

Research Statement

I am a microeconomic theorist. My research studies political institutions, the design of certificates and tests, and social learning. I have also done work in behavioral economics that demonstrates how synergetic theory and data can work together.

Elections: How do voters form political beliefs and choose their political information? Going further, how does the belief formation and the possibly heterogeneous quality of the voters' information shape political outcomes? And what are the pitfalls that we should be aware of: how might voters be manipulated or exploited by interested parties?

My job market paper "*Voter Attention and Distributive Politics*", starts from the empirical observation that voters who are more severely affected by a proposed reform will pay more attention and will be better informed (this is known as the "issue publics hypothesis", Converse '64). I build a model that allows to study the relationship between preference intensities, the information level of groups of voters with conflicting interests (distributive politics), and their voting power. In the benchmark, when the information of voters is exogenous, a median voter theorem holds. This is often not the first-best outcome: for example, when 51% of the citizens benefit from a reform marginally, but at the same time 49% of the citizens are impaired by it severely. This result is invariant to scaling the intensities of specific voters. When information is endogenous, attention shifts election outcomes into a direction that is welfare-improving. Even when a welfare-enhancing reform is not preferred by a majority ex-post, under certain conditions, there are equilibria where the reform is adopted. In such situations, there is a minority who cares a lot about the reform and pays more attention to politics. I show how this information advantage translates into voting power, precluding the majority from exerting its dominance. The model makes further several novel predictions: the polarization of the voters' preference intensities matters for election outcomes, and restricting the "richness" of the voters' information choices might lead to welfare-improvements. In another paper, called "*Persuasion and Information Aggregation in Elections*", and co-authored with Stephan Lauermann, we start from the basic observation that, in most election settings, for some voters, the ranking of alternatives depends on her information. An interested party that has private information may utilize this fact by strategically releasing information to affect the voters' behavior. Examples of interested parties holding and strategically releasing relevant information for voters are numerous: in a shareholder vote, the management may strategically provide information about the merger through presentations and conversations; similarly, lobbyists provide selected information to legislators to influence their vote. We study the scope of such "persuasion" (Kamenica and Gentzkow, 2011) in elections, in a setting, where absent strategic information provision, election outcomes are equivalent to the outcome with publicly known states ("information

aggregation”). We show that just by providing additional information, a manipulator can implement any target policy: for example, he can implement, in every state, the opposite of the outcome with full information.

On the topic of voting and elections, my future and ongoing research will be structured in two lines: first, I will study mechanisms of direct democracy such as petitions and referenda. In the paper, called “*Political Uncertainty, Signaling and Referenda*”, and co-authored with my fellow student Deniz Kattwinkel, we point out a mostly unnoticed difficulty of collective-choice mechanisms and political processes: often, new policies involve larger uncertainty relative to the status quo and their implementation is subject to more discretion by politicians. This creates one-sided signaling incentives. When politicians with misaligned preferences have full discretion—like in protest or non-binding voting models—babbling is often the only outcome (Battaglini, 2017). We show that, in situations of “intermediate discretion”, there is “oversignaling” by the voters. We argue that one case of intermediate discretion are referenda, where politicians are bound to the referendum, but, typically, not an exact implementation. We show: when the politician is biased against the referendum, there is an equilibrium where the referendum always passes, even in the situations where all citizens and the politician prefer it not to. Second, I plan to further analyze models of strategic information provision to voters. One focus will be on settings where interested parties compete in supplying information to voters. Early results show that a simple model of competitive persuasion of voters through public signals is equivalent to a class of all-pay-contests. In the future, I plan to leverage this equivalence in more general settings to understand how competition shapes the information provision to voters.

Test Design. In many markets, the information provided by participants is not only cheap talk. Often, on both sides of the market, additional information arises: in the form of certificates, that is hard evidence, or from tests of quality. My co-author Deniz Kattwinkel and I investigate the relevance of this observation in a particular instance (paper: “*Strategic Understatements*”) that relates to the following question: how should societies make use of tests or certificates in labor markets? Importantly, which tests and certificates are effective, (even) if we take into account that job candidates make strategic use of the evidence that they hold of their own quality and that employers might perform additional, costly tests on the candidates. We show, that, depending on the design of the test, there is a motive for “strategic understatements”, similar to countersignaling (Harbaugh, Feltovich, 2001): when tests are too selective, candidates of very high quality will likely possess evidence of their quality, but will abstain from presenting it to employers to motivate these to costly investigate their very high type.

The paper is a conceptual example on how relaxing the assumption that agents can commit to a strategy of costly testing—which is prevalent in the literature on mechanisms with costly verification (Ben-Porath, Dekel and Lipman, 2014)—can make problems of costly verification sometimes much more tractable. We believe that our approach might be useful, particularly in multidimensional settings. Be-

sides, we plan to study further questions related to test design: for example, both the design of product tests and the disclosure of their results is often at the discretion of firms, e.g. in the pharmaceutical industry. This leads to inefficient testing and inefficient information provision (DeMarzo, Kremer and Skrzypacz, 2019). If regulators could inspect the firms at a cost, how should they do that? What are the cost of restoring efficiency?

Social Learning. How much can individuals learn from the choices of others about a pay-off relevant state when the set of persons that is observed depends on the state itself? For example, a low-quality restaurant might serve customers more slowly, producing long queues. In such a situation, a newly arriving customer faces an inference problem: is the queue long because the restaurant is good or because it is bad? Early results show that even a minimal state-dependence of observations leads to “confounded learning” (Smith and Sorensen, 2001) in the canonical social learning model. Based on these early results, I plan to study richer settings of social learning with state-dependent observations where the state-dependence is endogenous: e.g. the bad restaurant might decide to serve slowly to benefit from the inference problem, however, at the cost of foregoing some customers that could otherwise be served as well. Intuitively, the incentives of doing so are higher for the bad restaurant than for a good restaurant such that, in fact, the inference problem might be sustained in equilibrium.

Behavioral Economics. Individuals can often inquire about how their decisions would affect others. When do they stop the inquiry if they prefer one of their options for selfish reasons?

In the paper “*Motivated Information Acquisition in Social Decisions*”, co-authored with my fellow student Si Chen, we provide causal evidence with a laboratory experiment for the following behavior: when having a selfishly preferred option, individuals are more likely to continue inquiring about the consequences of their decisions if the information received up to that point predominantly suggests that behaving selfishly harms others. In contrast, when the information up to that point predominantly suggests that being selfish harms nobody, individuals continue acquiring information in a similar manner to those without a preferred option. Drawing on the Bayesian persuasion model of Kamenica and Gentzkow (2011), we propose a theoretical model showing that this information acquisition strategy can be optimal for a Bayesian agent who values the belief that she does not harm others, but attempts to persuade herself to behave self-interestedly. The model predicts that, surprisingly, strategic information acquisition motivated by self-interest can reduce the decisions’ resulting negative externalities and improve the welfare of the affected others. This prediction was indeed found to be the case in our experiment. In a note with Si Chen, called “*A Non-Parametric Elicitation of Probability Weights*”, we developed a novel non-parametric method that trades off risk with delay to elicit individual’s probability weighting function. Importantly, the method can be applied to settings without monetary payoffs, like expedient in studies with children.