On the 23rd of June 2016 the UK has voted to leave the EU after n years of membership. The results of the referendum have come as a surprise to most observers as there has been a widespread consensus among economists that a leave vote would inflict serious damages on the British economy. Such an event raises the question for economists and political scientists whether a decision like this - which seemingly goes against the interests of those who made it - can be explained based the classical model of rational behavior. In case of Brexit, Becker (2017) has found evidence which calls into question the applicability of rational choice theory in this case, showing that in areas where the economic cost of Brexit is likely to be higher show no significantly higher rejection of Brexit than other areas. Perhaps not surprisingly, Becker instead finds that Brexit supporters were primarily the lower educated, poorer voters.

Of course political decision making is plagued by the problem of rational ignorance i.e. the fact that rational people will not be willing to invest the necessary time and energy to carefully evaluate the validity of every campaign message they receive given that the probability that their vote will have an effect on the outcome is infinitesimal. Olson has famously noted that a small but well organized lobby might have a disproportionate influence on public policy if the benefit to a small special interest group dwarfs the cost to the average citizen. However, even if voters will not expend much effort with fact checking everything they hear in a campaign, we might still expect them to take information in campaign messages with a pinch of salt. In particular, rational people understand that their interests do not align perfectly with the interests of the creators of the campaign and thus they should ignore campaign messages which try to convince them about the merits of a particular policy. Several important questions arise from this line of thought.

Firstly, even if we assume that parties can commit to the policy that they announce and that they know perfectly well which policy is the optimal one (the policy that a benevolent social planner would choose to maximize a social welfare function) they are not bound to be truthful in communicating this knowledge to voters. Of course, one might argue that there are long term reputational costs to misleading the public but how much these costs constrain campaign messages in practice is not clear. As a first approximation, political campaigns can be regarded as cheap talk, i.e. communication where the message sent does not directly affect the utility of the sender. If voters are fully rational does this imply that voters will completely ignore campaigns? A famous answer in the negative has come from Crawford and Sobel: They have shown that even in a very simple case there exists Nash equilibria of a cheap talk game even if the Sender and the Receiver have divergent interests. These equilibria are pooling in the sense that the Sender truthfully reveals in which set of states the world is in but does not give further information about which state within that set is the true one. The voters in turn, being perfectly rational, know that in equilibrium the message is honest and update their beliefs using the Bayes rule.

Thus a simple approach to modelling political communication would be adapting the Crawford Sobel cheap talk framework. Indeed, this is exactly the approach the Grossman and Helpman take. The test of this theory (as the test of any other economic model) is how well the conclusions of the model fit the stylized facts of reality. Of course at this level of abstraction we should not expect a perfect explanation of every empirical observation of politics we might have, rather a reproduction of the most important features that we are interested in. In this case, the question is how to interpret the Crawford Sobel model in a political context and does the conclusion provide a satisfactory description of political campaigns.

As much historical experience suggests the assumption of perfect rationality on part of the voters and the conclusion that campaign messages are truthful when information is transmitted does not provide even an approximate description of actual campaigns. Groups that attempt to shift public opinion do not carefully reveal the set a set of policies one of which is the socially optimal. In contrast, they often put forward a case for a very specific course of action, describing in detail what would be the best policy for the general welfare of the public but often tilting this program to serve their own interests instead. This suggests that deviations from rationality play an important role in forming political discourse.

The question that we might pose then is: What role exactly does irrationality play in political communication? The role of irrationality in decision making has long been known to economists. Starting with kahneman and Tversky there has been a long literature on the various forms of systematic errors that people make. A particular example of these, which plays crucial importance in the explanation of human behavior in situations that feature asymmetries of information (like political campaigns), is that most people find it difficult to fully take into account how the interests of other people influence their actions. A possible formalization of this has been provided by Eyster and Rabin in the form of the cursed equilibrium where agents do not fully understand how the hidden type of other players influences their actions. In political campaigns a similar mental limitation plays a crucial role namely that people often lend more credence to political messages then what would be rationally justifiable. This trait which we might call naiveté or credulity is arguably something that a good political campaign should exploit. But what exactly is the cost that we pay for our naiveté? If only a small fraction of the electorate is credulous, will the damage also be limited?

A theoretical framework for answering this question has been provided by Kartik extending the classic Crawford Sobel framework. Their setup features a messaging game which differs from the Crawford Sobel model in two respects. First, they introduce credulity on part of the receiver and second they introduce a cost of lying. Their model provides a good starting point to understand the implications of credulity in a political context.

In the model presented in this paper I shall integrate the insights of the Kartik model into a model of political campaigns that is due to Grossman and Helpman. This model contributes to the literature on political campiagns by showing how credulity and reputational costs to lying influence campaign communication, a question that to my knowledge has not been explored before in this setting.

In particular, I will show that even a small fraction of credulous voters in the electorate has dramatic influences on both the realized outcome and the message that is transmitted. Credulity even if it impacts only a few voters changes the Nash equilibria of the game qualitatively and - if talk is indeed cheap – allows the campaigning interest group to always implement its preferred policy. The intuition for this is simple: In the model of voting presented by Grossman and Helpman , in a two party system, both parties choose to announce the policy that is the posterior expectation of the average voter after hearing the campaign message. If a fraction of the electorate can be manipulated without costs the campaigning group will choose to send them a message that will make the average of the posterior expectation be its own bliss point. Even though in equilibrium rational voters are able to infer back the true state the credulous voters can be made to have a distorted enough view to shift the average to any desired point in the policy space.

Of course, this conclusion is quite an extreme one. This has the advantage of showing the contrast between my model and that of Grossman and Helpman. In fact, in some areas of economics – most notably in finance - it is often argued that modeling irrationality is not necessary despite the mounting empirical evidence in favor of it due to the fact that economic forces like arbitrage will make the effects of irrationality disappear in the aggregate. In other words, the most common justification of the rational choice model in economics is that models of aggregate economic variables such as prices of assets are robust to the introduction of irrational agents. This paper shows that this conclusion does not hold in this case i.e. in political campaigns no corrective mechanism drives out the influence of irrationality which implies that such behavior should not be ignored by economic models.

Of course, there are forces that constrain political campaigns not to drive public opinion too further away from the truth. In the long run, voters might find out the true state of the world and lose trust in campaigners who deceived them. This leads to the introduction of another new element into the Grossman Helpman model, namely a penalty for lying. It turns out, that costliness of lying in itself is also sufficient to induce separating equilibria (where each state of the world corresponds to a unique message) even without the presence of irrational agents. When both irrationality and costly lying are present – arguably the most realistic of the cases presented so far – the analytical solution to the sender’s strategy becomes a complicated function of the state thus I do not analyze this case in detail.

The welfare analysis of this model provides important insights: Suppose a benevolent social planner can invest in costly education for the voters thus converting credulous voters into rational ones. If lying is costless, the social planner is facing a binary choice: If it only decreases the fraction of credulous voters but does not eliminate them completely then welfare will remain completely unaffected. Only if credulity disappears completely will the welfare of the players change in equilibrium. Thus there is a unique value which is the cost of credulity for society and the social planner should invest in costly education programs for voters only if the cost is below this value.

Possibilities for several extensions arise: What if there are multiple rounds of campaigns by different interest groups? What if the interest groups themselves have voting power (i.e. if they form a substantial fraction of the electorate and thus their voting behavior cannot be ignored)? The model presented here seems to be robust to such changes in assumptions.

The rest of this paper is organized as follows: Section 2 reviews the existing literature on models of political campaigns with special attention on cheap talk models. Section 3 presents the formal setup of the model and its solution. Section 4 presents an evaluation of the model results, welfare and policy implication. Section 5 discusses directions for further research and discusses critically the modelling assumptions. Section 6 concludes.

The basic starting point for this paper is the model presented in Grossman and Helpman. In their baseline model of voting which they employ in many different settings, features a continuum of voters who have preferences over parties based on their policies. GH distinguishes between fixed and pliable policies for the parties and assumes that voters are more likely to vote for party which they think is closer to their optimal pliable policy. However, voters also have preferences over the fixed policies which are random and exogenous to the model furthermore they do not know the optimal value of the optimal pliable policy and treat it as a random variable. They then show that in a two party system both parties choose to announce the policy that is the average of the posterior expected optimal policy of the voters after receiving any messages. Before the parties announce their platforms a special interest group has a chance to send a message on the optimal policy. In the GH model this first step of the game is exactly identical to the Crawford Sobel cheap talk model.

The CS model is a general and widely used model of cheap talk, i.e. costless communication. A sender is perfectly informed about the state of the world while a decision maker is uninformed. The sender can send a message to the decision maker about the state which in general can be any probability distribution over the state space and can depend on the true state. The decision maker then uses her knowledge of the sender’s equilibrium strategy and the message and updates her belief about the state using the Bayes rule. Then she makes a decision (chooses an element of the state space) that is optimal for her given the posterior beliefs. The key conflict in this game is that while the bliss point of both the sender and the receiver in general is state dependent it does not have to coincide. This means that the sender has an incentive to induce an action which leads to an action that makes the action of the decision maker close to its own ideal policy. Despite this conflict of interest CS show that there exist equilibria where information is transmitted, where the sender truthfully reveals a subset of states in which the true state is in.

The CS model has been very influential in information economics and there have been several extensions the most relevant of which is the Kartik model. Kartik extends the CS model in two directions: They introduce credulous agents and costly lying. There framework is very general and they present the properties of the resulting equilibria in an abstract setting. The motivating examples they provide for the analysis are stock recommendations, advertising and grade inflation. They do not mention politics as a possible field of application.

There are other directions in which the CS model has been extended. For example, Chakraborty presents a model with multidimensional state space and state independent preferences for the sender. They show that in this case, it is possible to transmit information even is the bias of the sender is large, a result which does not hold in one dimension. Their intuition is that the expert can send comparative messages about the state i.e. saying that in dimension one the state is higher than in dimension two which in equilibrium increases the welfare of the receiver.

Similarly to how this paper uses the insights of Kartik to better understand campaign messages, Schankenberg applies Chakraborty to politics. In particular, he argues that political communication reveals directional information about the multidimensional state (e.g. Conservative economic and liberal social policy would be optimal) but not the exact value of the optimal policies.