the ideal turnout at elections, unlikely to be an informative exercise. Secondly, because the norm of one person one vote is so strong, it seems unlikely that many people, or indeed anyone apart from a small number of political consultants, would admit to favouring inequality expressed in those terms. The norm of one person one vote might act in effect as an implied framing of the question suggesting to respondents that they should give a particular answer.

A more neutral way of asking about political inequality, and one that allows one to construct comparable bivariate and univariate questions, is to ask about the influence individuals have on politicians, following a much cited but rarely repeated 1950s US study (Prothro & Grigg, 1960). A bivariate way of asking the question is to ask whether people think a rich person should have more influence over politicians than a poor person, or a poor person more influence than a rich person, or the same influence. An alternative way of asking the question would be to ask whether 'rich people' or 'poor people' should have more influence, but we rejected that option since it potentially

confused the influence of individuals with the influence of groups or classes. We settled on five options, distinguishing between 'some more influence' and 'much more influence' in each direction, plus 'the same influence'. A univariate way of asking the political question is to adopt the Gini formulation as for the health question and to ask respondents to imagine two societies, in one of which everyone has the same influence on politicians and in the second one person has a great deal of influence and everyone else no influence and then to estimate where on a scale between those two the country should lie.

As with the health question to see whether views on absolute and relative equality differ one can ask respondents to estimate first where they think society lies now and secondly where they think it ought to be, allowing us to derive what they think about whether it ought to become more or less equal or remain the same.

Economic Inequality

Several ways exist of measuring economic equality, each of which might generate a measure of opinion. The variables include asking about income as opposed to wealth and asking about acceptable multiples or gaps between the richest and the poorest and asking directly Gini-like questions. Running through all the possibilities might leave respondents exhausted and possibly confused, but as a cross-check it seems prudent to ask about economic inequality in more than one way. We used two measures: an income multiple question, ranging from 'it would be acceptable for the highest income to be more than 1,000 times greater than the lowest income' to 'there should be no real difference between the highest and the lowest incomes'; and a Gini-like question that asked respondents to imagine two societies, in the same manner as the health and political questions. Again, as with the health and political questions, respondents were asked their estimates of the current situation and the desired situation, to allow insight into whether they wanted economic inequality to rise, fall or remain the same. This method has distinct advantages over the other methods of asking about the desirability of reducing economic inequalities that have previously been

tried. It does not, for example, presuppose any particular theory about what might justify inequality (as in the World Values Survey question) and it does not confuse wanting inequality to be less and approving of specific government measures aimed at bringing about that result.

Sample

The survey was conducted using an online interview administered by YouGov Plc GB. Respondents were members of YouGov's panel of more than 185,000 individuals who have agreed to take part in surveys. An email was sent to panellists selected at random from the base sample according to the sample definition, inviting them to take part in the survey and providing a link to it. The sample size was 1,667 adults. Fieldwork was undertaken between 4th and 5th December 2016. The figures have been weighted and are representative of all adults (aged 18 or over) in Great Britain. YouGov Plc complies with the data quality and ethical standards of the Market Research Society and the British Polling Council (Market Research Society, 2014) (British Polling Council, 2016) (YouGov Plc, 2014).

YouGov Plc normally achieves a response rate of between 35% and 50% to surveys. However, this can vary depending on the subject matter, complexity and length of the questionnaire. The responding sample is weighted to the profile of the sample definition to provide a representative reporting sample. The profile is normally derived from census data or, if not available from the census, from industry-accepted data. The non-response rate is, however, using a standard UK occupation-based measure of socio-economic status, slightly greater for members of low socio-economic status categories (social grades C2DE) than for higher categories (social grades ABC1), as illustrated by Table 1, which compares the unweighted sample to the Office of National Statistics' estimate of the population by social grade as of the 2011 Census: [Table 1 here]

The questions being of some complexity, an obvious problem might be high rates of lack of comprehension of the questions, especially of univariate Gini-inspired questions. As it turned out, however, the 'don't know' rates for the univariate Gini-inspired questions were in the range of 13-

16%, roughly comparable with 'don't know' rates on voting intention surveys. The lowest 'don't know' rates were 12.1% and 10.1% for the political bivariate questions. The only questions with don't know rates that might cause concern were the two questions asking about income multiples: 26.3% for the question about what respondents thought the situation was now and 29.6% for the question about what respondents thought the situation ought to be. (Note, however, that the health bivariate question was a forced choice question that allowed no 'don't know' option).

The 'don't know' rate is also a proxy (albeit imperfect) for another possible problem, which is that respondents had no prior opinions about these issues but just generated pseudo-opinions as a result of being asked these questions (the 'non-attitude' problem). Although only discovering the degree of instability in respondents' views by repeating the survey a number of times, or engaging in qualitative follow-ups, can really address the point, the observed 'don't know' rates seem to indicate that 'non-attitude' was not a very big problem, again except for the income multiple questions.

We should, however, report a possibly important feature of the 'don't know' rates. In the case of every question, the 'don't know' rate is statistically significantly higher ($p < 0.05$) for respondents from social grades C2, D and E than for respondents from social grades A, B and C1. In addition, in two thirds of the questions, the 'don't know' rate is statistically significantly higher ($p < 0.05$) for women than for men. That situation is not unusual for social surveys, but it does suggest that in analysis partitioning the data by social grade and gender would constitute a good robustness check.

Results

The precise questions asked in the survey are shown in the Appendix. We report the results in two ways: first the proportions supporting the most egalitarian option on each question and secondly the degree to which respondents' views on one form of equality overlaps with their views on other forms.

Proportions

Table 2 presents the results of the survey for each question. For each we report two proportions. First, we report the percentage of the sample choosing the most egalitarian option available on that question when asked which option they want the UK to reflect. In the terminology we have adopted, this row represents respondents' answers on 'absolute' egalitarianism. Secondly, we report for each question the proportion of respondents who want the UK to be more equal than they themselves currently perceive it to be. That row represents 'relative' egalitarianism in the sense we are using that term here. For the political bivariate question, we also report the proportion of respondents who wanted poorer citizens to have more political influence than they do now. The difference between the two proportions is that the former does not include those who want the poor to have more influence even if that means less strict equality because they believe that the poor already have the same or more influence. The table also includes 95% confidence intervals. [Table 2 around here]

The main features the table brings out are that, not surprisingly, support for relative equality is greater than support for absolute equality, with the exception of political equality on the bivariate measure, in which the relative score is lower than the absolute score (although both scores are very high and the effect disappears if we ask instead whether poor individuals should have more influence). For both health and political equality, support for equality is higher if it is posited in a bivariate way than in a univariate way. In some questions, for example, absolute political equality, the bivariate score is very much higher. We found very little support for absolute economic equality, whether expressed as income multiples or as a wealth Gini. Support for relative economic equality, however, was comparable with support for the univariate forms of relative equality in health and politics. Support for absolute economic equality is higher if expressed in terms of wealth and a Gini, but support for relative economic equality is greater if expressed as an income multiple.

As explained in the previous section, the difference in 'don't know' rates between social grades and between women and men suggests that we should also consider the results of partitioning the data by those two variables. We found, however, few such differences. The results did not vary to any statistically significant degree between men and women. Partitioning the data by gender provides only two pieces of information. One is that the anomaly that the absolute score is higher than the relative score for the political bivariate seems to be driven by the opinions of women. Nevertheless, the effect disappears for both women and men if we switch to wanting the poor to have more influence as opposed to strict equality. The other is that the effect that the sample as a whole is more supportive of absolute economic equality if expressed in wealth/ Gini terms but more supportive of relative economic equality if expressed in terms of income multiples seems to be driven by the views of men.

Turning to social grade the same patterns mostly hold for both the ABC1 category and the C2DE category. For both categories, the proportions favouring relative equality is higher than that favouring absolute equality and the proportion favouring bivariate equality on both health and politics is higher than the proportion favouring univariate equality. For both categories, support for absolute economic equality is low, and much higher for relative economic equality regardless of how it is measured. A possible, though inconclusive, exception is that for the political bivariate, the relative-versus-absolute order is reversed for ABC1s but might not be for C2DEs, although that difference disappears for both groups where the formulation changes to more influence for poor people. Perhaps more interesting is that, albeit using different questions, support for absolute economic equality is slightly higher among C2DEs than among ABC1s (7% versus 3% on the multiples question ($p < 0.05$)), whereas support for relative economic equality is much higher among ABC1s than C2DEs (62% versus 51% on the Gini question ($p < 0.05$)), although the differences are not statistically significant using the opposite questions.

Overlaps

Another way of reporting the data is to try to capture the extent to which support for equality in one domain overlaps with or is separate from support for equality in another domain. We attempt this by constructing a Venn diagram (Figure 1) showing the possible combinations of beliefs and distributing each respondent to the appropriate space in the diagram. For the sake of clarity, we do not attempt to scale the spaces to the proportion of the sample they contain nor include the raw numbers. We remind readers, therefore, that $N=1667$ and 95% confidence intervals are in the region of plus or minus 2.5%.

Many possible diagrams might be drawn, combining the responses to different questions. For example, one might look at the overlap between the absolute univariate question for health and the relative bivariate question for politics. We, however, are interested in the effects of consistently opting for particular forms of the questions. As a result, we concentrate here on the diagrams that look at the overlaps between univariate and absolute questions for both health and politics and bivariate and relative questions for both health and politics. We also have two versions of economic inequality, one a Gini measure, the other an income multiple measure, but as we saw from the analysis of proportions, one cannot say that one or the other results in more support for equality. We show one of the two combinations with the former and one with the latter, although we could have switched them with no notable consequences. [Figure 1 around here]

Figure 1 shows that if the British public are asked for their views on equality in terms of whether they favour the most egalitarian option on each form of equality, measuring responses for each form of equality using a Gini-style univariate question, the proportion of the sample that favours full equality in all three domains is 6% and more than half of the sample (54%) refuses to support the most egalitarian option in any of the domains. The only overlap that goes beyond minimal levels is the 17% who favour both the most egalitarian options in both health and political equality but do not support full economic equality. If one compares all those who support both political and health

equality with all those who support both health and economic equality, including on both sides those who support all three forms of equality, the political and health combination is higher than the health and economic combination by 23% to 7%. Of those who choose at least one maximally egalitarian option, nearly half choose precisely one option, favouring equality in one domain but not in any of the others. [Figure 2 around here]

Figure 2 shows that if, in contrast, the British public are asked for their views on equality in terms of whether they want to see less inequality in each of our three areas, measuring the responses for each form of equality using a bivariate question and using an income multiple question for economic equality, the proportion of the sample that wants more equality in all three domains is 51% with only 7% favouring more equality in none of the three domains. The overlap between political and health egalitarianism, but not economic egalitarianism, is still more than minimal at 15%. Those who support both health and political equality (including those who support all three forms of equality) comes out at 65%, more than the 55% who support health and economic equality (including those who support all three forms of equality). Of those who favour more equality in at least one domain, less than a fifth favour more equality in one and only one domain.

Discussion

It is a commonplace of attitudinal research that the formulation of the question matters. But these results show something else, that the conceptions of equality that lie behind different formulations might also matter. A bivariate conception of equality garners more support than a univariate one, not only for health but also for politics. Support for less inequality is higher than support for absolute equality across all three domains. The results largely hold across gender and social grade. The differences in conceptions of equality also affect the degree to which support for egalitarian options crosses over from one sphere to another. If egalitarianism is framed in both absolute and univariate terms, overlap between spheres is low and support for egalitarianism across all three domains is minimal. On the other hand, if egalitarianism is framed in both bivariate and relative terms (and

economic inequality is framed in terms of income multiples) the degree of overlap rises considerably, with around half of respondents supporting less inequality in all three domains.

The importance of these results for those who want to promote equality is that they tend to justify Marmot's insistence on using 'social', which is to say in our terms bivariate, measures for health inequality (Marmot, 2013). Those who might want to undermine efforts towards equality, on the other hand, might gravitate towards univariate measures. The dispute between proponents of the two approaches looks, from this perspective, to be partly political – that one's preference might be driven by the political result one wants – rather than by a pure concern for arriving at the 'right' philosophical answer. Similarly, and perhaps more obviously for many practitioners of politics (Dorey, 2010), those who oppose egalitarian policies tend to be more successful if they can frame them as aiming at absolute equality or 'levelling down', whereas those who support egalitarian policies make more progress if they frame them in terms of 'fairness' or inequalities being 'too large'.

On the question of whether to associate health equality with other forms of equality, the results indicate that if one characterises equality in relative and bivariate terms, the overlaps are greater than if one characterises them in absolute and univariate terms. As a result, one should have less to fear from using Marmot's syllogism in the former case than in the latter. One nuance, however, is that even on the bivariate, relative formulation, about one in ten of those who support less inequality in health do not support less inequality in either of the two other domains. For many of these respondents, the use of the syllogism might be unpersuasive, and one might argue that its use risks alienating some supporters of reducing health inequality. But that is at least better than the equivalent situation under absolute and univariate formulations of equality, in which a third of supporters of health equality favour health equality alone with no overlap with the other forms of equality.

Two broader questions arise from the results, the answers to which might require further research, but about which some tentative remarks follow.

The first is how one might explain a combination of results that, at first blush, looks contradictory, namely the finding that public opinion reacts positively to bivariate formulations but at the same time is not at all favourable to absolute economic equality. After all, the active ingredient in bivariate formulations of equality, which distinguishes them from univariate formulations, is the presence of economic inequality. One possible answer, which is at least compatible with the facts, is that a large proportion of the public takes a view of equality reminiscent of that of Michael Walzer. What is objectionable for respondents about economic inequality might not be the thing itself, which might be justified by, for example, its incentive effects or the extent to which it rewards deserving individuals, but rather its spill-over effects into other value spheres. This seems very clear in the case of politics. A great majority (approaching 80%) of the public thinks that economic power should not translate into political power. But that might also be true for health. The increase in support for equality after introducing the link to economic inequality suggests that many respondents are repelled specifically by a spill-over of advantage from the economic sphere into the health sphere.

The second is what to make of the stronger overlap between support for health and political equality than that between health and economic equality (and indeed than that between economic and political equality)? It might be a relatively small effect on the bivariate measure (65% as against 55%) but is quite striking on the univariate measure (23% as against 7%). One interpretation, not inconsistent with the Walzerian interpretation of the results as a whole, is that some respondents see both health equality and political equality as entitlements of citizenship but do not see economic equality in the same way.

Strengths and Limitations

The key strength of this study is that it examines in a way not previously attempted attitudes to both bivariate and univariate conceptions of equality. Instead of treating the issue of whether to use bivariate or univariate measures as a theoretical or normative one, to be decided by researchers, it treats it as an empirical issue. Another strength is that it looks not just at attitudes to absolute equality but also to whether society should be more equal. It is also a strength that instead of asking directly for attitudes on the issue of more or less equality, which might elicit merely socially acceptable answers, it deduces attitudes by comparing each respondent's beliefs about current conditions with that respondent's view of where society ought to be.

On the other hand, the study has several limitations concerning the sample, survey method and measures. The sample was drawn from a panel and weighted according to known demographic characteristics. It was not, therefore, a purely random sample. The response rate of 35-50%, while good for a public attitude survey, is low enough that one should issue the standard warning that the results might be an artefact of differential response rates by respondents of different views.

As for the survey method, public opinion polling has some general limitations. The results are a snapshot of opinion at a single moment of time in a single place. We cannot know from a single survey how opinion might change over time and in response to other changes. Moreover, this was not in any way a deliberative poll – respondents were not supplied with context and information other than that which they brought themselves to the questions. Opinion is often sensitive to such context and information (Hough & Park, 2002). On the other hand, those engaged in trying to change public policy usually have no means to change the context and information available to their fellow citizens and so have to deal with public opinion as it is. Another possibility is that policy change might lead to change in public opinion, as possibly happened in the case of seat belts (Fhanér & Hane, 1979), although doubts exist about whether such effects are long-lasting and free of wider cultural influences (Demick, et al., 1992). But even if policy-makers can in principle induce changes in

public opinion it would not be clear to them in advance whether they would be able to do so in any particular case and strong normative reasons exist, on democratic and respect of autonomy grounds, for not attempting it in the first place.

Three points should be mentioned about measures. First, respondents could opt for egalitarian options without being presented with any cost of choosing those options. Policy debate around equality takes the form not only of claims around the desirability of equality in itself but also of claims around the costs of equality – the claim, for example that pursuing economic equality reduces incentives and thus economic growth (Adam & Browne, 2010) (Atkinson, et al., 2017) (Biswas, et al., 2017). The inclusion of costs might have had differential effects on the three forms of equality. Secondly, other domains of equality might have been added and might have changed the results on degrees of overlap. For example, we might have included equality in education. Thirdly, as mentioned above, we found a small difference in comprehension, as measured by the don't know rates between the univariate and bivariate questions (1-6 percentage points), and so it is possible that presenting the univariate options in a more intuitive way than the one we used might have attracted more support.

More generally, the survey covered only residents of Great Britain. As we have described, attitudes to equality differ across different countries. In particular, the Walzerian and citizenship interpretations of the results might not hold for places which have not had 70 years' experience of a publicly funded health service offering health care free at the point of delivery. One can envisage very different results from places in which buying better health care might have come to be seen as one of the legitimate privileges of economic success (Niederdeppe, et al., 2013, p. 12).

Finally, in terms of analysis, we have not attempted to discover at this stage what kind of people fall into the various categories of combinations of views beyond simple distinctions of gender and social grade. Nor have we attempted any causal analysis that might explain any patterns that might emerge. Such analyses would require a different study design.

Implications and Further Research

Our results suggest that much the British public seems to accept and expect a certain amount of inequality in relation to health, wealth, and political power. Most members of the public did not support absolute equality in any of those domains, with only 6% supporting absolute equality in all three. The public were, however, supportive of reducing inequalities: they wanted less inequality than the amount they perceived currently to exist. Most people wanted reduced inequality in all three domains, and only 7% wanted not to reduce inequality in any of them. We also found evidence that the British public treat health inequality in a way similar to the way they treat political inequality, as something that should be unrelated to economic inequality.

We began with what we called Marmot's syllogism: all inequality is wrong; health inequality is a form of inequality; therefore, health inequality is wrong. Our results suggest that as applied to absolute univariate inequality, the syllogism fails to represent how the British public thinks. Few people think all forms of absolute univariate inequality are wrong and many think that health inequality is wrong in itself, not because it is a form of inequality. As applied to relative bivariate inequality, however, the syllogism makes more sense. Few people who want to see bivariate health inequality reduced do not also want to see some other form of inequality reduced.

The main implication of our findings is therefore that those who want to promote health equality would be well-advised to talk in terms of reducing inequalities that arise from economic inequality and to emphasise that health should not depend on wealth or income. (Conversely, those who might want to undermine the case for health equality would increase their chances of success by characterising health inequality in absolute and univariate terms).

But the limitations of this study suggest that much more research could be done. Are these results stable over time? Can they change as a result of policy interventions? Do they vary from place to place? Does the Walzerian separation of health and wealth apply outside the UK, with its 70 years of

experience of the National Health Service? How malleable are the results in response to further context and information in a deliberative context? These questions remain to be answered.

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Appendix

Online YouGov Questionnaire

Q1a. Imagine the following two situations. In the first situation, everyone in the UK has the same amount of wealth. In the second situation, one person has all the wealth while no one else has anything.

On a scale of 1 to 10, where 1 is the first situation and 10 is the second, where would you put the UK currently?

Q1b. And where do you think the UK *should be* on this scale?

Q2a. Imagine the following two situations. In the first situation, everyone in the UK has the same chance of living a long and healthy life. In the second situation, one person has a good chance of living a long and healthy life while everyone else has a poor chance.

On a scale of 1 to 10, where 1 is the first situation and 10 is the second, where would you put the UK currently?

Q2b. And where do you think the UK *should be* on this scale?

Q3a. Imagine the following two situations. In the first situation, everyone in the UK has the same amount of influence on politicians. In the second situation, one person has all the influence on politicians while no one else has any influence on politicians.

On a scale of 1 to 10, where 1 is the first situation and 10 is the second, where would you put the UK currently?

Q3b. And where do you think the UK *should be* on this scale?

Q4. Thinking about how much influence people have on politicians in this country, which one of the following statements, if any, would you say best describes how things are at the moment in the UK?

- *A rich person has much more influence than a poor person*

- *A rich person has the same influence as a poor person*
- *A rich person and a poor person have the same influence*
- *A poor person has some more influence than a rich person*
- *A poor person has much more influence than a rich person*
- *Don't know*

Q5. And which one of the following statements, if any, would you say best describes how things *should be* in the UK?

- *A rich person should have much more influence than a poor person*
- *A rich person should have some more influence than a very poor person*
- *A rich person and a poor person should have about the same influence*
- *A poor person should have some more influence than a rich person*
- *A poor person should have much more influence than a rich person*
- *Don't know*

Q9. Thinking about how much income people earn in this country: what would you say the gap is, if anything, between the highest-earning income and the lowest-earning full-time income in the UK?

Please choose the following statement that best describes your view

- *The highest income is well over a thousand times the lowest full-time income*
- *The highest income is roughly a thousand times the lowest full-time income*
- *The highest income is roughly five hundred times the lowest full-time income*
- *The highest income is roughly a hundred times the lowest full-time income*
- *The highest income is roughly fifty times the lowest full-time income*
- *The highest income is roughly ten times the lowest full-time income*
- *The highest income is roughly twice the lowest full-time income*
- *There is no real difference between the highest income and the lowest full-time income*
- *None of these*

- *Don't know*

Q10. And what would you say is an acceptable gap, if anything, between the highest-earning income and the lowest-earning full-time income in the UK?

Please choose the following statement that best describes your view.

- *It would be acceptable for the highest income to be well over a thousand times the lowest full-time income*
- *It would be acceptable for the highest income to be roughly a thousand times the lowest full-time income*
- *It would be acceptable for the highest income to be roughly five hundred times the lowest full-time income*
- *It would be acceptable for the highest income to be roughly a hundred times the lowest full-time income*
- *It would be acceptable for the highest income to be roughly fifty times the lowest full-time income*
- *It would be acceptable for the highest income to be roughly ten times the lowest full-time income*
- *It would be acceptable for the highest income to be roughly twice the lowest full-time income*
- *There should be no real difference between the highest income and the lowest full-time income*
- *None of these*
- *Don't know*

Q11. Thinking about life expectancy in this country: what would you say the difference is, if anything, between how long the richest five percent and the

poorest five percent of people in the UK can expect to live?

Please choose a number in years from the dropdown box below.

0 - 30 years

Q12. And what would you say is an acceptable difference, if anything, between how long the richest five percent and poorest five percent of people in the UK can expect to live?

Please choose a number in years from the dropdown box below.

0 – 30 years

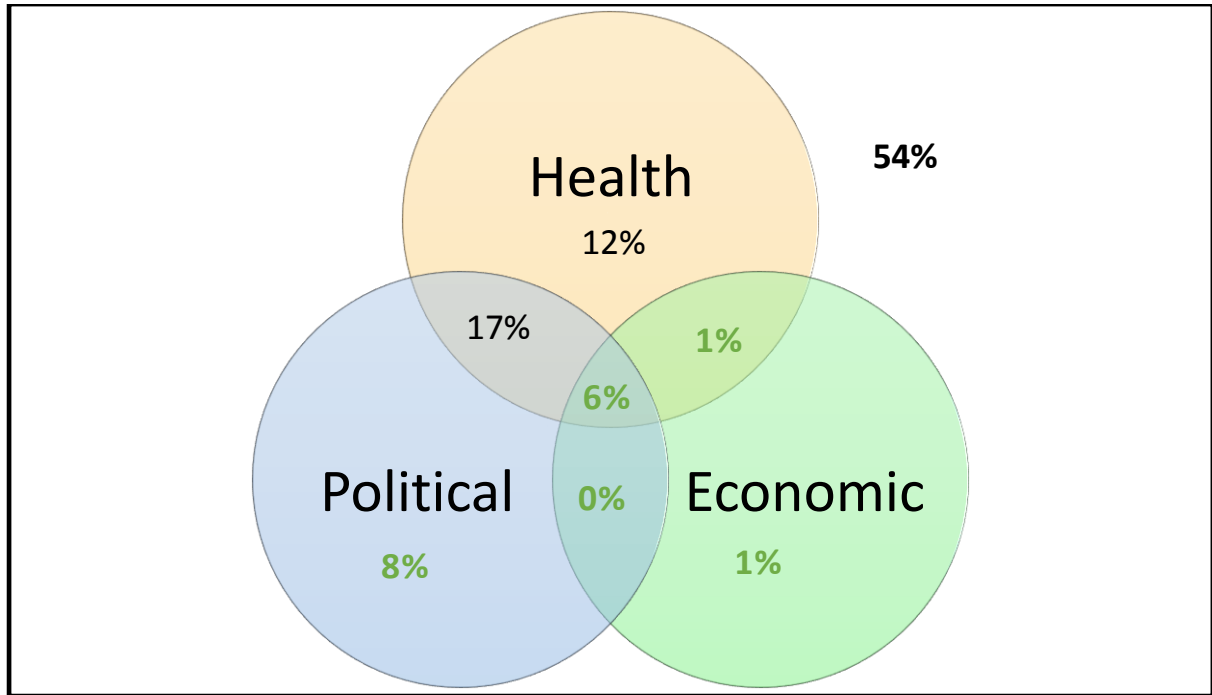


Figure 1: Overlaps in Public Opinion on Equality using Absolute Univariate Measures and the Wealth/ Gini Economic Measure

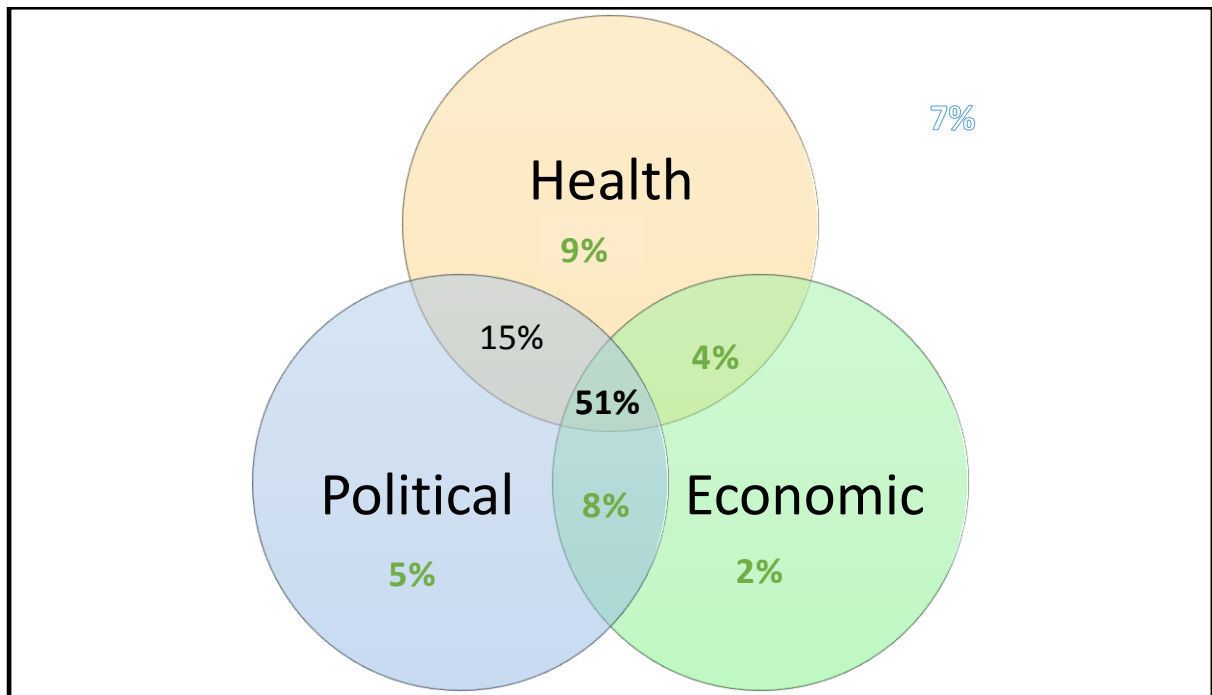


Figure 2: Overlaps in Public Opinion on Equality using Relative Bivariate Measures and the Income Multiples Economic Measure

Table 1: Comparing the sample with ONS population estimates

Social Grade	ONS Population Estimate	Unweighted Sample
ABC1	53.01%	57.7%
C2DE	46.99%	42.3%

Table 2: GB Public Opinion on Different Types and Domains of Equality

	Health univariate	Health bivariate	Political univariate	Political bivariate	Economic: Wealth/Gini (univariate)	Economic: Income multiples (univariate)
Proportion choosing most egalitarian option (e.g. 'everyone should have same the chance of a long and healthy life')	37% (611/1667) CI: 34.4-39.0%	46% (767/1667) CI: 43.6-48.4%	32% (527/1667) CI: 29.4-33.9%	76% (1266/1677) CI: 73.8-77.9%	8% (137/1667) CI: 7.0-9.6%	5% (83/1667) CI: 4.0-6.1%
Proportion wanting more equality	54% (907/1667) CI: 52.0-56.8%	79% (1312/1667) CI: 76.7-80.6%	56% (939/1667) CI: 53.9-58.7%	71% (1181/1667) CI: 68.6-73.0% <i>Poor should have more influence:</i> 78% (1301/1667) CI: 76.0-80.0%	57% (955/1667) CI: 54.9-59.7%	64% (1070/1667) CI: 61.9-66.4%