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THE POLITICAL ECONOMY OF IDEAS:
ON IDEAS VERSUS INTERESTS IN POLICYMAKING

Sharun Mukand
Dani Rodrik

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The Political Economy of Ideas: On Ideas Versus Interests in Policymaking
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ABSTRACT

We develop a conceptual framework to highlight the role of ideas as a catalyst for policy and institutional change. We make an explicit distinction between ideas and vested interests and show how they feed into each other. In doing so the paper integrates the Keynes-Hayek perspective on the importance of ideas with the currently more fashionable Stigler-Becker (interests only) approach to political economy. We distinguish between two kinds of ideational politics – the battle among different worldviews on the efficacy of policy (worldview politics) versus the politics of victimhood, pride and identity (identity politics). Political entrepreneurs discover identity and policy ‘memes’ (narratives, cues, framing) that shift beliefs about how the world works or a person’s belief of who he is (i.e. identity). Our framework identifies a complementarity between worldview politics and identity politics and illustrates how they may reinforce each other. In particular, an increase in identity polarization may be associated with a shift in views about how the world works. Furthermore, an increase in income inequality is likely to result in a greater incidence of ideational politics. Finally, we show how ideas may not just constrain, but also ‘bite’ the interests that helped propagate them in the first instance.

Sharun Mukand
Dept. of Economics
University of Warwick
Coventry, CV4 7AL
U.K.
S.Mukand@warwick.ac.uk

Dani Rodrik
John F. Kennedy School of Government
Harvard University
79 J.F. Kennedy Street
Cambridge, MA 02138
and NBER
dani_rodrik@harvard.edu

1 Introduction

Vested interests representing elites, lobbies, rent-seeking groups, or voters at large are the cornerstone of political economy. By focusing on interests, political economists have shed light on policy and institutional change and the persistence of inefficient policies in a variety of contexts.¹ For instance, industrial lobbies lobby for tariff protection (Grossman and Helpman, 1994), financial interests helped push through the repeal of the Glass-Steagall Act (Kwak and Johnson, 2011), and the threat of expropriation by the masses historically provided elites the incentive to democratize in some parts of the Western world (Acemoglu and Robinson, 2005). The emphasis on vested interests provides economists and other social scientists with a powerful conceptual lens with which to analyse the political determination of policies and institutions.

However, this almost exclusive emphasis on the primacy of interests is puzzling. Arguments for institutional or policy change that are made in the political marketplace rarely rely on a naked appeal to economic interests. Instead, political entrepreneurs attempt to persuade the public to adopt a new policy or institution by convincing them that the world has changed, so as to make the proposed changes apposite. Alternatively, they may emphasize identities, values or some overarching normative principles (such as fairness or freedom). In one form or another, ideational politics seems at least as important as interest-based politics.²

Indeed, the reliance on interests in modern political economy is also of recent vintage. Not just classical economists such as Ricardo and Marx but also Keynes (1936) and Hayek (1949) considered ideas to be an important driver of change. Keynes famously observed “it is ideas, not vested interests, which are dangerous for good or evil”. We do not go as far as him, but merely observe that both ideas and interests may be important. After all, the role of ideas is central to many historical accounts of institutional and policy change. These include not only dramatic examples of institutional transformation such as the prohibition of slavery in the U.S., women’s rights and the suffragette movement or the collapse of the socialist model the world over, but also policy changes such as the welfare reform, de-regulation and the Reagan tax cuts in the U.S. and privatization in Thatcherite Britain.

Accordingly, in this paper we take a first step in providing a minimal conceptual framework to think about ideas as a distinct vehicle from interests. In our framework, political entrepreneurs use ideas to catalyse political (and policy) change. We highlight two different channels of “ideational

¹See Stigler (1971) and Becker (1983) for early accounts and Acemoglu (1993) and Persson and Tabellini (2000) for good surveys.

²See Rodrik (2014) for an informal treatment of the issues and a variety of illustrations.

politics”. First, ideas shape the electorate’s understanding of how the world works, which in turn alter its perceptions of the mapping from proposed policies to outcomes. We call political entrepreneurship geared at altering public perceptions about the underlying state of the world “worldview politics”. Among many examples of worldview politics are the investments made by the Koch brothers in libertarian think tanks and research institutes and the role of the financial sector in convincing not just regulators, but also broader segments of the public that “what is good for Wall Street is good for America”.³ This brand of ideas is perhaps closest to what Keynes and Hayek had in mind when talking about the importance of ideas in driving policy.

An equally important force driving political outcomes are ideas about voters’ self-identity – perceptions about who they are. Individuals have a multiplicity of identities – revolving around ethnicity, race, religion or nationality – any number of which can be salient at a point in time (Sen 2005). Not only is the salience of these identities changeable, but they can also be constructed by the deployment of ideas by political actors.⁴ This is our second type of ideational politics, which we call “identity politics”. By sending messages about who is a native or an outsider, disseminating stereotypes about racial and religious minorities, harping on patriotism and national identity, or framing policy issues in such terms, a political actor can make a particular identity more or less salient. This can help alter voter behaviour and either catalyse or block policy and institutional change. This role of ideas is less familiar to economists, though there is a large literature in political science (Wendt, 1999, Ruggie, 1998 and Anderson, 1976) and sociology (see Cerulo, 1997 for a survey) that examines the construction of identity in a variety of contexts.

We consider a standard political economy model where the prevailing interests of the median voter (who is low-income) drive policy choice. In this context, a high-income political challenger faces a difficult task: how to push through a new policy that has distributional effects that hurt the low-income majority? With the (lower income) majority on his side, the political incumbent cannot be easily dislodged and the new policy will *not* get adopted. Under these conditions, one of the few options that a political entrepreneur (or an allied “political-ideational complex” of think tanks, pundits and partisan media) has is to try and disseminate ideas that alters either the worldview or the identity of the voters (or both).

Therefore with the aim of unseating the incumbent, a political entrepreneur allocates resources

³On the efforts of Koch brothers and other libertarian business leaders, see Mayer (2015). The argument that the financial sector cognitively captured policymakers’ and elites’ worldviews has been advanced by Kwak and Johnson (2009) as well as Buiter (2012).

⁴Haidt (2012) reports on research from biology suggesting that individuals have a ‘hive switch’ that helps make identities salient and bind an individual to a particular group.

towards the search and discovery of “memes” that catalyse ideational politics.⁵ A meme is some combination of cues, narratives, symbols or indeed any choice of communication that is deployed by the political entrepreneur such that exposure to it either shifts views about how the world works or makes an identity salient. We conceive of memes as the concrete vehicle that channelises ideas developed by the politician for the political marketplace.

Consider for example the politics of austerity. According to Skidelsky (2010), one reason why fiscal austerity and balanced-budgets resonate with the public is that “people think of the government’s finances very much as they think of their own household’s finances. Since every household knows that it has to balance its books,” they presume so does the government. Here is how Angela Merkel deploys the meme in a speech attacking deficit spending:

“The root of the crisis is quite simple. One should simply have asked a Swabian housewife, here in Stuttgart, in Baden-Wurtemberg. She would have provided us with a short, simple, and entirely correct piece of life-wisdom: that *we cannot live beyond our means*. This is the core of the crisis. . . . Then why is the world in this difficult place? Well, we have too often put our trust in experts that were not really experts... When we come together now to think about how one should answer these new global questions, we should put less faith in self-proclaimed experts, and instead follow one principle: the *principle of common sense!*” (Merkel, 2008, emphasis added)⁶

More generally, depending on whether an idea affects voter beliefs about the world or preferences, we have two corresponding kind of memes. If a meme affects a voter’s belief of how the world works we label it a “policy meme,” which results in *worldview politics*. In contrast, a meme that affects a voter’s sense of who he or she is, is labeled an “identity meme” and triggers *identity politics*. The entrepreneur’s decision of whether to focus on searching for an identity or policy meme (or both) depends on what is politically advantageous.

Consider identity politics first. It has the potential to alter the political status-quo by transforming a low-income voter’s preferences ex post: the median voter may now be willing to vote for a (rich) political challenger with whom he shares an identity marker such as religion or race. In other words by making identity salient or, more correctly, raising the salience of one type of identity (religion or race) over another (class) the political entrepreneur drives a wedge between a low-income individual and the status-quo policy of, say, transfers from the rich to the poor. Therefore, the identity meme introduces a trade-off between income and identity for the low-income voter where

⁵The notion of a meme was introduced by Dawkins (1976) when discussing how some cultural ideas and rituals spread very easily amongst anyone exposed to it - be it through rhetoric, slogans, speech or gestures.

⁶This is drawn quote is from Farrell and Quiggin (2012). We elaborate on this in Section 4.3 where we also discuss the political history of “common sense”.

previously no such trade-off existed. Even though such politics is divisive (it creates a different minority-majority wedge), it enables the challenger to overthrow the incumbent, by helping cobble together a sufficient number of low income voters with whom he shares an identity.

A policy meme is similar in some respects, but it works by changing voter perceptions of how the world works. Here the aim is to persuade the (low-income) voter that adoption of the new policy is actually in his interest since the state of the world has changed or (equivalently) there are new policy instruments available. So a policy that (previously) hurt the interests of the median voter, is no longer perceived to do so. Unlike identity politics, worldview politics is *not* divisive and exclusionary - it does not create a new line between insiders and outsiders. But it may be harder to catalyse unless structural conditions (the state of the economy, levels of unemployment or inflation) are conducive to new narratives about how the world works.

Our model also allows full-spectrum ideational politics, with both policy and identity memes being deployed. A possible example of a meme that combines both is Donald Trump's statement, "I will build a great, great wall on our southern border, and I will make Mexico pay for that wall".⁷ This meme combines elements of a policy response, while also emphasising identity (natives versus immigrants). Similarly, during the 2006 Venezuelan election Manuel Rosales attempted to unseat President Chavez by promising to issue a *Mi Nigra* (i.e. my dark-skinned woman) card that would directly transfer oil revenues to the poor – combining policy and identity memes in one initiative.⁸ We will examine the conditions under which the political challenger invests in one or both of these types of memes.

While simple, the framework makes several contributions. First, we clarify the analytical distinction between ideas and interests and show how ideas can be incorporated in political economy models. In doing so, we integrate the Keynes-Hayek perspective on the importance of ideas with the standard (interests only) political economy framework. A frequent contention of social constructivists is that the role of ideas in shaping interests renders formal rational-choice models of the type that economists and many political scientists work with irrelevant or inappropriate. Our model shows that there is in fact no incompatibility between constructivist arguments and formal or rational-choice modeling.

Furthermore, by emphasizing both the similarities and differences between identity and worldview politics, our paper helps bring two large literatures together. The fact that identity may be politically constructed draws on a large literature in the social sciences, much of it discussed

⁷This is from his announcement to seek the office of President in the U.S. on June 2015.

⁸See Simon Romero's article in *New York Times* November 12, 2006.

in Fearon and Laitin (2000). Similarly, the role of political entrepreneurs in shaping worldviews has been recognized as far back as Lenin(1902), Downs(1957) and recently formalised by Benabou (2008).⁹

Second, we show that ideas and interests both matter for policy and institutional change, and also feed into each other. On the one hand economic interests drive the kind of ideas that politicians put forward. As Shepsle (1985) put it, ideas can be regarded as “hooks on which politicians hang their objectives and further their interests.” However, ideas also shape interests. In our model, this happens because they alter voter preferences *ex post* and/or shift their worldviews, in both cases shifting rankings over policy. Indeed, in a two-period extension we illustrate how ideas not only constraint interests, but can also hurt the very interests that helped shape them. For example, financial interests propagation of the virtues of austerity and budget balance may have helped trigger Brexit (see Becker et al, 2017) - the institutional change with possibly the biggest blow against London’s financial interests in over half a century.

Our third contribution is to emphasize that the *practice* of ideational politics is broader than commonly thought - and includes not just a battle among different worldviews about the efficacy of policy but also a politics of victimhood, pride and identity. We provide a simple way to incorporate, but also distinguish between these different forms of ideational politics. By emphasising that these two kinds of politics work through different channels we provide a potential template to explain the heterogeneity in the nature of ideational politics both across time as well as place.

We may expect that the politician’s resource constraint creates a natural substitutability between the two types of ideational politics. Allocating more resources towards making identity salient reduces the incentive to change worldviews. However, our model helps identify a complementarity between the two: either kind of ideational politics increases the return to the other kind.

There are two distinct underlying sources of this ideational complementarity. To see the first, suppose that a low-income person gets utility from identifying with and sharing an identity with the high-income identity group (e.g. whites). We call this the “association” effect. In the presence of this association effect, the utility from belonging to the rich identity group is increasing in this group’s relative income. So for example, low-income white voters may be willing to support a policy (e.g. financial deregulation) that benefits the rich, white minority, if its adoption gives them an indirect bump in utility through association with other (now very) rich white beneficiaries of this policy. This effect is reinforced by a second source that arises from what we call the “income-

⁹In a sharp polemic, Lenin (1902) emphasized the importance of making workers ‘class conscious’ as a *prerequisite* for their engagement in revolutionary activity against capitalist interests.

identity tradeoff”. In particular, despite belonging to the majority identity group, some low-income voters remain immune to the pull of identity that they share with the challenger. This is due to the income loss from supporting the pro-rich policies of the challenger. However, a successful policy meme increases the returns to the identity meme, thereby generating complementarity that ameliorates the income-identity tradeoff. This makes it easier to persuade low-income voters that there is no income downside from supporting the rich challenger.

It may a priori not be obvious why an increase in identity polarization should be associated with prevalence of more *policy* memes. We would not expect the fact that voters believe the identity meme “Obama is a Muslim” in and of itself increases the likelihood that there will also be a successful policy meme such as the austerity related meme of “living within our means”. However, once seen in the context of the ideational complementarity between worldview politics and identity politics, this contemporaneous presence of both identity and policy is better understood. Indeed, precisely for this reason we should expect to see more ideational politics (of both kinds) in low-income regions/countries/states-of-the-world than in high-income ones. Indeed this echoes Frank (2007, pp. 259) who observed that the “poorest county in America” voted Republican and puzzled at the “tragically inverted form of class consciousness that makes such individuals make common cause with the assortment of millionaires ... pushing the Republican economic agenda of tax-cuts, de-regulation, free trade and corporate welfare”.¹⁰ Similarly, in light of our results it is interesting to observe that in many countries over the past decade (as in Russia, Venezuela and Turkey) populist policy themes were accompanied with a shrill nationalism directed against minorities or foreigners.

It is worth emphasising that this ideational complementarity *does not* rely on the precise mechanism through which memes persuade voting citizens - whether it is (Bayesian) persuasion or systematic behavioural biases in information processing of one kind or another. The fact that it does not rely on a specific micro-founded channel suggests that our result is of broader relevance than it first appears. In other words, even if local context differs, we should expect to see a correlation across time and space in the joint occurrence of identity and worldview politics. Furthermore, we should not expect identity and worldview memes to be equally prevalent across all sub-groups of the population. Typically political entrepreneurs will target the production of these memes towards the sub-group whose support is electorally critical for the challenger. A prediction of our framework is that we should observe greatest increase in identity polarisation and support for policy memes

¹⁰This is from a critical review by Larry Bartels of Frank (2007). We should point out that while useful, Bartels’s critique should be modified in an important respect. In particular, Frank’s argument about the importance of identity politics driving electoral outcomes can be correct *on the margin* even if (on average) the poor and the working class continue to vote with the Democratic Party on the basis of income rather than ‘wedge’ social issues.

amongst the majority identity group who belong to the lower and middle income group. We should not expect those memes to operate as strongly amongst the wealthy who belong to the majority group or the minority identity group of all incomes.

Finally, our model sheds light on the impact of a rise in inequality on the incidence of ideational politics. A rise in inequality increases the reward to the rich from successful ideational politics. The returns from discovering a policy meme that persuades the median voter, for example, that lower taxes are in the interests of not only the rich, but also the low-income median voter are much higher. Similarly, an effective identity meme that catalyses identity around issues such as gay marriage, women’s rights and immigration can also serve as a “wedge” that gives low-income voters a reason to vote for the high-income party. Furthermore, as noted by Ashok, Kuziemko and Washington (2015), “despite the large increases in economic inequality since 1970, American survey respondents exhibit no increase in support for redistribution....demand for income redistribution in the US has remained flat by some measures and decreased for others.” Our framework suggests that this may be because the elite along with an allied “political-ideational complex” (including academics, think tanks and talk-radio) have been successful in disseminating the worldview that the rise in inequality was an inevitable byproduct of structural changes in the global economy that necessitated adoption of financial deregulation, low capital income taxes and the embrace of globalization.

We note a couple of related papers in this connection. Benabou, Ticchi and Vindigni (2015) examines how political economy concerns affect a government’s incentive to affect the evolution of religious beliefs and allow scientific progress and growth. Shayo (2009) presents a model where individuals care about group status and are willing to sacrifice income to vote for identity. Two equilibria emerge in Shayo’s paper: a high redistribution equilibrium in which class is salient and a low redistribution equilibrium in which national identity is salient. While the issues that motivate the present paper are broader, we show, as in these papers, that there is a close relationship between attitudes towards redistribution and the salience of non-materialistic identities (religion or nation). Finally, our notion of the role of memes as the vehicle of ideas is related to recent work on the economics of narratives by Akerlof and Snower (2015), Collier (2016) and Shiller (2017).

The plan of the paper is as follows. In Section 2 we systematically describe the various elements of our conceptual framework, while Section 3 solves for and describes the equilibrium and presents important comparative statics. Section 4 discusses various case studies and Section 5 concludes.

2 The Framework

We now describe a framework that incorporates a role for both interests and ideas in policymaking. For simplicity, we consider a standard political economy model with democratic political institutions where the interests of the median voter (who is poor) drive the incumbent's choice of policy in favour of the status-quo. The key innovation of our framework is that political entrepreneurs have the scope to discover and introduce ideas. These ideas are introduced into the political arena in the form of memes that shape *both* the worldviews *and* preferences of its citizens. By altering world views or beliefs of the citizens these ideas have the potential to alter the political equilibrium. In order to make our point in the most transparent manner we introduce several simplifications. In particular, our benchmark model is a very simple model of political competition that is restricted to a single electoral cycle. Furthermore, our benchmark framework does not provide explicit micro-foundations to the operation of memes and account for how they alter beliefs and make identity salient. We relax these assumptions in Section 3 and Appendix B.

We now describe the framework in some detail below.

Policymaking and Beliefs about the World: Ideas can directly affect perceived payoffs associated with policy choices, by either shifting beliefs about the underlying state or by affecting the menu of policy options through (for example) devising new instruments of policy. In what follows, we take the former route and we examine whether political entrepreneurs can shift perceptions of the underlying state, i.e. alter world view. Accordingly, we assume that policymakers have a choice between retaining the status-quo policy a_0 or adoption of a new policy a_1 . However, the payoffs from either policy depend on the underlying state of the world, which is not known as well as whether the citizen is rich or poor. The policymaker's dilemma is that while the rich always benefit from the adoption of the new policy, the poor do so only in some states of the world.

The adoption of a_1 when the state of the world remains S_0 has adverse distributional effects in that the median voter (who is 'poor') is worse off with an (expected) income that equals $\bar{y}_P^1(S_0)$. This income is lower than what he would have earned if he had stuck to his status quo policy a_0 since his payoff in either state equals $\bar{y}_P^0(S_0) = \bar{y}_P^0(S_1)$. In contrast, *both* the rich and the poor are better off, if the change in the state of the world to S_1 , is accompanied by the adoption of the new policy a_1 . Such a policy-state switch results in the the poor earning an income of $\bar{y}_P^1(S_1) + g$, with a per capita gain $g > 0$. The rich benefit from the new policy a_1 in *all* states of the world and earn an income of $\bar{y}_R^1(S_0) + \alpha g = \bar{y}_R^1(S_1) + \alpha g$ where $\bar{y}_R^1(S_1) \geq \bar{y}_R^1(S_0)$ and $\alpha \geq 1$. So the distributional conflict between the rich and the poor arises in state S_0 and not S_1 .

The ex-ante probability that the state of the world is S_1 in period t_0 , is given by $\mu_0 = P(S_1)$. We assume that the probability that the underlying state is S_0 (i.e. $1 - \mu_0$) in the period $T = 0$ is high enough such that *all* individuals who are poor prefer the status quo policy a_0 .

Preferences, Income and Markers: There are a unit mass of citizens each of whom obtains utility from his income as well as his identity. Each individual is endowed with a vector of identity based ‘characteristics’ or ‘markers’ that may affect his payoff - such as ethnicity, religion, race or nationality. For simplicity, in what follows we allow for all individuals to belong to one such identity marker that can be either B or W .¹¹

Accordingly, an individual’s payoff in any period is:

$$v_j = y_{jk} + \lambda_m \theta_{jm} \tag{1}$$

Here he obtains an ‘identity’ utility θ_{jm} from membership to a group with characteristic-markers m , where $m \in \{B, W\}$. The magnitude of this identity payoff could be large if identity is salient (i.e. $\lambda_m = 1$) or small if identity is not salient (i.e. $\lambda_m = 0$). More generally, this identity payoff may be state-dependent and be either positive (i.e. salient) in some states of the world and negligible in others.¹² Furthermore, even if an individual’s group identity is positive (i.e. salient), its magnitude may be further affected by group-specific characteristics. So if average income of group W increases relative to group B , then arguably the identity payoff of an individual who belongs to either group may be affected.¹³ Alternatively, this identity payoff may be a lump-sum that is independent of any perceived features of the group per se. In what follows our preferred interpretation is the former one, where an individual obtains utility from solidarity with and the relative well-being/income of others who share their marker.

In addition, an individual j obtains an income $y_{jk} = \bar{y}_k + \tau_j$ that is a function of his whether he belongs to the class k , which can be rich R or poor P , with expected income \bar{y}_k , where $\bar{y}_R > \bar{y}_P$. Furthermore, heterogeneity in an individual’s income arises from the realisation of an individual-

¹¹While our current formulation assumes a single marker that can divide the population along that one dimension, in principle we could endow each individual with a set of M “primitive” characteristics or markers $\mathbf{M}_i = \{m_i^1, m_i^2, \dots, m_i^M\}$ where these primitive characteristics or markers can be a wide variety of aspects of an individual that may (or may not) be “active” or politically salient, such as his ethnicity, religion, wealth, language or even his height or hair colour.

¹²This alternative (more standard) formulation of the model would treat this identity payoff as being state dependent. In some states, an individual’s identity is very important and in other states much less so. The political entrepreneur may get individuals to invest in a particular identity by persuading them that the state of the world has changed and group identity is important. We discuss this further in Appendix A.

¹³For example, an individual who belongs to the W group obtains an identity payoff that is a function of the relative income of W ’s as compared to B ’s, i.e. $\theta_{jW}(\bar{y}_{WB})$, where \bar{y}_{WB} is the relative income of W ’s as compared to B ’s and $\theta' \geq 0, \theta'' \leq 0$.

specific random variable τ_j , with distribution G which is assumed - for simplicity - to be uniform, i.e. $\tau_j \sim U[-\frac{1}{2\phi_k}, \frac{1}{2\phi_k}]$ with ϕ_k being the density of income group $k \in \{R, P\}$.¹⁴

We assume that a minority fraction n_R of the population is rich (R) and the remainder n_P are poor (P), with $n_P > 1/2$. Furthermore, we assume that at the beginning of the first period, identity is not salient (i.e. $\lambda_m = 0$) and an individual's payoff is driven only by their income. However we allow for the possibility that an individual's identity can be made salient, in a subsequent period. As previously mentioned, we assume that all individuals have this identity marker B or W , with a majority fraction n_W of the population having the W marker, where $n_W > 1/2 > n_B$.

The Political Structure: The political structure is very simple. There is a low-income political incumbent in office who faces a political challenger who belongs to the other group - the minority 'rich'. In addition, we assume that at this stage identity is irrelevant (i.e. not salient), even though the incumbent has the B marker. Individuals compare their expected payoffs from the incumbent and the challenger, and vote for the politician under whom their payoff is higher. If elected, this rich political challenger will adopt his preferred policy a_1 in the next (final) period.

Given this political structure, there are only two scenarios under which a political challenger from the rich group (in a minority) can get elected and enact a_1 . The first possibility is that sheer chance may play a role in enabling his election. In particular, the political incumbent's relative popularity shock δ , where $\delta \sim [-\frac{1}{2\psi}, \frac{1}{2\psi}]$ may affect the electoral fortunes of the challenger.¹⁵ The second possibility, is the one we focus on. Here the political challenger actively tries to get elected (and enact a_1) through engaging in "ideational" politics.

2.1 Memes and the Nature of Politics

The political challenger's difficulty is to transform the political status-quo that favours the incumbent who belongs to the majority poor group (and favours the status-quo policy a_0). However, overturning the political status-quo requires the 'discovery' of a meme by the political challenger (or indeed any allied "political-ideational complex" of partisan think tanks, spin doctors, academic-political commentariat in the media). As mentioned earlier, we conceive of memes as some combination of cues, narratives, symbols or targeted communication that channelises ideas to voters –

¹⁴Observe that heterogeneity amongst the poor can be built in two (equivalent) ways. The first is what we have described above, with heterogeneity in initial income driven by the realization of a random variable τ_j . Alternatively (and equivalently), we can assume that incomes are binary in that they are either high \bar{y}_R (the 'rich') or low \bar{y}_P (the 'poor'). However, in this interpretation the heterogeneity in net income arises due to differences in individual-specific adjustment costs τ_k such as the cost of worker retraining and inter-sectoral mobility.

¹⁵These distributional assumptions are to facilitate closed form solutions. We further assume that the distributional 'support' for δ is not too 'narrow' compared to τ .

such that exposure to it shifts a voter’s worldview *or* makes identity salient.

Political entrepreneurs deploy memes and transform an individual’s identity or alter his worldview in a variety of ways.¹⁶ For instance, political entrepreneurs may manipulate beliefs about the world or “prime” voter identity. by the direct exploitation of behavioural biases in voter processing of information.¹⁷ Indeed it is well documented that environmental and media “framing” can “prime” the voter into identifying with a particular social identity and/or buy into a policy worldview.¹⁸ Finally, memes can be deployed to exacerbate and exploit information asymmetries (Glaeser (2005), Majumdar et al (2014)) or (Bayesian) persuasion (Alonso and Camara, 2015).

Each of the above mechanisms is likely to be of greater or lesser relevance, depending on the particular local context, underlying structural conditions and institutional realities. Since we are less interested in the precise mechanism through which a politician shifts voter beliefs and/or gets them to invest in an identity, we sidestep the issue of providing micro-foundations till Appendix B. Instead, we develop a minimal framework that has the following elements. First, the ‘receptivity’ of the population to memes from ideational entrepreneurs is likely much higher when structural conditions make them unhappy with the prevailing status-quo - be it due to a recession, high unemployment or a history of conflict. Second, the discovery and deployment of any such memes is likely fraught with uncertainty and requires a combination of skill, knowledge of local context, resources and luck. Below we describe a simple framework that has these elements.

Consider first the case of an *identity meme*. Individual attitudes towards a policy are often mediated through identity. As suggested by Akerlof and Kranton (2000), identities are expressed as and associated with support for a corresponding set of actions and/or policy choices.¹⁹ So a

¹⁶There is a large literature arguing that politicians and the news media can ‘prime’ voters about issues (including identity) (see DellaVigna and Shapiro(2010) for a survey). For example, in the U.S. context Kinder and Sanders (1987), Melinda Jackson, (2011) and Mendelberg (2001) provide evidence on priming racial identity. Blouin and Mukand (2018) provide evidence on how President Kagame successfully managed to use propaganda to ‘erase’ ethnic identity in Rwanda. Similarly, Wilkinson (2004) discusses how religious identity is primed for electoral purposes in India.

¹⁷These biases include anticipatory utility (Benabou and Tirole, 2002, 2006), ‘coarse thinking’ (Mullainathan, Schwartzstein and Shleifer (2008)), salience and attention (Genniaoli and Shleifer, 2010) or peer-influence heuristics (see Levy and Razin, 2016) among others.

¹⁸On framing, Stephen Breyer (1981, pp. 320) recounts how the Kennedy hearings on regulation attempted to shift public opinion in favour of airline (de)regulation by trying to ensure that the regulatory reform was “seen as one of ‘lower prices’ and ‘helping the consumer’ (since it) can pick up support, time and effort from many person”. On priming, see Molden (2014) for a survey. The non-informational change in preferences (due to priming) is well documented in social psychology. More recently, Dietrich and List (2011) provide axiomatic microfoundations to underlie mechanisms that show how non-informational priming can change preferences due to a shift in the underlying ‘motivationally salient dimension’.

¹⁹To take one example, Campbell (2002) argues that “ efforts to reform, if not dismantle, U.S. welfare policies during the 1970s and 1980s were led by politicians who reframed means-tested welfare programs as stipends and services that were being provided to African Americans and other minorities, but paid for by allegedly exorbitant taxes on working-class whites. The idea was to frame the issue of welfare reform in such a way as to divide the working class along racial lines and generate support among white voters for reform (Quadagno 1994).”

person who acquires a group identity associated with his caste, ethnicity or religion, will get a payoff from taking actions (or preferring policies) that are consistent with this identity. For example, if an individual's ethnic marker W becomes active, he gets utility from association with the (high income/status) W group. In this case a poor voter may well support a pro-rich policy a_1 , that is against his economic interest. Therefore, by catalyzing identity, a rich political entrepreneur can generate political support for a policy amongst the poor, that (on purely income grounds) may have been lacking otherwise.

In contrast, a *policy meme* works by persuading voters that the underlying state of the world has changed to S_1 , such that adoption of a_1 now benefits both the rich *and* the poor. In particular, if prior beliefs in period $t = 0$ that the state of the world is S_1 are given by μ_0 , then the policy meme changes beliefs of the underlying state to μ_1 , where μ_1 is the *effectiveness* of the policy meme and $\mu_1 > \mu_0$. By altering (especially poor) voter beliefs about the efficacy of a_1 , the policy meme is effective in making policy a_1 and the rich political challenger politically competitive.

Learning and Discovery of Memes:

The technology of discovering both identity and policy memes is very similar and is a function of the underlying structural environment and the effort put in by the political challenger. In particular, a political challenger who further expends resources $e(i, p)$ successfully “discovers” an identity meme with probability i and a policy meme with probability p where $e(i, p) = \frac{\beta[\varphi^I(\cdot)i + \varphi^P p]^2}{2a}$. Here φ^I, φ^P are sufficiently large, such that the arguments for i, p each are bounded by 1. Both memes work in similar though distinctive ways. An identity meme works by priming an individual to make an identity investment that changes his preferences, while a policy meme changes his beliefs about the underlying state of the world.

In both cases the prospect of discovering an appropriate policy meme is going to be a function of not just the political challenger's ability a , but also the prevailing structural conditions that may differ for identity memes (φ^I) or policy memes (φ^P). For instance, if a country has had a history of ethnic or religious conflict then it may be easier for an opportunistic political challenger to make ethnic (or religious) identity an ‘active’ politically salient characteristic, i.e. the cost φ^I will be relatively low.

Similarly, in the aftermath of a financial crisis that has resulted in exploding deficits, it may be easier to persuade voters that austerity is the appropriate policy because of the readily available meme about the government (like an individual) ‘living within its means’. We should also point out that if a new policy innovation comes into the horizon (either because of the input of policy innovators, think-tanks or experimentation by a neighbouring country), then by providing a skein

of respectability, it makes it easier for entrepreneurs to ‘market’ this policy.²⁰ We capture either of these scenarios in the form of $\varphi^P \in [0, \bar{\varphi}]$ being relatively low.

Finally, actions taken by the incumbent in control of government can also make it more difficult for any political challenger to discover and deploy memes. For instance, this could be achieved by any measures enacted by the government that curb media freedom (such as libel laws or restrictions on private media), increase repression as well as engage in counter-propaganda. We model this in a very simple way by assuming that if the incumbent government incurs a cost $c(b)$, then with probability b the political challenger’s costs of discovering a meme are higher since β equals β_1 and with probability $1 - b$ the costs equal the status quo with $\beta_0 = 1$, where $c', c'' > 0$ and $c(1)$ is sufficiently large such that $b < 1$.

We now describe the timing of decision making where the political challenger (who belongs to the minority rich group) tries to defeat the incumbent from the majority low-income group, by discovering either an identity meme, or a policy meme or both.

The Timing of Decision Making:

In period $T=0$, nature moves and structural conditions φ^I, φ^P are realised that can make it easier or more difficult for the political challenger to engage in ideational politics. The political incumbent observes these structural conditions and takes a costly action $c(b)$ with the aim of making it more difficult for the political challenger to be successful in discovering a meme.

In the first period $T = 1$ a political challenger is (randomly) chosen from the set of individuals who are rich (i.e. belong to the rich group R).²¹ This political challenger observes the realization of β as well as structural conditions and evaluates how much (if any) resources to allocate to “discover” (with probability i) an identity meme and/or (with probability p) a policy meme. Depending on whether an identity and/or policy meme are discovered, there will be a (i) shift in voter preferences as ethnicity becomes an “active” characteristic that affects individual payoffs, (ii) shift in beliefs about the likelihood that the underlying state of the world is S_1 .

The second period $T = 2$ begins with the realisation of the political incumbent’s relative popularity shock (e.g. charisma) given by δ , which can be positive or negative and elections take place with each citizen voting for the candidate who maximises their expected payoffs.

In the last period $T = 3$, the winner of majority of votes is announced and implements the

²⁰This corresponds to the Keynes’s (1936) emphasis on the notion that once ideas are generated by ‘academic scribblers’ (or ‘intellectuals’ in Hayek’s (1949) account) they are ripe for the being exploited by political entrepreneurs. See Lopez and Leighton (2012) for a good discussion.

²¹More generally, the challenger can be chosen from the entire population. Here we directly assume that the political challenger differs on the only dimension that is salient at the beginning of the first period, namely, income.

policy that maximises his or her payoff. Voter payoffs are also realised.

3 Full-Spectrum Ideational Politics: Equilibrium Analysis

In this section we allow the political challenger to engage in full-spectrum ideational politics by simultaneously investing in the discovery of both identity and policy memes. Given that we allow for full-spectrum politics, we now describe how to solve for the political challenger's optimal choice of i^* , the probability of discovering an identity meme and p^* , the probability of discovering a policy meme as well as the optimal effort allocated by the incumbent c^* to prevent discovery of memes that change the political status-quo in the first place.

Being a finite period game, we solve for the equilibrium to the above game backwards. Since politicians are unable to credibly pre-commit to any particular policy, the political incumbent in the last period ($T = 3$) implements his preferred policy. Of course, all citizen-voters in the penultimate period $T = 2$, vote for the candidate under whom they perceive that utility will be highest in the last period. The voter's choice amongst candidates is a function of (i) the congruence of their preferences with those of the challenger versus the incumbent and (ii) the realisation of the aggregate relative popularity shock δ (i.e. relative charisma) of the incumbent versus the political challenger. Accordingly, we now describe the key voting decision that takes place in period $T = 2$. For simplicity (and without loss of generality), we focus on the sub-game where the rich political challenger with the W identity marker has successfully generated both identity as well as policy memes (so identity is salient *and* beliefs about the underlying state of the world have shifted towards μ_1). The case where only an identity meme *or* a policy meme has been discovered is described in the Appendix A. He faces a political incumbent who is poor and has the identity B and prefers the status quo policy a_0 . In this case the *perceived* tradeoff facing an individual who is poor and whose W identity is salient is given by²²

$$\mu_1[(\bar{y}^1(S_1)+g)+\theta^1(S_1)]+(1-\mu_1)[\bar{y}^1(S_0)+\theta^1(S_0)] \geq \mu_1[\bar{y}^0(S_1)+\theta^0(S_1)]+(1-\mu_1)[\bar{y}^0(S_0)+\theta^0(S_0)]+\tau+\delta$$

The left hand side is the expected payoff in a world where policy a_1 is enacted (by the political challenger if elected). The first term on the left hand side is the income payoff ($\bar{y}^1(S_1) + g$) and the identity payoff ($\theta^1(S_1)$) if a_1 is adopted and the state of the world (with probability μ_1) equals S_1 . The second term is the payoff from adoption of policy a_1 , if the state of the world remains S_0 (this

²²Since the focus of much of our analysis is on the median voter who is poor and W (i.e. P, W) in what follows we suppress the P, W notation unless we need to explicitly distinguish with those who are rich R and/or B .

occurs with probability $1 - \mu_1$). In contrast, the right hand side is the payoff from sticking to the status quo policy a_0 (i.e. if the incumbent remains in power).

We simplify the above expression to obtain the *perceived* tradeoffs facing a poor individual with the W marker from voting for the challenger (and the adoption of a_1) as against voting for the incumbent (and policy a_0),

$$\{\mu_1[g] + (1 - \mu_1)\bar{y}^{10}(S_0)\} + [\theta^{10}(S_0)] + \mu_1[\theta^{10}(S_1) - \theta^{10}(S_0)] \geq \tau_j + \delta. \quad (2)$$

The term in the curly brackets is the *worldview effect* that arises from the policy meme. This worldview effect is the expected payoff from adoption of a_1 where $\bar{y}^{10}(S_0) = \bar{y}^1(S_0) - \bar{y}^0(S_0) < 0$. The identity meme results in an individual for whom his W identity is salient, obtaining utility from the adoption of policy a_1 (quite irrespective of the underlying state). This higher identity payoff from adoption of a_1 is the *identity polarization* effect, and is captured in the second term of the right hand side where $\theta^{10}(S_0) = [\theta^1(S_0) - \theta^0(S_0)]$.

Finally, consider the last term on the left hand side of the inequality. This term shows that the policy meme increases the returns to identity polarization. In particular, it is the *increase* in the magnitude of the identity polarization effect that accrues to a W individual, due to a change in beliefs about the state of the world being S_1 . For example, this may occur if a poor W person believes that adoption of policy a_1 disproportionately benefits his identity group at the expense of the B group in state S_1 than if the state remained S_0 .

We are now in a position to solve for the voting game. However, for this we first need to calculate the set of voters who will support and vote for the high-income political challenger with the W identity. To facilitate our analysis, we need to calculate the set of individuals who support the political incumbent amongst the various sub-groups. First, consider the set of low-income voters with the W identity where τ captures heterogeneity.²³ Accordingly, the set of low income citizen-voters who vote for the challenger and stand to lose the least amount by doing so. This set is given by those individuals with adjustment costs $\tau_j < \bar{\tau}^{IP}$, where we define $\bar{\tau}^{IP}$ as:

$$\bar{\tau}^{IP} = \mu_1 \cdot g - (1 - \mu_1)\bar{y}^{01}(S_0) + \theta^{10}(S_0) + \mu_1[\theta^{10}(S_1) - \theta^{10}(S_0)] - \delta. \quad (3)$$

This defines the person who is indifferent between the status-quo and the new policy under identity

²³The use of individual adjustment costs τ_i is a parsimonious way of capturing differences in the support for the pro-rich policies amongst the poor who share an identity. For example, if these differences in adjustment costs are higher amongst those poor who work in the agricultural (as against industrial) sector, we should expect higher realised τ 's in the agricultural sector.

politics. We depict this equation of indifference in Figure 1 that depicts four zones. Zone 1 (Zone 2) represents parameters for which the policy meme (respectively, identity meme) is powerful enough to ensure that the indifferent individual will support the political challenger. Zone 3 depicts the region where both policy and identity memes are needed to ensure that individual supports the challenger. In contrast, Zone 4 represents the set of parameters for which despite being exposed to the memes, the individual continues to support the status-quo.

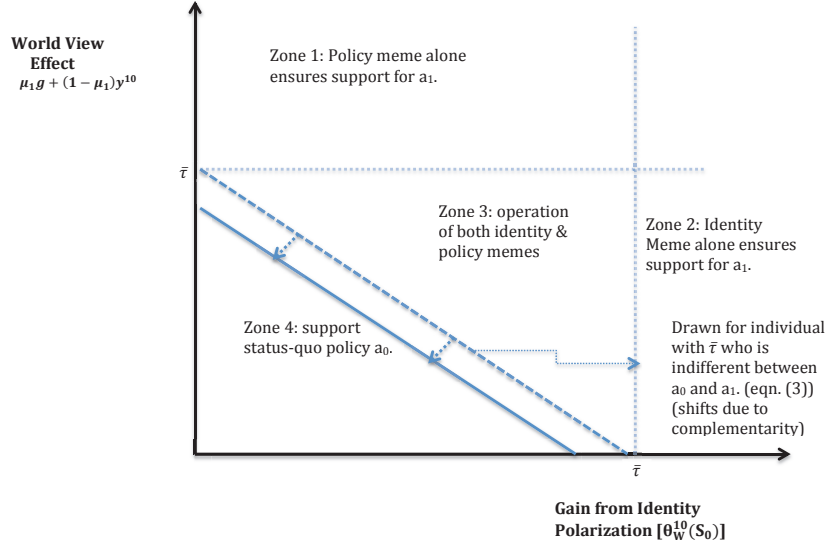


Figure 1: Memes and Policy Choices: the Four Zones

Now consider the set of high-income citizens with the W identity. Observe that for this subgroup of mass n_{RW} there is a complete congruence of interests with those of the political challenger and they will be inclined to vote for him. Of course, since the high-income voters are a minority, the rich challenger needs some of the P, W voters to cobble at least $n_{RW} + n_{PW}[1 - G(\tau_j)] + n_{BR}[G(\tau_j)] \geq 1/2$ of the votes, where G is the distribution function of τ in the P, W population and is assumed to be uniform.²⁴

This implies that given the heterogeneity in the strength of identity in the population (recollect that τ_j is drawn from the uniform distribution G), we have the following:

$$\pi_c^{IP} = Prob_\delta [n_{RW} + n_{PW}G(\bar{\tau}^{IP}) \geq 1/2] \quad (4)$$

We now use equation (3) and the fact that $\delta \sim U[-\frac{1}{2\psi}, \frac{1}{2\psi}]$, to substitute for $G(\bar{\tau}^{IP})$ in the preceding

²⁴For simplicity, we assume in what follows that the set of individuals who are rich and have the B marker is negligible in size. This is without loss of generality. Alternatively, we can also obtain the same simple expressions by assuming that economic payoffs for all rich B 's are high enough to ensure that they vote for a_1 .

equation, (details are relegated to Appendix A), and arrive at the challenger’s probability of getting elected when both identity and policy memes are in operation which is given by:

$$\pi_c^{IP} = \frac{1}{2} + \psi \left\{ \mu_1 \cdot g - (1 - \mu_1) \bar{y}^{01}(S_0) + mu_1 [\theta^{10}(S_1) - \theta^{10}(S_0)] + \theta^{10}(S_0) - \frac{1}{n_{PW}} \left(\frac{1}{2} - n_{RW} \right) + \frac{1}{2\phi_P} \right\} \quad (5)$$

Observe that π_c^{IP} is increasing in the productivity of the new policy a_1 and the degree of potential polarization. Using a similar logic in Appendix A we derive the probability of the political challenger overthrowing the incumbent in a world where ideational politics is restricted to the politics of identity ($\pi_c^I > 0$) or to the case where there is only worldview politics (i.e. $\pi_c^P > 0$).

Using these expressions, we now turn to the political challenger’s optimisation problem at the beginning of period $T = 2$:

$$\max_{i,p} [i(1-p)\pi_c^I + p(1-i)\pi_c^P + i \cdot p \pi_c^{IP} + (1-i)(1-p)\pi_c^0] \mathcal{R} - \frac{\beta[\varphi^I i + \varphi^P p]^2}{2a} \quad (6)$$

The expected payoff to the political challenger (given by the economic and ego rents \mathcal{R}) depends on the probability of getting elected - that differs on the probability of successfully discovering an identity meme (i.e. $i(1-p)$), policy meme (i.e. $p(1-i)$) or both (i.e. ip). As pointed out earlier, even in the case that there is no ideational politics (this occurs with probability $(1-i)(1-p)$), there is the possibility (given by π_c^0) that the political challenger gets elected due to having higher ‘charisma’ relative to the incumbent. We should point out that the challenger will allocate resources towards discovering an identity meme, only if there exists a ‘marker’ (in this case the ethnic marker B or W) that satisfies (a)-(c), where (a) the marker is shared by the *majority* and the challenger but *not* the incumbent; (b) an individual with an ‘active’ marker gets utility from supporting policy a_1 and (c) it is technologically feasible to “prime” the characteristic.²⁵

Under the assumption that the passive identity marker satisfies the above conditions, we can take first order conditions with respect to i and obtain:

$$(\pi_c^I - \pi_c^0) \mathcal{R} + p(\pi_c^{IP} + \pi_c^0 - \pi_c^I - \pi_c^P) \mathcal{R} - \frac{\beta \varphi^I}{a} [\varphi^I i + \varphi^P p] = 0 \quad (7)$$

²⁵If the set of characteristic/markers that satisfies (a)-(c) is an empty set, then allocates no effort to the discovery of an identity meme. If the set of such markers is greater than one, the challenger chooses the marker that maximises his payoff.

Similarly with respect to p :

$$(\pi_c^P - \pi_c^0)\mathcal{R} + i(\pi_c^{IP} + \pi_c^0 - \pi^I - \pi^P)\mathcal{R} - \frac{\beta\varphi^P}{a} [\varphi^I i + \varphi^P p] = 0 \quad (8)$$

We can use the two preceding equations to solve for the pair $(i^*(\beta), p^*(\beta))$ which are presented in the Appendix.

We now move to the beginning of the game, where the political incumbent chooses how much resources to allocate with aim of preventing (or making more difficult) for the challenger to engage in ideational politics that can upset the political status-quo. Accordingly, his optimisation is given by,

$$\max_b [bV(\beta_1) + (1-b)V(\beta_0)]\mathcal{R} - c(b) \quad (9)$$

where $V(\beta_k) = [i^*(\beta_k)(1 - p^*(\beta_k))(1 - \pi_c^I) + p^*(\beta_k)(1 - i^*(\beta_k))(1 - \pi_c^P) + i^* \cdot p^*(1 - \pi_c^{IP}) + (1 - i^*(\beta_k))(1 - p^*(\beta_k))(1 - \pi_c^0)]$ for $k \in \{0, 1\}$. The preceding equation gives us the expected payoff to the political incumbent from investing resources that raise the cost of engaging in ideational politics. The first-order conditions give us the optimal amount of resources spent by the incumbent in trying to make it difficult for any political challenger from successfully discovering and deploying a meme. Accordingly, an equilibrium consists of a triple (i^*, p^*, b^*) where the expressions are given by (20)-(22). We summarise our results in the following proposition below.

PROPOSITION I: *There exists an equilibrium i^*, p^*, b^* given by the expressions (14)-(15), such that the political incumbent raises the cost of discovering a meme with probability b^* and the political challenger invests resources $e(i^*), e(p^*)$. In this equilibrium there is the discovery with probability:*

- (i) $i^*(1 - p^*)$ of only an identity meme and we have the politics of identity;
- (ii) $p^*(1 - p^*)$ of only a policy meme and there is worldview politics;
- (iii) i^*p^* of both policy/identity memes and there is full-spectrum ideational politics;
- (iv) $(1 - \pi_c^0)(1 - p^*)(1 - i^*)$ of neither identity or policy memes such that “interests rule”.

PROOF: See Appendix. \odot

The search and discovery of memes that are political game-changers is a difficult and uncertain process. The above proposition depicts how with (a positive probability) different configurations of ideational politics may arise. For instance, if the social or reputational fixed cost to the politician for deploying ‘racial’ memes is sufficiently high, we may well have $i^* = 0$. In contrast, a history of racial, caste or religious conflict makes it easier for political entrepreneurs to make the relevant identity marker salient in some countries (e.g. India or the U.S.) as compared to others (e.g. Brazil

or Japan). Similarly in the case of policy memes. As pointed out first by Dornbusch and Edwards (1990), structural/institutional conditions in Latin America (i.e. small φ^P) makes it much easier for political entrepreneurs to discover policy memes that make populist policies attractive electorally. Of course, even if resources are allocated towards the discovery of identity or policy memes, it is entirely possible (given the stochastic nature of the discovery process) that neither such meme is discovered and we remain in a world with class conflict - where interests rule.

3.1 Ideas and Interests: Some Implications

We now examine two aspects of the nature of ideational politics. First, we focus on the issue of complementarity between the two kinds of ideational politics and explore its implications. Second, we discuss whether ideas are a handmaiden of interests, or whether it is an independent driver.

3.1.1 Ideational Complementarity

We now analyse whether “identity politics” and “worldview” politics are substitutes or complements. To address this issue, we begin by observing that there is a direct substitutability that arises from the political challenger’s resource constraint. This effect is straightforward and arises from the technology of ‘discovering’ memes where allocation effort towards the discovery of an identity meme means that the entrepreneur has fewer resources available to allocate towards the discovery of the policy meme. However, there is a more subtle effect that works in the opposite direction. In particular, we identify conditions under which there exists a natural complementarity between investment in worldview *and* identity politics that is illustrated in Figure 2 below. We

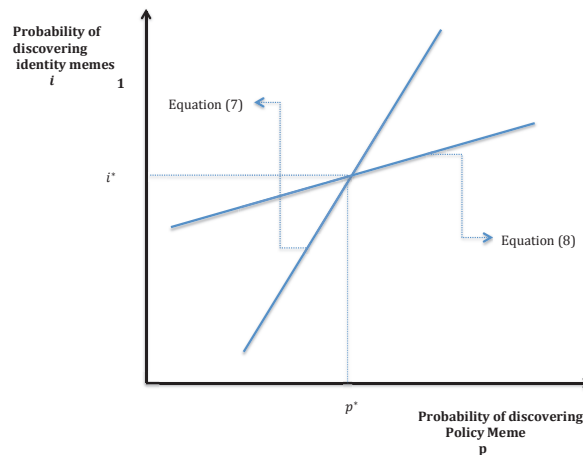


Figure 2: Complementarity and Ideational Politics

show that the returns to investing in the discovery of an identity (or policy) meme are increasing in the resources allocated to discovering a policy (or respectively identity) meme. In particular, in the Appendix we show that di/dp is positive so long as the complementarity between investment in identity and policy memes was sufficiently strong. This condition is described in the condition below.

PROPOSITION II: *If $[(\mu_1 - \mu_0)[\theta^{10}(S_1) - \theta^{10}(S_0)] + (1 - 2\mu_0)[g + y^{01}(S_0)] - 2\varphi^I\varphi^P > 0$, we have a sufficient condition for ideational complementarity with $di/dp > 0$.*

It is a priori not clear why the returns to investing in an identity meme should be higher when the policy meme is more likely to be discovered. So what accounts for the fact that full-spectrum ideational politics may be more effective than the sum of its two parts - namely, identity and worldview politics? There are *two* distinct sources that underpin this complementarity between worldview politics and the politics of identity. We describe each in turn below.

The complementarity between identity and worldview politics is driven by policy meme induced changes in the “association” effect - the payoff to a poor W person from sharing an identity with the higher status (and income) W group. This intuition for this source of complementarity is easiest to observe when the identity driven utility is driven by (for example) relative group income. Now suppose that the relative income of the W 's is higher when the state is perceived to be S_1 (and a_1 adopted) rather than when the state is S_0 (and the status-quo policy a_0 retained). This means that a policy meme, by persuading the voter that the state is S_1 , can increase the payoff from identity to those who belong to the W group. Therefore, in the presence of the “association” effect on identity, it is optimal for the political entrepreneur to invest more in discovering a policy meme. So for example, low-income white voters may be willing to support a policy that benefits a rich minority (e.g. financial deregulation), if its adoption gives them an indirect bump in utility - through association with other (now very) rich white beneficiaries of this policy.

This ideational complementarity that is driven by the association effect can be reinforced by an additional factor. Recollect that if voters perceive that the underlying state is S_0 , then the adoption of policy a_1 has a negative impact on the income of the poor. Nevertheless, *once identity is made salient* a subset of the poor will support this policy for reasons of loyalty to the identity group, even though supporting this policy has a negative impact on their income. However, the issue is whether the poor W voters who are reluctant to support the rich challenger - can be persuaded to change their position. To see this observe the impact of a policy meme that persuades the poor citizen that the state has switched to S_1 . Such a change in beliefs due to the policy meme,

makes adoption of the new policy a_1 optimal for *all* the poor W voters as the negative income effect of identity disappears. Therefore (in the presence of the policy meme), supporting policy a_1 on grounds of identity, is no longer perceived to be costly to the poor. This additional source of ideational complementarity makes it optimal for the political entrepreneur to invest more in trying to find a policy meme.

In much of the discussion that follows, as illustrated in Figure 2, the complementarity between identity and worldview politics plays an important role. Indeed the importance of this ideational complementarity becomes clear when we discuss the implications of an exogenous increase in (respectively) identity polarization, economic inequality and the effectiveness of the policy meme. This complementarity has interesting implications, that we discuss below.

IMPLICATIONS:

A. Identity Polarization and Policy Memes:

Greater identity polarization in the political arena is often associated with the prevalence of inconsistent (and even contradictory) ‘beliefs’ amongst segments of the population. For example, false beliefs such as ‘President Obama is a Muslim’ are prevalent amongst large segments of the population. Similarly, despite the increase in education levels and greater prevalence of information, there has been a persistence in the prevalence of ideas/memes that denies the fact that global warming is taking place or that budget balance and fiscal austerity may well be optimal for a country - even in the midst of a recession. Our framework provides an account of why such policy and identity memes may well go together.

To see this, we first observe that our framework throws light on whether an exogenous increase in identity ‘polarization’, can affect the production of *policy* memes. Equivalently, our framework also allows us to analyze the impact of a perceived increase in the technological payoff from policy a_1 , given by g . Indeed this is a direct implication of Proposition II above and we highlight it in the following corollary.

COROLLARY I: *Under conditions that satisfy Proposition II, there will be an increase in the production of policy memes either if there is an increase in identity polarization ($[\theta^{10}(S_1) - \theta^{10}(S_0)]$) or an increase in the marginal effectiveness of the policy meme (i.e. $[\mu_1 - \mu_0]$).*

These results are a direct implication of the presence of complementarity in ideational politics. Greater identity polarisation has two effects. First, by increasing the payoff from identity, this polarisation makes it attractive for the rich political challenger to discover such identity memes. This is because such identity memes help persuade the low income citizen to vote on the basis of

their identity, rather than their class interest. Furthermore, through the ideational complementarity effect (see Proposition II), this higher investment in the discovery of identity memes also gives rise to a higher production of policy memes.

This is because of the impact of greater identity polarization on the strength of the “association effect” amongst the subset of the poor that has a W marker. This effect increases in size because relative income (and status) of the W group goes up under a_1 (e.g. low taxes or financial deregulation). In other words, the low income W citizen gets more utility from identifying with the W group in state S_1 . Furthermore, this complementarity is further reinforced by the “identity-income tradeoff effect”. Using a similar argument, we also observe that an increase in productivity in state S_1 results in higher utility for the poor with the marker W from identifying with their group.

B. Economic Inequality and the Full-Spectrum Ideational Politics:

Inequality affects the nature of ideational politics through several channels. To fix ideas, consider the example of a policy choice between high and low taxation. Suppose that under the status-quo state S_0 the preferred policy of the median voter (who is poor) is the high tax policy a_0 while the preferred policy of the rich is the lower tax policy a_1 .

Now consider a technological change that results in an increase in income inequality in *both* states of the world. We capture this inequality in the form of higher wages of the rich, i.e. a higher \bar{y}_R . This rise in inequality has two effects on the rich political challenger’s incentives. First, the direct income benefits to a rich political challenger from adoption of a_1 (i.e. lower taxes) are higher when inequality is higher.²⁶ Therefore, under higher inequality, the rich challenger has a higher incentive to persuade the poor that the state is S_1 (and low taxes are good) by discovering a policy meme. Further observe that this higher inequality also gives rise to a higher incentive to engage in identity politics. This is because the rise in inequality disproportionately benefits the identity group W (at the expense of the B ’s), who also constitute most of the rich. This gives rise to an ideational complementarity that is easiest to illustrate through the “association effect”. In particular, if the political challenger can get the poor to identify with the rich through their common W identity, then he makes the increase in inequality more palatable to the poor - since they also get some status and utility.²⁷ So greater economic inequality not only increases the incentive to engage in politics

²⁶In particular, the payoff to the rich challenger (captured by the rents \mathcal{R}) from being elected goes up with higher inequality. This is because a rich entrepreneur will implement policy a_1 (lower taxes) that boosts his utility and equal $(1 - \mu_1)\bar{y}_{RW}^1(S_0) + \mu_1\bar{y}_{RW}^1(S_1)$ (indeed this follows from $di^*/d\mathcal{R} > 0$ (see appendix)).

²⁷It can be argued that the political-ideational complex has played an important role in persuading citizens into strengthening this ‘association effect’ by buying into a worldview (and/or identity) that makes it easier to justify and live with the prevailing high inequality. This is consistent with Piketty’s conclusion that (2014, pp. 419) that there has been a “huge change in the social representation of inequality.” Piketty draws on examples from popular culture

of changing worldviews but also introduce identity politics. Together, both these effects increase the likelihood that with an increase in inequality, there is both greater identity polarization as well as prevalence of policy memes. Therefore, the effect of inequality it to always (weakly) increase the likelihood of ideational politics.

Therefore, our analysis suggests that (as a result of the production of identity and policy memes), there will be greater perceived congruence in the interests of the economic elites and the masses. Gilens and Page (2014) run a horse race between various models within an integrated econometric model and find that “nearly total failure of “median voter” and other Majoritarian Electoral Democracy theories. When the preferences of economic elites and the stands of organized interest groups are controlled for, the preferences of the average American appear to have only a minuscule, near-zero, statistically non-significant impact upon public policy.....Furthermore, the preferences of economic elites (as measured by our proxy, the preferences of “affluent” citizens) have far more independent impact upon policy change than the preferences of average citizens do. To be sure, this does not mean that ordinary citizens always lose out; they fairly often get the policies they favor, but only because those policies happen also to be preferred by the economically elite citizens who wield the actual influence.”

Our framework suggests that the implications of Gilens and Page are even more pessimistic than they suggest. In part this is because much of the congruence in preferences between the elite and the median voter may be the direct results of prior successful attempts by the elite in shaping voter preferences and attitudes through the production of memes. For instance Gilens (2012) reports empirical results that suggest that the rich and the poor had similar preferences on not just foreign policy (where we may expect some agreement), but also on issues that affect the rich and poor very differently such as the war on drugs, education spending and childcare and family leave.

3.1.2 Ideas versus Interests

We should caution against interpreting our model too narrowly. In particular, it could be argued that rather than making a case for ideas, we have simply strengthened the argument for interests. After all, it is the interests of the political challenger that drives policy and identity memes. However, we argue that such an argument downplays the role of ideas in several ways.

First, in the presence of ideational politics, the link between interests and policy outcomes can be significantly weakened. The power of vested interests to get their way depends not only on their

to argue that they offer a “hymn to a just inequality, based on merit, education and the social utility of elites.” This is corroborated by Carlson, Dahl and Rooth (2015), who provide empirical evidence that suggests that worldviews about what is fair, just and meritocratic can be shaped by political entrepreneurs.

resources, but also on their ability to craft policy narratives and appeal to identity in appropriate ways. Money and organization certainly help with the latter set of tasks too. But sometimes political outsiders can upset these moneyed ‘interests’ through the introduction of memes that shape popular attitudes and alter the trajectory of history. More fundamentally, one can also consider the role of ideas in the political elites’ formulation of their interest. Even though our model took those interests as given, elites’ desired policies are as much a function of their identity and worldview as is the case for non-elites. Tax reform provides an illustration. As we discuss below, business elites were against the personal income cuts Reagan advocated, as they worried about the adverse fiscal implications. Over time, they began to place greater weight on the incentive and supply effects, and many have turned into enthusiastic advocates of across the board tax cuts. South Korea’s and Taiwan’s political leaders viewed their objectives largely in military and geopolitical terms through the late 1950s. This dictated inward-looking economic policies. Once they redefined their strategy as building strength through exports, economic goals began to loom much larger and their policies changed dramatically (Rodrik 1995). Any explanation that runs off the importance of vested interests begs the question of where powerful groups get their ideas about their interest in the first place.

Second and equally importantly, ideas can have an independent effect in shaping interests. Indeed, in some instances ideas may end up constraining and hurting the very interests that launched them in the first instance. For example, consider the June 2016 vote to leave the European Union in the U.K. (‘Brexit’) - the institutional change that in the longer run is likely to be the biggest blow against London’s financial interests in over half a century (see discussion in d’Ancona, 2016). Despite the 2008 financial crisis and the recession, these financial ‘interests’ in London were strong proponents of fiscal austerity. Indeed, these interests played a key role in the dissemination of the ‘budget balance’ meme and the gospel of fiscal austerity - so much so that not just the Tory party, but also Labour leaning policymakers found it difficult to deviate from this orthodoxy. However, the actual implementation of fiscal austerity by the government (especially in the post financial crisis world) arguably set the stage for Brexit. Recent work by Becker et al (2017) suggests that those households that suffered most from fiscal austerity were likely to have tipped the balance in favour of Brexit. This was probably because of a combination of the fact that the fiscal austerity meme had limited the government’s ability to manipulate (on the policy front) in the face of a recession and made the populace who were suffering from the financial crisis vulnerable to memes about national identity and ‘taking back control’ with the Brexit vote.

Similarly, the Republican Party (and its wealthy (business) interests) have long found it politi-

cally useful to disseminate memes and narratives that made identity salient (e.g. Willie Horton in 1988 or the welfare queen under Reagan). In the aftermath of the financial crisis, the Republican Party (and business) helped spread the austerity meme that limited the use of fiscal policy and deficits as a policy tool. The resulting financial austerity, coupled with structural changes due to globalisation, made the party vulnerable to a takeover by Trump and his nativist policies on immigration and much else - some of which directly hurt the business “interests” and backers of the Republican Party.

Two aspects of these examples are worth noting. First, a set of “interests” helped propagate a meme that helped shape perceptions of the world and/or make identity salient. Second, and importantly, this initial meme distorted the ability of subsequent policymakers to use their full set of instruments. Of course, the interest group that helped develop the meme knew that it would limit later policy flexibility in a way that may hurt their interests in the future. Or that it may alter structural conditions in such a way so as to generate a political backlash. However, this was either considered to be a remote possibility (high uncertainty about structural conditions) or discounted quasi-hyperbolically because of electoral outcomes being also driven by exogenous factors such as charisma.

We illustrate essential features of these examples through a simple extension of our existing framework to two electoral cycles. Second, we assume that structural conditions that affect the production of memes, $\varphi^k(a_i(S_j))$ are a function of exogenous shocks and also a function of policy choices. We assume that structural conditions are captured as a random draw each period from a symmetric distribution with mean $\bar{\varphi}^k(a_i(S_j))$ where $k \in \{I, P\}$. However, this exogenous shock can be further worsened by having an inefficient policy in place - a financial crisis and recession can be exacerbated by an inefficient policy-state mismatch. Finally, we allow governments to choose not just between a_0 and a_1 (possibly corresponding to high and low taxes, respectively) but also a populist policy a_p that directly hurts the rich but involves an unusually large dead-weight loss. However, if the identity W is salient, then we assume that adoption of this populist policy a_p provides a large identity based utility. This policy a_p can be variously interpreted as secession, Brexit, restrictions on high skill immigration - all policies that may have adverse distributional consequences on the rich and are arguably more or less inefficient.

Now consider a specific history at the end of the first electoral cycle: the rich challenger wins an election by deploying a policy meme that persuades the populace that the state is μ_1 and adopts the policy a_1 even though the appropriate policy choice is a_0 . This inappropriate policy choice along with a bad exogenous shock (e.g. financial crisis or recession) lowers the mean cost of searching for

identity memes in the second electoral cycle $\bar{\varphi}_2^I$. This lower cost of discovering identity memes opens a window of opportunity for low income challengers who invests resources in trying to get elected by making a passive marker salient (e.g. race, language or native/immigrant) that maximises his chances of winning the elections. With positive probability $i_2^*(\varphi^I(a_1(S_0)))$ such an identity meme is discovered and makes identity salient. If this identity is best expressed with the populist policy a_p , it will get implemented - even if it results in lower utility for all.

In other words, in order to get elected, a low-income challenger may make salient an identity and implement the associated policy a_p even if it is inefficient and directly hurts the minority rich. Therefore, in the longer run, identity politics may result in the adoption of (for example) anti-immigrant or anti-free trade policies that are opposed by the rich “interests” that catalysed identity politics in the first place.

4 The Political Economy of Ideas and Interests: Some Vignettes

There are plenty of case studies that suggest the successful deployment of memes of one kind or another play a role in the adoption of policies. For example, Campbell (1998) has argued that racial politics helped change the political fortunes of welfare, taxation and labour market policies in the U.S. Similarly, Skocpol (1997) has pointed out that policies viewed as complex, poorly framed and lacking a simple and clear message fail to get adopted. In some instances, policies that stand to benefit a group do not gain political traction even with the intended demographic because they are not marketed properly and are viewed as ‘excessively vague, complex and ambiguous’ (see Campbell (1998) on healthcare). Lau and Redlawsk (2001) suggest voters typically use cognitive shortcuts to process complicated information. Not surprisingly, this is exploited by political entrepreneurs. In what follows we provide a few brief case studies of political entrepreneurship in developing and deploying memes to generate popular support for a policy.

4.1 The Laffer Curve and the Reagan Tax Cuts of 1981

Soon after President Reagan assumed office he promulgated the Economic Recovery Tax Act of 1981 (ERTA), the largest tax cut in U.S. history. Looking at the widespread support for these income tax cuts in subsequent decades (especially amongst the business community), it is tempting to presume that ERTA always had the backing of business interests. However, a remarkable and relatively unnoticed aspect of the history of this legislation is that business originally opposed personal income tax cuts, which stood at the heart of ERTA. In her study of the popular origins of the Reagan

tax cut of 1981, Monica Prasad (2012) argues that “the record could not be clearer that business groups opposed” such tax cuts. She points out that business feared they were an “invitation to a financial disaster” that would result in exploding deficits and “touch off an inflationary explosion that would wreck the country and everyone on a fixed income.”

The embrace of tax cuts as a central plank in Republican politics presents a suggestive illustration of the power of ideas and policy memes. The idea was first introduced by a young economist in a meeting with Republican Party sympathisers who drew the famous Laffer curve on a napkin in DC where his message was simple - “if you tax somethings, you get less of it, If you subsidize something, you get more of it. We tax work, growth, investment, savings and productivity, while subsidizing non-work, consumption and debt”. Arthur Laffer’s argument was a classic policy meme - simple, catchy and plausible.²⁸ Lower taxes would increase the incentive to work, increase productivity and increase tax revenue. So the policy meme suggested that there was *no real trade-off* between lower taxes and higher revenue (i.e. lower deficits). Prasad (2012) details how effective the tax-cut policy meme was in garnering support from Jude Wanniski of the *Wall Street Journal* and Jack Kemp and subsequently (then) Governor Reagan. Jack Kemp and Ronald Reagan had been interested in cutting taxes. However, it was only when exposed to the simplicity of Laffer’s argument that Reagan (and Kemp) realised that this was not only a policy that lowered taxes on the rich, but one also likely to appeal to the (much poorer) median voter.

4.2 Ricardo and the Repeal of the Corn Laws 1846

In 1844 the Tories in England voted 308 against 1 to prevent a repeal of the Corn Laws - tariffs on the import of corn into Britain. In one of the more dramatic reversals in voting behaviour in history just two years later, 114 Tories had switched and joined the Whigs and others to repeal these same Corn Laws. So how did this overnight policy revolution come about? Stigler (1982, pp. 63-64) has emphasized the inevitability of the demise of the Corn Laws, due to sectoral shifts and the relative rise of the manufacturing. However, this ‘interest’ based view is difficult to square this with the almost sudden policy reversal.

Instead, more compelling is the view due to Lord Robbins (1963) that “any account...of the coming of free trade in the United Kingdom which omitted the influence of economic thought and of economists would be defective and, indeed absurd”. In particular, David Ricardo’s ideas about comparative advantage and free trade had been influential in changing the worldview of policymak-

²⁸Campbell (1998) emphasizes that ‘the Laffer curve became a powerful pedagogical symbol that many supply siders used when presenting their position.’

ers (especially the Conservative Prime Minister, Robert Peel) about the adverse consequences of high corn tariffs on the real wages of the working class (Lustzig, 1995 and Irwin, 1989). This was buttressed by the Anti-Corn Law league whose propaganda helped disseminate a wide variety of ideas that helped bring disparate interests into the movement for repeal. These ideas included the notion that free trade (and repeal) helped personal morality, religious faith, national wealth and secure the peace (Schonhardt-Bailey, 2006, p. 30). The most systematic study on the relative roles of ideas and interests is Schonhardt-Bailey (2006). She argues that Peel’s challenge was how to persuade members of his own party (who stood to benefit from keeping the Corn Laws in place), to change their position. She argued that Peel effectively managed to “nationalize the interest” such that his MPs chose to vote for the common good rather than more narrowly vote for the interests of their (agricultural) constituents.

4.3 The Great Recession of 2008: Austerity Economics and Keynesian Policies

The financial crisis of 2008 and its aftermath provide good examples of how politicians exploit the ‘availability’ and ‘representativeness’ heuristic in their choice of memes (Kahneman and Tversky, 1974).²⁹

Conservative political entrepreneurs repeatedly invoked the fear associated with ‘living beyond one’s means’ or ‘spending money that we don’t have’. Some variant of this narrative was repeatedly deployed in the U.S., Germany and the United Kingdom. For example, then U.S. House Minority Leader John Boehner claimed that “American families are tightening their belt. But they don’t see the government tightening its belt.” Indeed this meme was so powerful that even President Obama found it hard to resist, saying “Families across the country are tightening their belts and making tough decisions. The Federal government should do the same”.³⁰ Similarly, in the United Kingdom, the Conservative government used a multiplicity of narratives to ensure that there was support for implementing austerity. Initially the argument made by David Cameron was that “the country was living beyond its means” and deficit cutting and austerity were required to “clean up the mess left by Labour”. Just as President Obama was unable to pull away from the persuasive power of the meme, the Labour’s Shadow Chancellor Alistair Darling could not think of an effective way to argue against austerity. Indeed, he reportedly said that “Whatever our message, it’s got to strike a chord with millions of ordinary people as being realistic and credible. People know there

²⁹In particular, Kahneman and Tversky (1974) argue that individual decision makers assess ‘probability of an event by the ease with which instances and associations can be brought to mind’ - i.e. the “availability heuristic”. Similarly, when making “judgements we represent the problem automatically via the functioning of attention, perception, and memory, and our decisions are subsequently distorted by such representation” (Shleifer and Genniaoli, 2010).

³⁰Both these are from Krugman’s column in the New York Times of Jan 28, 2010.

is a deficit. They know it needs to come down. If we deny that, frankly people will not listen to you” (quoted by Skidelsky, 2010). It is arguably a combination of Kahneman and Tversky’s (1974) ‘availability’ and ‘representativeness’ heuristics that makes this policy narrative so compelling. As Skidelsky (2010) points out:

“people think of the government’s finances very much as they think of their own household’s finances. Every household knows that it has to balance its books. If it is spending more than it’s earning, it either has to earn more or spend less. Spending less means saving more. ...Households also know that a lot of their spending is ‘wasteful’ on things they can do without. And they assume the same is true of governments. Ordinary people, I suspect, think of the government as a huge household, which is currently spending much more than it is earning. Its collateral - the national economy - has shrunk in value. So it has to ... make provision for repaying its debt out of its surplus, just like the millions of smaller households in the land.

Indeed, Angela Merkel’s invocation of the Swabian housewife in Germany makes this quite explicit, as did David Cameron’s claim that ‘government deficit is just like credit card debt’.³¹

5 Concluding Comments

We end with some brief comments on the implications of our analysis for empirical research on political economy that takes both ideas and interests on board.

Since ideas and interests are both endogenous, it is difficult to tell them apart empirically. This is a problem that plagues much of the case-based political economy literature highlighting the role of one versus the other. This literature typically does not specify how an interest-based argument would be distinguished from an ideas-based one, leaving the conclusions open to alternative interpretations.³²

³¹This routine invocation of an analogy to household budget was also labeled as ‘commonsensical’. As pointed out in a historical treatment of the ‘Common Sense’ by Sophia Rosenfeld (2012), this is especially true in a country with an anti-elitist and populist strain such as the U.S., where the use of “common sense” as a political weapon to undermine institutions and policies put forth by experts that were possibly counterintuitive and complex. The Reagan Revolution was described by the President himself as a period when there was a “rediscovery of our values and common sense”. Indeed President Reagan saw that government could be “operated efficiently by using the same common sense practiced in our everyday life, in our homes, in businesses and private affairs”. See also Blyth (2013) on the history of austerity as an idea.

³²For example, Calomiris and Haber (2014) argue that the financial crisis of 2008-2009 was the product of an alliance of interests between big banks and community groups. The former wanted lax regulation while the latter wanted cheap housing credit for low-income groups. As such, the argument seems to be about vested interests. But one is left wondering why community groups such as ACORN bought into a worldview that favored leveraging poor households with excessive amounts of debt that they might not be able to service down the line. Conversely, ideas-based accounts of Germany’s advocacy of austerity policies in the euro zone (e.g. Blyth 2013) downplay the structural role of Germany as a creditor nation with little economic slack – leaving the country with much to gain and little to lose from such policies.

If a lobby pushes a particular policy, is that because they have a vested interest in that policy or because of ideational forces that shaped their understanding of where their interests lie?

Even though we did not carry out systematic empirical analysis in this paper, our framework does suggest a way that an empirical distinction can be drawn between ideas and interests. We can say that any behavior that is predictable on the basis of preference characteristics or worldviews that are salient ex ante can be attributed to “interests”. Behavior that is the result of ex post shifts in preferences or worldviews, brought about by memes and narratives, can be attributed in turn to ideational politics. This is consistent both with constructivists’ take on how ideas shape preferences and worldviews and with standard political economy models, which draw tight links between behavior and agents’ ex ante identifiable characteristics (such as occupation, industry, income group, or pre-existing ideological preferences over inflation/unemployment, etc.).

Our analytical wedge between ideas and interests relies on this distinction between ex-ante versus ex-post salience of identities and worldviews. Interests are determined by identities and worldviews that are salient ex ante. Ideas possibly intervene to transform these ex post. A broader implication of our framework, therefore, is that today’s ideas become tomorrow’s interests. In the very short run, it is all about interests. In the long run, it is all ideas.

References

- Acemoglu, D., Robinson, J. A. (2005). *Economic origins of dictatorship and democracy*. Cambridge University Press..
- Akerlof, G.A. and Snower, D.J., 2016. Bread and bullets. *Journal of Economic Behavior Organization*, 126, pp.58-71.
- Ashok, V., Kuziemko, I., Washington, E. (2015). Support for Redistribution in an Age of Rising Inequality: New stylized facts and some tentative explanations. Princeton University Working Paper
- Akerlof, George A., and Rachel E. Kranton (2000) “Economics and identity.” *Quarterly journal of Economics*, 715-753.
- Bartels, Larry (2005), “Homer Simpson Gets a Tax Cut: Inequality and Public Policy in the American Mind”, *Perspectives on Politics*, 3(01), 15-31.
- Bartels, L. M. (2006). What’s the Matter with What’s the Matter with Kansas?. *Quarterly Journal of Political Science*, 1(2), 201-226.
- Becker, G.S., 1983. A theory of competition among pressure groups for political influence. *The Quarterly Journal of Economics*, pp.371-400.
- Benabou, R. (2008). “Ideology”. *Journal of the European Economic Association*, 6(2013), 321-352.
- Benabou, R., Ticchi, D., Vindigni, A. (2015). Religion and innovation (No. w21052). National Bureau of Economic Research.
- Benjamin, D. J., Choi, J. J., Strickland, A. J. (2010). Social Identity and Preferences. *The American economic review*, 100(4), 1913.

- Blouin, Arthur and Sharun W. Mukand. (2018). Erasing Ethnicity? Propaganda, Nation Building and Identity in Rwanda. *The Journal of Political Economy*, forthcoming.
- Buiter, W. H. (2012). The role of central banks in financial stability: how has it changed?.
- Blyth, M. (2013). *Austerity: the history of a dangerous idea*. Oxford University Press.
- Blouin, Arthur and S. Mukand (2015). "Bridging the (Ethnic) Divide? Nation Building and Identity in Rwanda". Working Paper
- Bordalo, P., K. Coffman, Geniaolli, N. and A. Shleifer (2015) Stereotypes, *Quarterly Journal of Economics*
- Calomiris, C.W. and Haber, S.H., 2014. Fragile by design: the political origins of banking crises and scarce credit. Princeton University Press.
- Campbell, J. L. (1998). Institutional analysis and the role of ideas in political economy. *Theory and society*, 27(3), 377-409.
- Campbell, J. L. (2002). Ideas, politics, and public policy. *Annual review of sociology*, 21-38.
- Carlsson, Magnus, Gordon Dahl and Rooth (2015), "Do Politicians Change Public Attitudes", NBER Working Paper 21062
- Cerulo, K. A. (1997). Identity construction: New issues, new directions. *Annual review of Sociology*, 385-409.
- Collier, P., 2016. The cultural foundations of economic failure: A conceptual toolkit. *Journal of Economic Behavior & Organization*, 126, pp.5-24.
- Dawkins, R. (2006). The selfish gene (No. 199). Oxford university press.
- DellaVigna, S. and Gentzkow, M., 2010. Persuasion: Empirical Evidence. *Annual Review of Economics*, 2(1), pp.643-669.
- De Marzo, P. and Vayanos, D., Jeffrey Zwiebel (2003) "Persuasion Bias. Social Influence and Unidimensional Opinions?", *Quarterly Journal of Economics*, August, pp.909-67.
- Dietrich, F. and List, C. (2011). "A model of non-informational preference change". *Journal of theoretical politics*, 23(2), 145-164.
- Farrell, H., Quiggin, J. (2012). Consensus, dissensus and economic Ideas: the rise and fall of Keynesianism during the economic crisis. Working paper
- Fearon, J. D., Laitin, D. D. (2000). Violence and the social construction of ethnic identity. *International organization*, 54(04), 845-877.
- Frank, T. (2007). *What's the matter with Kansas?: how conservatives won the heart of America*. Macmillan.
- Gennaioli, N., Shleifer, A. (2010). What Comes to Mind?. *The Quarterly journal of economics*, 125(4), 1399-1433.
- Irwin, D. A. (1989). Political economy and Peel's repeal of the Corn Laws. *Economics and Politics*, 1(1), 41-59.
- Gilens, M. (2012). *Affluence and influence: Economic inequality and political power in America*. Princeton University Press.
- Gilens, M., Page, B. I. (2014). "Testing theories of American politics: Elites, interest groups, and average citizens". *Perspectives on Politics*, 12(03), 564-581.
- Glaeser, E. L. (2005). "The political economy of hatred". *The Quarterly Journal of Economics*, 45-86.
- Haidt, J. (2012). *The righteous mind: Why good people are divided by politics and religion*. Vintage.
- Hayek, F.A., (1949). "The intellectuals and socialism". *The University of Chicago Law Review*, 16(3), pp.417-433.
- Iyengar, S. and Kinder, D. R. (2010). *News that matters: Television and American opinion*. University of Chicago Press.

- Jackson, M. S. (2011). “Priming the sleeping giant: The dynamics of Latino political identity and vote choice”. *Political Psychology*, 32(4), 691-716.
- Keynes, J. M. (2006). *General theory of employment, interest and money*. Atlantic Publishers Dist.
- Johnson, S., Kwak, J. (2011). *13 bankers: The Wall Street takeover and the next financial meltdown*. Vintage Books USA.
- Jain, S., Majumdar, S., and Mukand, S. W. (2014). “Walk the line: Conflict, state capacity and the political dynamics of reform”. *Journal of Development Economics*, 111, 150-166.
- Kahneman, D. and Amos Tversky (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157), 1124-1131..
- Lenin, V. I. (1902). *What is to be done?*, available online at <https://www.marxists.org/archive/lenin/works/download/what-itd.pdf>.
- Levy, Gilat and Ronny Razin (2015), “Perceptions of Correlation, Communication and Ambiguity”. LSE Working Paper
- Lopez, E. and Leighton, W., 2012. Madmen, intellectuals, and academic scribblers: The economic engine of political change. Stanford University Press.
- Lusztig, M. (1995). Solving Peel’s puzzle: repeal of the Corn Laws and institutional preservation. *Comparative Politics*, 393-408.
- Mayer, Jane (2015), *Dark Money: The Hidden History of the Billionaires Behind the Rise of the Radical Right*, Doubleday, New York
- Mendelberg, T. (2001). *The race card: Campaign strategy, implicit messages, and the norm of equality*. Princeton University Press.
- Molden, D.C. (2014). Understanding Priming Effects in Social Psychology: What is “Social Priming” and How does it Occur?. *Social Cognition*, 32(Supplement), pp.1-11.
- Mullainathan, Sendhil, Andrei Shleifer, and Joshua Schwartzstein. (2008), “Coarse Thinking and Persuasion.? *Quarterly Journal of Economics* 123(2): 577-619
- Persson, T. and G.Tabellini (2000) *Political Economics*, Cambridge: MIT Press.
- Piketty, T. (2014). *Capital in the 21st Century*. Cambridge: Harvard University Press.
- Prasad, M. (2012). “The Popular Origins of Neoliberalism in the Reagan Tax Cut of 1981”. *Journal of Policy History*, 24(03), 351-383.
- Quadagno, J. (1996). *The color of welfare: How racism undermined the war on poverty*. Oxford University Press.
- Rodrik, Dani (1995), “Getting Interventions Right: How South Korea and Taiwan Grew Rich,? *Economic Policy* 20
- Rodrik, D. (2014). “When Ideas Trump Interests: Preferences, Worldviews, and Policy Innovations”. *The Journal of Economic Perspectives*, 28(1), 189-208.
- Robbins, L. (1963). *On the Relations between Politics and Economics* (pp. 3-23). Palgrave Macmillan UK.
- Rosenfeld, S. A. (2011). *Common Sense*. Harvard University Press.
- Ruggie, J. G. (1998). What makes the world hang together? Neo-utilitarianism and the social constructivist challenge. *International organization*, 52(04), 855-885.
- Schonhardt-Bailey, C. (2006). *From the corn laws to free trade: interests, ideas, and institutions in historical perspective*. MIT Press.
- Sen, Amartya (2005). *Identity and Violence: The Illusion of Destiny*, W.W. Norton, New York.
- Sethi, R., and Yildiz, M. (2012). “Public disagreement”. *American Economic Journal: Microeconomics*, 4(3), 57-95.
- Shayo, M. (2009). A model of social identity with an application to political economy: Nation, class, and redistribution. *American Political Science Review*, 103(02), 147-174.

- Shepsle (1985), "Comment of Why the Regulators Chose to Deregulate," in Roger Noll (ed.), *Regulatory Policy and the Social Sciences* (Berkeley: University of California Press): 231-39.
- Shiller, R.J., 2017. Narrative economics. *American Economic Review*, 107(4), pp.967-1004.
- Skidelsky, Robert (2010), "Austerity versus Stimulus", mimeo.
- Skocpol, T. (1997). *Boomerang: Health care reform and the turn against government*. WW Norton Company.
- Stigler, G. J. (1971). "The theory of economic regulation". *The Bell journal of economics and management science*, 3-21.
- Stigler, G. J. (1982). The economists and the problem of monopoly. *The American Economic Review*, 72(2), 1-11.
- Turner, John C (1985) "Social categorization and the self-concept: A social cognitive theory of group behavior." *Advances in group processes: Theory and research 2* : 77-122.
- Wendt, A. (1999). *Social theory of international politics*. Cambridge University Press.
- Wilkinson, S. I. (2006). *Votes and violence: Electoral competition and ethnic riots in India*. Cambridge University Press.

Appendix A

In the tables below, the payoffs in the square brackets, correspond to Appendix B.

Table 1: Payoff from Policy Meme

(to low income or poor citizen (P) from policy a_i and state S_j)

State/Policy	a_1	a_0	$y^{ij}(S_k)$
State S_1 (prob. μ_1)	$y^1(S_1)[= 1 + g]$	$y^0(S_1)[= 1]$	$y^{10}(S_1)[= g]$
State S_0 (prob. $(1 - \mu_1)$)	$y^1(S_0)[= 1 - g]$	$y^0(S_0)[= 1]$	$y^{10}(S_0)[= -g]$

Table 2: Payoff from Identity Meme

(to low income citizen (P) with W marker from policy a_i and state S_j)

State/Policy	a_1	a_0	$y^{ij}(S_k)$
S_1 (prob. μ_0)	$y^1(S_1) + \theta^1(S_1)[= 1 + g + \theta]$	$y^0(S_1) + \theta^0(S_1)[= 1]$	$y^{10}(S_1)[= g + \theta]$
S_0 (prob. $(1 - \mu_0)$)	$y^1(S_0) + \theta^1(S_0)[= 1 - g]$	$y^0(S_0) + \theta^0(S_0)[= 1]$	$y^{10}(S_0)[= -g]$

Table 3: Payoff from Identity and Policy Meme

(to low income citizen (P) with W marker from policy a_i and state S_j)

State/Policy	a_1	a_0	$y^{ij}(S_k)$
S_1 (prob. μ_1)	$y^1(S_1) + \theta^1(S_1)[= 1 + g + \theta]$	$y^0(S_1) + \theta^0(S_1)[= 1]$	$y^{10}(S_1)[= g + \theta]$
S_0 (prob. $(1 - \mu_1)$)	$y^1(S_0) + \theta^1(S_0)[= 1 - g]$	$y^0(S_0) + \theta^0(S_0)[= 1]$	$y^{10}(S_0)[= -g]$

PROOF OF PROPOSITION 1:

Here we proceed in several steps. First, we need to derive expressions for π^I, π^P as well as illustrating how we arrived at the expression for π^{IP} that is shown in the main body of the paper. We then show that there exists a solution (i^*, p^*) to the pair of equations given by (7) and (8) in the relevant range (i.e. $i^*, p^* \in [0, 1)$).

Derivation of π^I : Once identity is made salient, following equation (1), an individual j 's payoff from policy a_1 (LHS of inequality below) is greater than the payoff from the payoff from sticking to the status-quo policy a_0 (the RHS below) if:

$$[\mu_0 y^{10}(S_1) + (1 - \mu_0) y^{10}(S_0)] + \mu_0 [\theta^{10}(S_1) - \theta^{10}(S_0)] + \theta^{10}(S_0) \geq \tau_p + \delta \quad (10)$$

The set of ‘poor’ individuals who vote for the challenger follows from the above equation and is given by $\tau_j < \bar{\tau}^I$ where $\bar{\tau}^I$ is the defined by the poor individual who is indifferent between the two policies under identity politics, where $\bar{\tau}^I = [\mu_0 y^{10}(S_1) + (1 - \mu_0)y^{10}(S_0)] + \mu_0 [\theta^{10}(S_1) - \theta^{10}(S_0)] + \theta^{10}(S_0) - \delta$.

In particular, for the challenger to get elected he needs to collect at least $n_{RW} + n_{PW}[1 - G(\tau_j)] + n_{BR}[G(\tau_j)] \geq 1/2$, where G is the distribution function of τ in the P, W population and is assumed to be uniform.

This implies that given the heterogeneity in the strength of identity in the population (recollect that τ_i is drawn from the uniform distribution G with support $[-\frac{1}{2\phi_P}, \frac{1}{2\phi_P}]$), we have the following:

$$\pi_c^I = Prob_\delta [n_{RW} + n_{PW}G(\bar{\tau}^I) \geq 1/2]$$

We now use equation $\bar{\tau}^I$ to substitute for $G(\bar{\tau}^I)$ in the preceding equation, substitute for $\delta \sim U[-\frac{1}{2\psi}, \frac{1}{2\psi}]$ to obtain:

$$\begin{aligned} \pi^I = \frac{1}{2} + \psi \left\{ [\mu_0 y^{10}(S_1) + (1 - \mu_0)y^{10}(S_0)] + \mu_0 [\theta^{10}(S_1) - \theta^{10}(S_0)] \right. \\ \left. + \theta^{10}(S_0) - \frac{1}{n_{PW}} \left(\frac{1}{2} - n_{RW} \right) + \frac{1}{2\phi_{PW}} \right\} \end{aligned} \quad (11)$$

Derivation of π^P and π^0 :

His payoff from voting for the rich challenger (who adopts a_1) is greater than the payoff from voting for the poor incumbent (who retains status-quo a_0) if the following is true:

$$\mu_1[y^1(S_1) + g] + (1 - \mu_1)y^1(S_0) \geq \mu_1[y^0(S_1)] + (1 - \mu_1)y^0(S_0) + \tau + \delta \quad (12)$$

The term on the left hand side of the inequality equals the payoff if policy a_1 is implemented and the individual believes that the state S_1 with probability μ_1 . The term on the right hand side of the inequality is the expected payoff from sticking to the status-quo a_0 . On further simplifying and rearranging, we obtain

$$\mu_1[g] + (1 - \mu_1)y^{10}(S_0) \geq \tau + \delta \quad (13)$$

The term on the left hand side of the inequality equals the payoff if policy a_1 is implemented and the individual believes that the state S_1 with probability μ_1 . The term on the right hand side of the inequality is the expected payoff from sticking to the status-quo a_0 .

Using a similar logic as earlier, the total votes for the challenger if a successful policy meme had been discovered would be given by: $n_R + n_P G(\bar{\tau}^P)$. As previously, we can calculate the probability of a political challenger who discovers a policy meme is successful in winning elections as given by:

$$\pi_c^P = \frac{1}{2} + \psi \left\{ \mu_1 g - (1 - \mu_1)y^{01}(S_0) - \frac{1}{n_P \phi_P} \left(\frac{1}{2} - n_R \right) + \frac{1}{2\phi_P} \right\} \quad (14)$$

Observe that $d\pi_c^P/dg > 0$ and the absence of distributional effects is reflected in the fact that (unlike the case with identity politics) $\pi^P > 1/2$.

Similarly, we can derive π^0 . Only way that the challenger can win is if his popularity shock δ works sufficiently in his favour to ensure that it is greater than the income loss.

$$\mu_0 y^1(S_0) + (1 - \mu_0)y^1(S_1) \geq \mu_0 y^0(S_0) + (1 - \mu_0)y^0(S_1) + \delta + \tau$$

Rearranging we obtain,

$$\mu_0 y^{10}(S_0) + (1 - \mu_0) y^{10}(S_1) \geq \delta + \tau.$$

Following the same steps as earlier, this gives rise to

$$\pi^0 = \frac{1}{2} + \psi \left\{ (1 - \mu_0)g - \mu_0 y^{01}(S_0) - \frac{1}{n_P \phi_P} \left(\frac{1}{2} - n_R \right) + \frac{1}{2\phi_P} \right\} \quad (15)$$

Derivation of Equation i^, p^* :*

$$\begin{aligned} \pi_c^{IP} = \frac{1}{2} + \psi \left\{ \mu_1 \cdot g - (1 - \mu_1) \bar{y}^{01}(S_0) + m u_1 [\theta^{10}(S_1) - \theta^{10}(S_0)] \right. \\ \left. + \theta^{10}(S_0) - \frac{1}{n_{PW}} \left(\frac{1}{2} - n_{RW} \right) + \frac{1}{2\phi_P} \right\} \end{aligned}$$

Observe that $\frac{d\pi_c^{IP}}{dg} > 0$ and $\frac{d\pi_c^{IP}}{d\theta_w^{10}} > 0$. Also note that changes in g indirectly may affect the degree of identity polarization since the relative status between the two groups may change as a function of the changes in income (i.e. $\bar{y}_{PW}^{10}(S_1)$ is a function of g and output).

Having solved for π^I, π^P, π^{IP} , we can substitute these expressions into the political challenger's optimisation (given by (6)) and obtain first order conditions given by (7) and (8). On solving (7) and (8) simultaneously we obtain (where $z = a/\beta_i$):

$$i^* = \frac{z(\pi_c^P - \pi_c^0) \mathcal{R} [z(\pi^{IP} + \pi^0 - \pi^I - \pi^P) \mathcal{R} - \varphi^I \varphi^P] + (\varphi^P)^2 z(\pi_c^I - \pi_c^0) \mathcal{R}}{(\varphi^I \varphi^P)^2 - [z(\pi^{IP} + \pi^0 - \pi^I - \pi^P) \mathcal{R} - \varphi^I \varphi^P]^2} \quad (16)$$

$$p^* = z \mathcal{R} \left\{ \frac{(\varphi^I)^2 (\pi^P - \pi^0) + (\pi^I - \pi^0) [z(\pi^{IP} - \pi^0 - \pi^I - \pi^P) \mathcal{R} - \varphi^I \varphi^P]}{(\varphi^I \varphi^P)^2 - [z(\pi^{IP} - \pi^0 - \pi^I - \pi^P) \mathcal{R} - \varphi^I \varphi^P]^2} \right\}. \quad (17)$$

Recollect that $z = a/\beta_i$ where $i \in \{0, 1\}$. Now observe that since z is decreasing in β , we have the numerator decreasing and denominator increasing in β . Therefore, i^*, p^* are both decreasing in β . We further point out that while there exists a i^*, p^* that solves the above equations, we need further condition to ensure that $i^*, p^* \in [0, 1)$. These conditions are described in the proof of Proposition 2. Finally, given that $c(b)$ is continuous, we can solve for b^* by examining the first order conditions for the political incumbent.

PROOF OF PROPOSITION 2: For complementarity, we need to impose conditions such that not only does i^*, p^* exist, but that $di/dp > 0$ as in Figure 2. Accordingly, (i) we evaluate (7) (LHS below) and (8)(the RHS below) when $p = 0$. This gives rise to:

$$\frac{2[\pi^I - \pi_c] \mathcal{R} (a_i a_p)^2}{[\varphi^I]^2} \leq \frac{[\pi^P - \pi_c^0] \mathcal{R}}{\frac{\varphi^I \varphi^P}{2a^2} - (\pi^{IP} + \pi_c^0 - \pi^I - \pi^P) \mathcal{R}}$$

On simplifying we obtain:

$$\varphi^I \varphi^P \leq (\varphi^I)^2 \frac{\pi^P - \pi_c^0}{\pi^I - \pi_c^0} + 2(\pi^{IP} + \pi_c^0 - \pi^I - \pi^P) \mathcal{R} a^2$$

This inequality is satisfied and $RHS > LHS$ for a variety of parameters (including a_i, a_p, π^{IP} sufficiently large as well as $\varphi^I \rightarrow 0$).

Observe that equations (7) and (8) are linear in i and p . Differentiating (7) we obtain:

$$\frac{di}{dp} = \frac{a(\pi^{IP} + \pi_c^0 - \pi^I - \pi^P)R}{[\varphi^I]^2} - \frac{\varphi^P}{\varphi^I} \quad (18)$$

Similarly differentiating (8) we obtain

$$\frac{di}{dp} = \frac{(\varphi^P)^2}{a(\pi^{IP} + \pi_c^0 - \pi^I - \pi^P)\mathcal{R} - \varphi^I\varphi^P}. \quad (19)$$

Further comparing slopes from (18) and (19) we observe the slope of (18) is steeper than the slope of (19) (and positive) if the following inequality holds:

$$\frac{a\mathcal{R}}{2}[\pi^{IP} + \pi_c^0 - \pi^I - \pi^P] > \varphi^I\varphi^P \quad (20)$$

This is true for $[\pi^{IP} + \pi_c^0 - \pi^I - \pi^P]$ being positive and a, \mathcal{R} being sufficiently large. Observe that:

$$[\pi^{IP} + \pi_c^0 - \pi^I - \pi^P] = (\mu_1 - \mu_0)[\theta^{10}(S_1) - \theta^{10}(S_0)] + (1 - 2\mu_0)[g + y^{01}(S_0)] \quad (21)$$

This implies that if (i) the ideational complementarity and/or the (ii) the ‘income-identity tradeoff’ effect (i.e. income loss to the poor from a_1) and a, \mathcal{R} was sufficiently large we would expect an increase in i^* to be complementary to an increase in p^* . Substituting (5), (11), (14), (15) into (20) gives us the condition for ideational complementarity described in Proposition 2.

Given the differences in intercepts and the differences in slopes, the two curves will intersect in the positive (i, p) quadrant. However, for existence we need an additional step that ensures that $\exists i^*, p^* \leq 1$. A sufficient condition for this is if parameters satisfy the following two conditions: (i) at $p = 1$, we want i^* (from (7)) $>$ i^* (from (8)) and (ii) at $p = 1$ we also have i^* (from (8)) ≤ 1 . If both these conditions are satisfied, we will have demonstrated the existence of i^*, p^* .

The first of these conditions is satisfied if the following inequality holds (for $p = 1$):

$$\frac{2a^2}{(\varphi^I)^2}[(\pi^I - \pi^0)\mathcal{R} + (\pi^{IP} + \pi_c^0 - \pi^I - \pi^P)] - \frac{\varphi^P}{\varphi^I} > \frac{2a^2(\pi^P - \pi^0)\mathcal{R} - (\varphi^P)^2}{\varphi^I\varphi^P - [\pi^{IP} + \pi_c^0 - \pi^I - \pi^P]\mathcal{R}2a^2}.$$

Observe that the LHS is increasing (and the RHS is decreasing) in $[\pi^{IP} + \pi_c^0 - \pi^I - \pi^P]\mathcal{R}$. Further observe that $\text{RHS} < 0$ for $\pi^P \rightarrow \pi^0$.

For (ii) above, we need the following inequality to be true:

$$2\mathcal{R}a^2(\pi^P - \pi^I) - (\varphi^P)^2 \leq \varphi^I\varphi^P - [\pi^{IP} + \pi_c^0 - \pi^I - \pi^P]\mathcal{R}2a^2.$$

On simplifying this equals:

$$2\mathcal{R}a^2[\pi^{IP} - \pi^I] \leq \varphi^I\varphi^P + (\varphi^P)^2$$

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Appendix B: Microfoundations for Policy and Identity Memes

In this appendix we relax a key assumption of our benchmark model. In particular, we provide micro-foundations for both identity and policy memes and throw light on the question of how is it that these memes can alter beliefs of the populace. As a first step, we observe that we can interpret an individual's preferences as being state-dependent on not only the income dimension but also the identity dimension. It is quite standard to assume that individuals may get a higher income payoff in some states of the world than in others. Using a similar logic we argue that in some states of the world, an individual receives more utility from their membership to an identity group than in others. We allow for the possibility that this makes identity salient and gives rise to an incentive for individuals to invest in their group identity. In this appendix we sketch a version of our model that shows how both memes work - essentially by changing beliefs that individuals have about the underlying state of the world (be it income or an identity related state). We elaborate on this below.

As discussed in the text, there are several channels through which the memes can alter beliefs about the state of world and/or get individuals to invest in their (otherwise passive) group identity.³³ Rather than privilege a particular channel we take a different more direct route over here. In particular, we sidestep the issue of how this information manipulation is carried out by the entrepreneur. Instead, we assume that the discovery of (for example) a policy meme 'blocks' information that a citizen receives about the underlying state of the world.

Accordingly, we assume that policy a_i is state-dependent where the relevant states are S_j , where $i, j \in \{0, 1\}$. However, we now allow for preferences regarding identity be a function of the underlying state also. In particular, we allow group identity to be much more important in state S_H and much less (or of negligible) importance when the state is S_L . Of course, it is entirely possible that the policy relevant states S_0 (or S_1) are correlated with or even perfectly coincide with the states of the world that determine the magnitude of the identity payoff. However, for the purpose of the appendix we treat the policy and identity relevant states as uncorrelated. The payoffs in what follows corresponds to the numbers in the square brackets of Tables 1-3 in Appendix A above.

For simplicity, we assume that priors about both the policy and identity relevant states are such that $P(S_0) = P(S_L) = \mu$.

We assume that each individual obtains a correlated reliable (but imprecise) private signal about the underlying policy relevant state s_0 or a signal s_L about the corresponding identity relevant state. The reliability of these correlated private signals equals $P(s_0|S_0) = q = P(s_L|S_L)$. When the political challenger allocates effort (i, p) , he blocks the signal s_0 with probability p and the signal s_L with probability i . Therefore, if the voter does not receive the signal about the underlying state, he updates using Bayes rule and obtains the following:

$$P(S_1|\text{no signal } s_0) = \mu^p = \mu_1 = \frac{(1 - \mu)}{[p + (1 - p)(1 - q)]\mu + (1 - \mu)} \quad (22)$$

Similarly, on not receiving the signal s_L we have

$$P(S_H|\text{no signal } s_L) = \mu^i = \frac{(1 - \mu)}{[i + (1 - i)(1 - q)]\mu + (1 - \mu)} \quad (23)$$

³³These channels include the role manipulating the media and information by the political entrepreneur by exploiting behavioural biases arising from framing (Breyer, 1981), anticipatory utility (Benabou and Tirole, 2002), coarse thinking (Mullainathan et al, 2008), salience and attention (Genniaolli and Shleifer, 2010), correlated neglect and peer influence heuristics (Levy and Razin (2014), Enke and Zimmerman (2017)) or Bayesian persuasion (Alonso and Camara).

These two expressions give us the voter's posterior in the case the memes are discovered and manage to shift a voter's information set by blocking information that the voter may have received. In the case of the policy or identity meme, this results in an updated posterior about the likely success of adopting the new policy or the likelihood that investing in group identity is likely to provide a payoff.

We now follow our earlier derivation of the probability of the political challenger winning the election (depending on whether an identity, or policy or both memes have been discovered π^I, π^P, π^{IP} or none π^0). Therefore, the payoff from electing the rich challenger with the W marker is greater than electing the incumbent so long as the following inequality holds,

$$\mu^P[(1+g) + \mu^i\theta] + (1 - \mu^P)[(1-g) + \mu^i\theta] \geq 1 + \tau_j + \delta$$

Rearranging, we get the set of voters with τ 's such that they will vote for the political challenger is given by

$$\tau_j \leq g[2\mu^P - 1] + \mu^i\theta - \delta \equiv \bar{\tau}^{IP}$$

We can use similar mechanics to derive expressions for π^I, π^P and π^0 . Given these probabilities of getting elected under different circumstances, the challenger's problem is

$$\max_{i,p} [i(1-p)\pi_c^I + p(1-i)\pi_c^P + i.p\pi_c^{IP} + (1-i)(1-p)\pi_c^0] \mathcal{R} - \frac{[\varphi^I i + \varphi^P p]^2}{2}$$

Taking first order conditions with respect to i (and for simplicity take $\varphi^I = 1$ and $\varphi^P = c$) we obtain:

$$[p\pi^{IP} + ip\frac{\partial\pi^{IP}}{\partial i} + (1-p)\pi^I + i(1-p)\frac{\partial\pi^I}{\partial i} - p\pi^P - (1-p)\pi^0]R - (i+cp) = 0$$

Here we observe that,

$$\frac{\partial\pi^{IP}}{\partial i} = \frac{\partial\pi^I}{\partial i} = \psi\theta\frac{\partial\mu^i}{\partial i}$$

Using the above expression, substituting and simplifying we obtain,

$$\left[\psi\theta\mu^i \left(1 - \frac{i q \mu}{(1-\mu)} \mu^i\right) + \psi \left(\frac{n_{RW} - n_B}{2n_{PW}\phi_P} - \frac{n_R}{2n_P\phi_P} \right) \right] R = i + cp. \quad (24)$$

Similarly, we can take first order conditions with respect to p and obtain,

$$[i\pi^{IP} + ip\frac{\partial\pi^{IP}}{\partial i} + (1-i)\pi^P + p(1-i)\frac{\partial\pi^P}{\partial p} - i\pi^I - (1-i)\pi^0]R - c(i+cp) = 0$$

Once again observing that

$$\frac{\partial\pi^{IP}}{\partial p} = \frac{\partial\pi^P}{\partial p} = 2\psi\theta\frac{\partial\mu^P}{\partial p}$$

Furthermore, observe that

$$\frac{\partial\mu^P}{\partial p} = (-)\frac{(\mu^P)^2}{(1-\mu)} q\mu$$

Once again we use the preceding two expressions to simplify and substitute in the first order

condition with respect to p to obtain,

$$2g\psi \left[(\mu^p - \mu) - \frac{pq\mu}{(1-\mu)} (\mu^p)^2 \right] R = c(i + cp) \quad (25)$$

Substituting for $(i + cp)$ from (22) into (23) and rearranging, we obtain

$$Z(i, p) \equiv c \left[\theta \mu^i \left(1 - \frac{iq\mu\mu^i}{(1-\mu)} \right) + \frac{n_{RW} - n_B}{2n_{PW}\phi_p} - \frac{n_R}{2n_P\phi_P} \right] - 2g \left[(\mu^p - \mu) - \frac{pq\mu}{1-\mu} (\mu^p)^2 \right] = 0 \quad (26)$$

Now we can use the above expression to obtain

$$\frac{di}{dp} = (-) \frac{\frac{\partial Z(i,p)}{\partial p}}{\frac{\partial Z(i,p)}{\partial i}} = (-) \frac{\frac{4g(\mu^p)^2 q\mu}{(1-\mu)} \left[1 - \frac{pq\mu\mu^p}{1-\mu} \right]}{-\frac{2c\theta(\mu^i)^2 q\mu}{(1-\mu)} \left[1 - \frac{iq\mu\mu^i}{1-\mu} \right]} \quad (27)$$

Observe that $di/dp > 0$ iff both $q\mu < 1$ and $\frac{iq\mu\mu^i}{1-\mu} < 1$.