

# High Speed Society, Slow Motion Democracy, and the Dilemma for Democratic Problem Solving (SLOMODEMO)

## State-of-the-art and objectives

### Main Proposition, Objective, Research Question, and Ambition

We live in a high-speed society governed by a slow-motion democracy. Social acceleration – defined as the progressively faster rate of technological, social, and life-pace change (Rosa 2013) – continuously introduces new problems and amplifies the demand for rapid, effective policy solutions. However, democratic problem solving is often notoriously slow and always at risk of falling behind in responding to urgent calls for intervention. Policy and regulatory solutions are regularly proposed that are outdated as soon as they are introduced, or problem solving is sped up at the cost of democratic procedures (Part B1 gives examples).

My **main proposition** is that under rapid technological, social, and life-pace change, democratic problem solving faces a fundamental dilemma: speed up decision making by circumventing democratic procedures or hold on to slow procedures at the cost of effective problem solving. Both options are likely to exacerbate public disenchantment with liberal democracy, which is already high.

Prior political science research has taught us much about the temporal dimension of democratic politics, democratic disenchantment, how democracies fare under extreme stress, and changing politics in the digital age. However, these literatures almost exclusively focus on the input and throughput dimensions of the political system and thus give insufficient attention to policy performance, i.e., the output and outcome components that are key for democratic problem solving (Evans & Stoker 2022). Moreover, these literatures disregard how social acceleration affects liberal-democratic problem solving. By contrast, social acceleration theory has provided us with a rich and nuanced theory of high-speed society (Rosa 2013) but lacks causal and empirical precision (Vostal 2014). The literature on social acceleration's direct impact on democracy (Scheurman 2004) is informative but has remained too theoretical and speculative to inspire solid empirical research. These theoretical and empirical shortcomings, which I substantiate in the next section, need to be remedied to achieve an accurate understanding of the dilemma for democratic problem solving.

The **objective** of SLOMODEMO is to accurately understand the dilemma for democratic problem solving. The **overall research question** is: how and under what conditions is social acceleration negatively affecting liberal democracy's capacity to legitimately solve problems? The **prospect** is that answering this question will help us better understand the fundamental challenges liberal democracy is facing worldwide and hence how to walk the line between efficacy and legitimacy. To **achieve the objective**, SLOMODEMO advances a new theoretical and empirical research agenda to answer the overall research question. The project reconceptualizes liberal democracy as a problem-solving system, advances the theory and empirics of social acceleration, and offers cross-national and over-time studies of eight liberal yet constitutionally and politically diverse democracies. This innovative approach enables **key contributions** on:

- the measurement of the extent of social acceleration
- social acceleration's disruptive effects on liberal-democratic institutions and lawmaking
- when and why citizens and politicians prioritize fast problem solving over democratic processes and the trade-offs they make
- the strategies governments employ to cope with the dilemma for democratic problem solving and to what effect
- how to obtain a legitimate balance between democratic procedures and effective problem solving amidst rapid change.

Three decades of sustained work on the dynamics of liberal democracy, modern welfare states, and capitalist economies have prepared me well for taking up this ambitious new research project. In my most recent work (Van Kersbergen & Vis 2022; Busemeyer et al. 2022; Van Kersbergen & Svendsen 2022), I have shifted attention to how new technology is changing the context of political and economic systems. My **ambition as PI** is to build on this momentum and establish a research group to break new ground in understanding the complexities of high-speed society and the fundamental dilemma for democratic problem solving.

## Moving Beyond the State of the Art

This section offers a succinct and necessarily selective review of various bodies of literature that either directly speak to SLOMODEMO's proposition and objective or are otherwise potentially relevant for advancing the theoretical argument. It identifies the following six **gaps in the literature that SLOMODEMO will fill**:

- While much has been written about the temporal dimension of democratic politics, there is a need for further exploration of the unique challenges posed by accelerating technological, social, and life-pace changes.
- While democratic disenchantment has been thoroughly explored, insufficient attention has been given to the impact on democratic legitimacy of dissatisfaction with democracy's problem-solving capabilities and performance.
- The literature on democratic performance during crises and emergencies provides valuable insights, but more attention is required to address equally pressing temporal challenges that arise from ongoing technological and social transformations that are not urgent crises or emergencies yet still adversely affect democratic problem solving.
- Research on the impact of digital technologies on democratic politics has mainly focused on the input and throughput phases, neglecting the output and feedback phases.
- While the literature on globalization has highlighted its negative impact on democracy, empirical research suggests that advanced liberal democracies have found ways to combine globalization and democracy while being forced to accept constraints on national sovereignty. Additionally, globalization is not the sole cause of economic insecurity, and its 'losers' often mistakenly attribute their difficulties to free trade and immigration, even though fast technological change plays a more significant role.
- The theory of social acceleration provides a compelling framework, but there is a need for refinement to achieve greater precision in identifying the driving forces behind acceleration and causal links among its three dimensions. Also, empirical specificity is required to support its continued theoretical relevance.

*The temporal dimension of democratic politics.* The temporal dimension of democratic politics has been the subject of extensive scholarship (Schedler & Santiso 1998; Linz 1998; Goetz 2019) which has focused on various ways time and timing influence democratic politics. This includes the impact of electoral, policy, budget, and information cycles (Nordhaus 1975; Franzese 2002; Alesina & Spolaore 2005; Shi & Svensson 2006); policy and political "timing" (Bonoli 2007; Schleiter 2019; Wenzelburger et al. 2020; Thomas & Darsey 2023); the challenge of myopic politics and democratic 'short-termism' (Healy & Malhotra 2009; Garri 2010; MacKenzie 2021; Rapeli et al. 2021; Sheffer et al. 2023); the long-term consequences of policy and institutional decisions (path dependence; Pierson 2000, 2011; Kreuzer 2020); the temporal requirements for political participation and deliberation (Fumagalli 2021); the problem of time inconsistency, credible commitments, and governing for the long term (Majone 1996; Jacobs 2011, 2016; Tsebelis 2017); and the role of temporal order and event sequencing in regime change and democratization (Schmitter & Santiso 1998).

Such studies provide valuable insights into the temporal dynamics of democratic politics under routine circumstances that are relevant for SLOMODEMO. But while there is a lot to learn from this literature on how democratic processes unfold over time, it does not sufficiently explore the unique temporal and problem-solving challenges that arise in the context of rapid technological, social, and life-pace transformations.

*Democratic disenchantment.* The concept of democratic disenchantment (also sometimes called disaffection, disillusionment, or dissatisfaction) has been extensively explored in the literature in the past decade. Public support for democracy and the legitimacy of the political system are faltering (Norris 2011; Lindberg & Steenkamp 2017; Foa et al. 2020; Kriesi 2020; IDEA 2022). Citizens express low trust in politicians (Wike & Fetterolf 2018) and there is growing frustration with the political system's inability to address critical issues like inequality, climate change, and migration (Evans & Stoker 2022; Harrison 2023). This mounting dissatisfaction has caused the rise of (mainly right-wing) populism (Berman 2021), led to 'democratic backsliding' and a decline in commitment to liberal democracy as a political regime (Runciman 2013; Levitsky & Ziblatt 2018; Mounk 2018; Przeworski 2019; Stasavage 2020a; Haggard & Kaufman 2021; Wolkenstein 2022), and caused an increasing number of citizens to turn to non-democratic approaches (Foa & Mounk 2016, 2017; Puddington & Roylance 2016).

The democratic disenchantment literature primarily focuses on citizens, voters, parties, (social) media, parliaments, and governments (the input and throughput dimensions of the political system) and have taught us a lot about the sources and manifestations of democratic dissatisfaction. However, these literatures (but see Evans & Stoker 2022) have paid insufficient attention to how much the deficient policies and policy performance of democracies (output and outcome) contribute to public disenchantment with democracy.

*Democracy under acute time stress.* The literature on democratic performance under acute time stress has extensively analyzed how liberal democracies respond to crises, such as economic and financial crises, emergencies like pandemics and environmental disasters, and internal and external threats to national security (Bermeo & Pontusson 2012; Edelsen 2013; Boin et al. 2016; Kreuder-Sonnen 2018; Rhinard 2019; White 2019; Stasavage 2020b; Boin et al. 2021; Goetz & Martinsen 2021). This literature emphasizes the adaptability of democracy under exceptional conditions, but also demonstrates that crises and emergencies often necessitate the (usually – but not always – constitutionally justified) suspension of routine democratic procedures.

This literature is obviously directly relevant for SLOMODEMO, but despite its valuable contributions to understanding the dilemmas democracies face under extreme pressure, it does not address the extent to which the dilemma for democratic problem solving is a much wider phenomenon that extends beyond times of crisis to more ordinary circumstances. Rapid technological change (say the recent advances in Generative Artificial Intelligence) do not constitute a crisis but do fundamentally challenge existing regulatory frameworks and democracy's capacity to respond adequately and timely.

*Digital politics*'. The advent of new communication technologies, social media platforms, and digital networks has brought about a significant transformation in the way people interact with each other and participate in politics that affects the functioning of liberal democracy. This literature highlights how the rise of social media and other digital technologies has created new forms of political communication and mobilization, but also new challenges such as increased surveillance and privacy violations, the spread of misinformation and fake news, filter bubbles, and echo chambers that reinforce polarization (Pariser 2011; Benkler et al. 2018; Bennett & Pfetsch 2018; Bennett & Livingston 2018; Jungherr et al. 2020; Tsifti et al. 2020). Moreover, big tech companies and platforms now play a bigger role in shaping politics, which poses challenges to democratic accountability and transparency (Zuboff 2019; Nielsen & Ganter 2022).

Research further focuses on 1) the impact of technological change on political movements, mobilization, campaigning, protest, and electoral behavior (Little 2016; Margetts et al. 2016; Bruns et al. 2016; Jost et al. 2018; Woolley & Howard 2018); 2) opportunities for 'digital citizenship', 'e-democracy', and 'digital political parties' (Farrell 2012; Fisher 2012; Jungherr 2017; Gerbaudo 2019; Hintz et al. 2018); 3) how digital technologies are transforming relationships between citizens and the state. Digital platforms and tools can enhance citizen participation and engagement, but they can also exacerbate existing inequalities and reinforce patterns of political exclusion (Coleman & Blumler 2009).

A key insight is that the use of big data can reinforce existing power structures and inequalities. For example, algorithms that are trained on biased data can perpetuate discrimination against marginalized groups, leading to unfair outcomes in policy decisions (O'Neill 2016; Eubanks 2018; Yeung 2019). This may erode public trust in the fairness and effectiveness of democratic processes (König & Wenzelburger 2020, 2022). Additionally, data-driven decision making muddles transparency and undermines accountability, as it often remains unclear whether the datasets used are reliable and unbiased, or whether the algorithms used are transparent enough to be audited by outside parties (Nemitz 2018; Campolo & Crawford 2020).

In sum, SLOMODEMO can extract many important insights from this literature, but, as with the literature on democratic disenchantment, the major shortcoming concerns its almost exclusive focus on the input and throughput side of democratic politics.

*Globalization and democracy.* The political economy debate on the impact of globalization on democracy has revolved around the question of whether national sovereignty, democracy, and (hyper or deep) globalization are compatible. Rodrik (2011) has argued that there is a trilemma between the three (in principle desirable) objectives, whereby it is impossible for a country to simultaneously achieve all three. Instead, a country must prioritize two of the three, according to its preferences and constraints. If a state aims to preserve democracy and national sovereignty, it must restrict globalization and impose barriers to trade and capital flows. If a state prioritizes globalization and national sovereignty, it must limit democracy and delegate policymaking to technocratic or supranational institutions. If a state seeks to promote globalization and democracy, it must constrain national sovereignty and accept external rules and standards.

Another strand of literature highlights that globalization (especially international trade, offshoring, and immigration) causes labour market disruption, job polarization, and economic insecurity especially among low-skilled workers, who express grievances politically by supporting right-wing populist parties (Rodrik 2018; Colantone & Stanig 2019; Naoi 2020; Walter 2021).

For SLOMODEMO, three observations are key. First, there is broad consensus in the political economy literature that skill- or routine-biased technological change contributes much more to economic insecurity among workers than does globalization (Busemeyer et al. 2022), but that insecure workers misattribute their difficulties to free trade and immigration rather than technological change (e.g., automation) (Gallego & Kurer 2022; Wu 2022). Second, the trilemma argument exaggerates the trade-offs and constraints and underestimates the extent to which countries can address the trilemma by cooperating to find beneficial solutions (Stein 2016;

Palley 2017; Aizenman & Ito 2020; Funke & Zhong 2022). Finally and critically, globalization and social acceleration are fundamentally distinct analytical concepts that capture different empirical phenomena. Globalization is about connectivity, capturing the increasing interconnectedness and interdependence of the world with its focus on the cross-border flow of goods, services, capital, people, and information. Social acceleration is about temporal change, centering on the increasing pace of social change. While globalization primarily affects democracy through economic interdependence and cross-border issues, social acceleration directly impacts the internal dynamics of democratic institutions, politics, and policies.

*Social acceleration theory.* The concept of accelerating societal speed has become a prominent topic in social, political, and legal theory (Chesneaux 2000; Scheuerman 2004; Virilio 2006; Tomlinson 2007; Hassan 2009; Rosa & Scheuerman 2009; Laux 2011; McIvor 2011; McGinnis 2013; Rosa 2013; Mavrofidis et al. 2014; Vostal 2014, 2021; Wajcman 2015; Agger 2016; Saward 2017; Wajcman & Dodd 2017; Zandvoort 2017; Fawcett 2018a, b). Hartmut Rosa's (2005; 2013) theory of social acceleration is the analytically most robust and empirically potentially most valuable approach in this area. It highlights acceleration in three dimensions: a) technological change; b) social change; and c) change in the pace of life (elaborated in the theory section below).

Amidst growing concerns about the speed of technological, social, and life-pace change (Bertman 1998; Gleick 1999; Tomlinson 2007; Hassan 2009; St. Clair 2011; Glezos 2011; 2020; Agger 2016; Wajcman & Dodd 2017; Azhar 2021), it is important to examine whether these anxieties are truly warranted. While anxiety about rapid change is not a new phenomenon (Toffler 1970; Mokyr et al. 2015; Frey 2019), there is some evidence that the current wave of change is progressing faster than ever before and accelerating in some domains. This is perhaps most distinct in the domain of technology and exemplified by breakneck advances in information technology, automation, artificial intelligence, big data, robotics, stem cell research, cloning, genome editing, and much more (Schwab 2016; Hillyer 2020; UN 2021; Djuraskovic 2022). In addition, the time intervals of the adoption of new technologies are ever-shortening: new technologies are disseminated at an unprecedented pace (Dobbs et al. 2016; McGrath 2019), with many significant ramifications for the organization and pace of social and political life.

The theory of social acceleration is rich and nuanced and a key inspiration for SLOMODEMO. However, the theory has been criticized for lacking causal and empirical precision as to the drivers of social acceleration, the links between its three dimensions, and its consequences (Vostal 2014, 2021; Wajcman 2015; Cornwell et al. 2019; Santarius & Bergener 2021; Schäfer & Merkel 2021; Gokmenoglu 2022). The same holds true for the literature on social acceleration's direct impact on democracy (Scheuerman 2004, 2019; McGinnis 2011, 2013). SLOMODEMO requires much sharper causal theory, while robust empirical evidence is needed to test the truthfulness of assertions and to gauge consequences for liberal-democratic problem solving.

*To recap:* This literature review suggests that a refinement of social acceleration theory and an extended reconceptualization of liberal democracy as a problem-solving system are two necessary theoretical innovations to address the gaps and weaknesses identified in the existing scholarship on democratic politics. This task is taken up in the next section.

## Advancing Theory: Social Acceleration and Liberal-Democratic Problem Solving

This section outlines the general theoretical foundation of SLOMODEMO, with specific elaborations provided in the work package descriptions in Section b. I can here only sketch the contours of and lay the foundation for **SLOMODEMO's argument**, which I will fully develop in the project's first year. Step one is to **specify the theory of social acceleration**, arguing that technological development should be understood as the primary, but not exclusive, catalyst of social and political transformations. Step two is to build on and extend existing theories to broaden our understanding of liberal democracy beyond its common usage, i.e., **reconceptualizing liberal democracy** as a problem-solving system.

*FOUNDATION FOR STEP ONE: Specifying the theory of social acceleration.* Social acceleration refers to the progressively decreasing amount of time necessary for social activities or experiences, which encompass a wide range of actions such as production, consumption, communication, travel, employment, relationships, and more. Social acceleration theory points out acceleration in three dimensions: a) technological change, b) social change, and c) change in the pace of life.

Technological acceleration refers to the incessant and progressive changes in the domains of transportation, information, communication, and production. The rapid advancements in transportation technology, such as automobiles, rail, and jet aircrafts, have considerably reduced the perceived distances between geographical locations as faster modes of travel compress space. Virtual reality technology could potentially eliminate the very need for physical travel. Information dissemination has also undergone a transformation, enabling data to travel at the speed of light, with significantly increased capacity for simultaneous transmission (internet, mobile technology, cloud computing). Furthermore, interpersonal communication – e.g., via email, instant

messaging, video conferencing, and social media platforms – has become less reliant on physical proximity and temporal constraints. The advent of digitization and virtualization (e.g., 3D printing, ‘digital twin’ technology, the Internet of Things) has catalyzed the acceleration of the production and distribution of goods and services. Critically, the rate of adoption of new technologies has increased (Digital Adoption 2023). For example, OpenAI’s ChatGPT, a revolutionary and potentially disruptive artificial intelligence application, reached 100 million unique users within two months of its launch in November 2022, making it the fastest-growing AI app to date (Hu 2023).

The concept of the acceleration of social change refers to the progressively faster evolution of production forms and structures, division of labour, occupational patterns, and family arrangements. It encompasses the experience of the increasing pace at which social structures, institutions, organizations, traditions, conventions, lifestyles, routines, and habits are being destabilized and replaced by new forms of social interaction. One significant empirical development is the shift in the pace of social change from inter-generational to intra-generational. For example, social institutions related to intimate relationships have become less stable within a single generation, both in terms of duration (e.g., rising divorce rates, remarriage, re-partnering, serial monogamy) and form (e.g., cohabitation, religious and ethnic diversity, varying gender composition, single parenthood) (Hantrais et al. 2020; Boyle 2023). Similarly, the revolution in women’s roles (Esping-Andersen 2009) occurred within one generation. The acceleration of social change is further exemplified by the increasing frequency and speed at which workers change jobs throughout their lifetimes and the consequent need for retraining. The rapid pace of change poses a challenge for public education policies to keep up (Goldin & Katz 2010; Gordon 2013; PWC 2017). A final example is the phenomenon of constant organizational change, including shifts in management styles and the swift replacement of familiar occupations with new ones (Holbeche 2015; Burke 2017). The conjectured consequence of accelerated social change is a rising sense of insecurity about the shape of society in the future.

The acceleration of life pace refers to the objectively measurable increase in the intensity of experiences and activities that individuals engage in during a given period of time (Scheuerman 2004: 13). Social activities have been progressively speeding up, with people multitasking more frequently, connecting with others through email and social media, and doing more activities with fewer breaks professionally, socially, and privately. This objective acceleration leads to a qualitative change in the subjective experience of time, resulting in a feeling of having no personal time, lagging behind, or being out of touch. This sense of being pressed for time can generate a fear of missing out and a compulsion to adapt (Nowotny 1989; Bertman 1998; Eriksen 2001; St. Clair 2011; Rosa 2013; Wajcman 2015), which can exacerbate work-life imbalances (Schöneck 2018). Rosa (2013: 134) has identified the ‘slipping slope syndrome’ as an existential feeling of standing on slipping slopes that results from the realization that in a dynamic society, almost all of one’s knowledge and assets are constantly threatened with obsolescence. This syndrome reinforces the feeling of lagging behind and the compulsion to adapt (Korunka & Hoonakker 2014; Wajcman 2015).

The consequences of social acceleration potentially undermining liberal-democratic problem solving are many and concern: (1) the ‘shrinking of the present’, which results in contingency and uncertainty as the future becomes less predictable; (2) the paradoxical situation where the future is important but inaccessible, which increases anxiety and alienation; (3) the economic, social, and political decoupling of social systems, which causes different systems to develop their own logic and temporal dynamics; (4) the increase in the pace and intensity of everyday activities, which negatively affects the perception and management of time; and (5) a potential ecological catastrophe, which arises because ‘the time pattern of society overstrains the reproductive and regenerative capacities of the natural environment’ (Rosa 2013: 319). These consequences challenge the legitimacy and effectiveness of liberal-democratic problem solving.

*Towards renewal and improvement of the theory and empirical measurement of social acceleration.* A key critique of the theory of social acceleration is its imprecise formulation regarding the driving forces behind acceleration and the causal links among its three dimensions. According to Rosa (2013: 71; chapter 6), the three dimensions of social acceleration are analytically distinct but interrelated, logically irreducible to each other, and empirically interconnected in complex and partly paradoxical ways. Social acceleration is seen as a ‘self-propelling process that places the three realms of acceleration into reciprocal relationships of mutual escalation’ (Rosa 2013: 151). Consequently, the theory introduces the causally ambiguous notion of a ‘circle of acceleration’, which underscores the self-reinforcing feedback in a circular causal chain.

To address the question of what initiates the acceleration processes and how the different dimensions are interrelated, ‘external driving forces’ or ‘motors’ are identified. Specifically, the capitalist economic motor propels technological acceleration, while the cultural logic of escalating expectations propels the acceleration of the pace of life. Additionally, the socio-structural logic of functional differentiation drives the acceleration of social change. However, this approach does not attribute causal primacy to any one of these external driving ‘motors’ and instead emphasizes their complex complementary interaction and deep-seated relationship of

mutual escalation. As such, the theory intentionally avoids making unambiguous causal claims or specific statements about causal primacy that can be empirically tested, instead emphasizing the multifaceted and reciprocal nature of the acceleration processes.

Rosa (2013: 152ff) acknowledges this shortcoming and proposes that, for heuristic purposes, the dwindling availability of time should be viewed as the fundamental driver of technological acceleration. As societies become more time-constrained, they increasingly prioritize technology that saves time or accelerates processes. Technological acceleration then serves as a potent force propelling social change. The acceleration of social change, in turn, accelerates the pace of life.

Although this argument leaves unexplained where the lack of time stems from, the causal chain this sets in motion makes sense and is taken as a starting point for refining the theory to offer more causal specificity. Throughout history, technological advancements have led to new forms of production, transportation, communication, and social organization, which transformed societies and political structures. The Industrial Revolution in the 18<sup>th</sup> and 19<sup>th</sup> centuries was based on major technological innovations that had a profound impact on society and politics. New machines and technologies revolutionized how goods were produced, leading to a massive increase in productivity and economic growth, but also to large-scale societal disruption for which solutions needed to be found (Hobsbawm 1999; Landes 2003; Stearns 2018). Similarly, new technologies in the 20<sup>th</sup> and 21<sup>st</sup> century, including automation and robotization, but also the internet, personal computers, smartphones, etc., have added to economic prosperity, but at the same time are unsettling existing arrangements of production, work, and communication (Avent 2016). Moreover, technological advancements drive the demand for further technological improvements. As new technologies become available, they create new possibilities and opportunities, which in turn drive further innovation and development (Brynjolfsson & McAfee 2014; McAfee & Brynjolfsson 2017; Frey 2019). This cycle of innovation is self-reinforcing and can create a feedback loop that continually accelerates the pace of technological change and social transformation, thus boosting the dilemma for liberal-democratic problem solving.

While I hold that technological advancements have played a catalyzing role in driving societal and political changes throughout (democratic) history (Boix 2019), further theorizing should consider that this relationship is neither exclusive nor deterministic (Wyatt 2008, 2023). Technological development is not the only factor that shapes society and politics. Rather, it interacts with and is influenced by cultural, economic, and political factors, which in turn affect the trajectory of technological change (Bijker et al. 2012).

Economic considerations (e.g., expected returns on investments) and the availability of financing play a crucial role in a firm's decision regarding whether to adopt new technologies. Intellectual property rights, such as patents and copyrights, facilitate innovation but can also create barriers to entry for competitors and hinder the ability of other innovators to build upon existing ideas. The length and scope of intellectual property protections can impact technological development, with shorter and more limited protections potentially encouraging faster innovation and competition (Frey 2019).

Direct political interventions matter too. For instance, the European Union's General Data Protection Regulation (GDPR) is shaping the development and use of digital technologies in Europe, while the EU's AI Act (June 2024) is likely to have a strong impact on the design and use of future AI applications.

Furthermore, societal values and beliefs can shape how technology is developed and used. For example, the development and use of facial recognition technology will strongly depend on whether cultural values and norms such as privacy, individual liberty, and autonomy dominate and crowd out other concerns (e.g., collective security or social stability).

I will elaborate the theory in line with the open functional approach to public policy change proposed in earlier work (Van Kersbergen & Vis 2014). This approach holds that (rapid) changes in technology present themselves as functional pressures to which society and liberal democracy as a problem-solving system must adapt. For instance, in the domain of public policies, automation and the development of the AI-driven platform economy negatively affect the functioning of the welfare state by disrupting traditional forms of work, social protection, and education and training, and by creating new forms of economic insecurity. This generates *functional* pressure to update and innovate – or dismantle (Bauer et al. 2012) – public policies and institutions, insofar as such adaptation is necessary for reasons of the continuity and integration of the public policy system. This should not be misunderstood as a *functionalist* argument, because I argue that failure to respond adequately to functional pressure is always a distinct possibility. Public policy systems never functionally adapt automatically, and the political-institutional context and human agency (identifying the problem, coming up with solutions, gathering support for change, implementing policies, monitoring results, etc.) are always key.

Based on these theoretical considerations, SLOMODEMO will remedy the problem of empirical imprecision, anecdotal evidence, and overly broad generalizations which have made it difficult to test or validate social acceleration theory and its conjectured consequences. While anecdotal evidence can be useful

in generating ideas and provides leads for theorizing, it is not sufficient for establishing the validity of the theory. The solution (and key methodological contribution of this project) consists of developing a novel measurement model for social acceleration based on the refinement of the concept of social acceleration and its various dimensions. This is fully described in WP1.

*FOUNDATION FOR STEP TWO: Reconceptualizing liberal democracy as a problem-solving system.* To properly understand the dilemma for democratic problem solving and disenchantment with democracy, SLOMODEMO builds on and extends existing theories by broadening the understanding of liberal democracy beyond its common usage. This is done by reconceptualizing liberal democracy as a problem-solving system (Briggs 2008; Warren 2017; Noveck 2021). The concept of liberal democracy must include the analytical perspective of problem solving, i.e., what the political system *delivers* (beyond output legitimacy; Scharpf 1999).

Liberal democracy is a political system where citizens – through inclusive and fair procedures and under the protection of the rule of law – confer power to public authorities. These empowered governors, in turn, are expected to rule on behalf of citizens in a just, lawful, and effective way to solve collective problems. Fair procedures, the rule of law, and problem-solving policies guarantee public support for democracy and accord legitimacy to the system (Easton 1965, 1975; Keman 1997; Dahl 1998; Van Kersbergen & Van Waarden 2004; Ringen 2022).

For theorizing liberal democracy as a democratic problem-solving system, an analytical distinction is made between four components:

- The institutional architecture of the liberal-democratic system whose procedural provisions (formal and informal rules and meta-rules) are built to facilitate collective problem solving in a relatively stable and predictable manner. This is referred to as the ‘polity’.
- The conflicts of individual and collective interests as well as political demands and support in society that are translated and brought into the political decision-making system via intermediary organizations such as social movements, interest groups, political parties, and the media, but also via less organized events such as demonstrations, and via direct influence (e.g., elections, referendums, lobbying). This is called ‘politics’.
- The capacity of the political system to produce collective and binding decisions that guarantee what Easton (1965: 350) called the authoritative allocation of values for society at large and aim at the solution of social problems. The term for this is ‘policy’.
- The actual intended, unintended, anticipated, and unanticipated consequences of policies, which form the feedback into the system and impact it in all other components. Collective decisions and policies are never guaranteed to be successful in terms of their problem solving, and unsolved problems (can) reappear as new input for the political system (Van Kersbergen & Vis 2014). This is called ‘performance’.

Problem solving is liberal and democratic to the extent that it is in accordance with specific normative aspirations: lawmaking occurs in deliberative and representative legislatures; the exercise of political power is subject to the rule of law; and constitutional law provides clarity and stability to lawmaking and the exercise of power (Scheuerman 2004: 190; Chambers 2012). Ultimately, the legitimacy of liberal democracy depends on its ability to solve problems democratically (i.e., according to well-established process rules and norms) *and* effectively (i.e., via satisfactory policy performance).

*How social acceleration challenges the temporal conditions of liberal-democratic problem solving.* In liberal democracy as a problem-solving political there exists an inherent temporal tension between deliberation, which demands preference-forming slowness, and aggregation, which requires action-enabling fleetness (Stoker et al. 2016). Social acceleration increases this tension, and liberal democracy’s key institutions and powers seem ill adapted to the change-speed of society. The issue is one of continually diminishing time resources available for political decision making (Palonen 2008). Democratic politics is constantly short of time in the face of rapid change and therefore risks making decisions that are quickly outdated (Rosa 2013: 263; MacKenzie & Warren 2012). Moreover, because of the constant flow of new facts, demands, and pressures produced by the fast pace of technological, social, and life-pace change, the number of decisions to be made mounts and the time available per decision shrinks. In addition, the ever-shorter time horizon in a high-speed society limits the possibility of governing for the long term, forces decision makers away from future-oriented policy design, and hence increases ad-hoc decision making for the short term (Jacobs 2011, 2016; Bardi et al. 2014; Goetz 2014). Social acceleration hence conspires to challenge the basic temporal conditions under which the problem-solving capacity of liberal democracy has been upheld. Three manifestations of this can be identified.

First, the classical liberal-democratic separation of powers assumes that legislation is future-oriented, the judiciary is past-oriented, and the executive is present-oriented (Scheuerman 2004, 2019; Schäfer & Merkel 2021). Legislative action is intended to be unhurried, slow, and deliberative, while executive power is expected

to be expeditious. Judicial power, meanwhile, is neither fast nor slow. This traditional approach to liberal democracy is being challenged by the accelerating pace of societal change, which makes it increasingly difficult to base legislation on realistic expectations about the future course of society (Urry 2016; Johnson 2018). It is becoming more difficult to define stable or stabilizing norms and rules for the future, especially constitutional rules, if social acceleration challenges expectations about the future. The most likely victim of social acceleration is future-oriented and stabilizing democratic rulemaking and regulation, while the most likely beneficiaries are the executive and the courts (Prandini 2013).

Traditional institutions of liberal democracy are resilient and generally reluctant to adopt new technical possibilities to keep pace with high-speed society, though governments worldwide have taken initiatives to adapt to social acceleration, such as digitalizing government services to exploit new information and communication technologies for policymaking and service delivery (Van Kersbergen & Vis 2022; Van Kersbergen & Svendsen 2022). However, governments' ability to adapt to social acceleration varies greatly, and most governments are struggling to keep up with accelerating change (Wauters et al. 2016). As a result, governments are falling behind rapid societal changes in many areas and failing to update their capacity to solve social problems, including the classic law-and-order core function of the modern democratic state, as evidenced by the challenges in adapting law enforcement to spiralling cybercrime and worldwide hacking and manipulation of key economic and public institutions, including elections.

Social acceleration may create new means that promise huge democratic advances (McGinnis 2013), such as the role of new social media in democracy ('mediatization') (Mazzoleni & Schulz 1999; Kriesi et al. 2013; Esser & Strömbäck 2014; Schillemans & Pierre 2016). However, these new means may often decelerate rather than speed up democratic government and problem solving, or come with several serious challenges (Scheuerman 2009, 2019; Colvile 2016).

Second, future-oriented steering becomes more problematic. The faster pace of change leads to poorer and less maintainable knowledge about likely future trends. The literature has already paid attention to the role of information, policy problem definition, prioritization, and problem solving in highly complex societies (Hilbert 2012; Baumgartner & Jones 2015). However, the point is that increasing uncertainty and unpredictability caused by social acceleration challenge the very basics of the politics of problem solving (Rosenblum 2014; Nowotny 2016). It makes it more difficult to detect what will be the relevant social problems that should be politicized and admitted to the political agenda. If detection is more and more difficult, selection and prioritization of social problems become more demanding too. Under conditions of faltering detection and selection, the very definition of the policy problem is more taxing. In the absence of a clear policy problem definition, any policy solutions rest on weak foundations, leading to ineffective or delayed policies.

Third, speeding up decision making via shifts in governance comes at the cost of democracy. There have been a great number and types of shifts in governance arrangements (Van Kersbergen & Van Waarden 2001, 2004; Fukuyama 2016; Peters 2016), the significance of which becomes much clearer when seen in light of social acceleration. Vertically, there have been shifts from national to international public bodies, from national and international to subnational and regional levels, from national to international markets, and from national to supranational courts. Horizontally in the public sphere, there has been a shift from public to semi-public or private forms of governance as well as from government to business. In addition, there have been shifts between the formal *trias politica* of state powers, from politics to courts, from command and control to contracts or covenants between public and private actors, and from command and control to information management. There have also emerged new, often relatively independent bodies that regulate privatized sectors. Finally, there have been various kinds of mixed vertical–horizontal shifts, for instance from national public standardization bodies to international private ones. Increasingly, governance decisions are made in complicated networks encompassing supranational, national, and subnational, and public, semi-public, and private actors.

These shifts are displacements of decision making and – in addition to being solutions to so-called 'wicked problems' of complexity (Head 2022) – need to be interpreted as responses to social acceleration. They are attempts to speed up decision making and policy effectiveness, but they come at the cost of democracy. Traditional ways of governing society, politics, and the economy have been undermined, and this creates major problems of accountability and legitimacy. Social acceleration has blurred the boundaries of societal spheres (e.g., public–private and political–economic) and challenges the governance capacity of existing arrangements. Traditional control mechanisms (checks and balances, accountability) are becoming less effective.

## Methodology

### From foundational theory to empirical research

Balancing theoretical rigor and empirical accuracy is crucial for effective research. SLOMODEMO will **develop precise research questions, operationalizations, testable hypotheses, and designs** that align with theoretical considerations on social acceleration and liberal-democratic problem solving and specify and translate the overall research question into important new analyses of

- 1) The pace of technological, social, and life-pace change. This is done in WP1, which has as its research question: how to theorize, operationalize and measure social acceleration?
- 2) The extent to which, how and when liberal democracy is falling behind technological and social change. WP2 picks this up with the research question: to what extent, under what conditions, and how does social acceleration affect liberal-democratic (constitutional) performance (Study 2.1) and lawmaking (Study 2.2)?
- 3) The conditions under which citizens and politicians prefer speedy problem solving over democratic decision making or vice versa. WP3 has two research questions: (Study 3.1) Under what conditions and to what extent do citizens and politicians a) opt for solutions that adhere to basic liberal-democratic rules, even if these come at the cost of public problem solving, or b) choose to ignore – or accept violations of – basic liberal-democratic rules to speed up decision making and enhance public problem solving?; (Study 3.2) Under what conditions and to what extent are citizens willing to rely on exclusive, non-democratic decision-making arrangements?
- 4) The extent to which governments are trying to deal with the dilemma for democratic problem solving and to what effect. The research question of WP4 is: to what extent and under what conditions do governments use strategies such as digitalization to solve the dilemma for liberal-democratic problem solving, and with what consequences for democratic legitimacy and problem solving?
- 5) Synthesis of research results: how to obtain a legitimate balance between democratic procedures and effective problem solving amidst rapid change.

### Work packages

#### *Case and Period Selection*

For all studies described below, SLOMODEMO will examine eight liberal democracies: Denmark, Estonia, India, Germany, the Netherlands, Switzerland, the United Kingdom, and the United States. The case selection follows the logic of the Most Different Systems Design by maximizing variation on constitutional architectures and is explained in WP2. Because there is evidence (Rosa 2013; Wajcman 2015; Colvile 2016; Friedman 2016; Diamandis & Kotler 2020; Azhar 2021) that social acceleration has become more pronounced in the new millennium, the period 2000–2024 is covered.

#### *Work Package 1: Theorizing, Operationalizing, and Measuring Social Acceleration (PI, research assistant, student assistant)*

This WP lays the foundational groundwork for refining and improving the theory and empirics of social acceleration. In the theory section, I outlined the preliminary contours of my theoretical approach that emphasizes technological development as a key driver of social and political transformations. Building on existing theory, I will elaborate this theoretical perspective in an iterative research process, where the empirical work feeds into the theoretical framework, which in turn guides further empirical investigation, etc.

The theory of social acceleration has a weakness in that the main variable, ‘social acceleration’, lacks causal specificity and empirical evidence. While a few studies have proposed ways to operationalize and measure certain aspects of social acceleration (Ulferts et al. 2013; Schöneck 2018; Lorenz-Spreen et al. 2019; Santarius & Bergener 2021), there is currently no dataset that covers the rapid and accelerating technological, social, and life-pace changes. This WP addresses this gap with the **research question**: how to theorize, operationalize, and measure social acceleration? The goal is to **specify theory**, develop a **novel measurement model**, and to construct a **comprehensive dataset on social acceleration** for eight selected countries (see WP2) for the period 2000–2024.

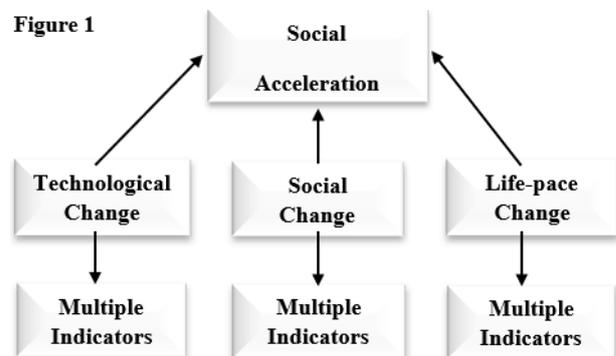
In existing theory, social acceleration is conceived as a latent concept (Bollen 2002), i.e., a substantively important concept for which no observed values are available or even possible. A latent variable is therefore postulated rather than directly measured. Social acceleration consists of the three analytically and empirically distinct dimensions that – measured as variables – ‘cause’ or determine the construct. The latent variable of social acceleration is therefore not the predictor of the measured variables, but the measured variables *constitute* the latent concept, while there is no specific expectation about the covariation between the indicators

constituting the latent variable. In other words, the theory of social acceleration *demand*s a formative (causal) index rather than a reflective (effect) index or scale as the appropriate methodological tool (Diamantopoulos & Winklhofer 2001; Diamantopoulos & Siguaw 2006; Bollen & Diamantopoulos 2017).

In contrast, each of the constituents – technological change, social change, and life-pace change – are themselves constructs that have indicators that *reflect* the central theoretical constructs. Because all indicators have the same underlying cause, covariation between the indicators is expected. This makes a reflective index the appropriate methodological tool for measuring the constitutive indicators.

In sum, to operationalize and measure social acceleration a **combined formative and reflective model** will be specified, with multiple indicators and multiple causes (Diamantopoulos & Temme 2013). Figure 1 visualizes (a simple version of) the model. The three variables of technological acceleration, social change, and life-pace change are separate dimensions that determine the latent variable of social acceleration. The variables can, but do not necessarily, co-vary. As explained, this is a matter of theoretical principle, i.e., existing theory demands this.

Each of the constituting variables – technological change, social change, and life-pace change – are also latent variables but are associated with multiple indicators that indirectly measure them. Measurement variables such as ‘change in automation (routine tasks absorbed by machines)’ and ‘change in average software lifetime’ are examples of reflective measures (indicators) of the construct of technological change. Measurement variables such as ‘change in the number of children living in non-traditional households’ and ‘change in types of employment (atypical/temporary/fixed ...)’ are examples of reflective measures (indicators) of the construct of social change. Measurement variables such as ‘change in time used for basic needs (sleeping/eating/...)’ and ‘change in the number of Google searches on stress/work life balance’ are examples of reflective measures (indicators) of the construct of life-pace change. The causal arrows here go from the construct to the measures. The expectation based on existing theory is that the indicators correlate with each other because they are alternative measures (effects) of the same underlying concept. Well-established statistical techniques can determine whether this is the case, and hence which variables are ultimately allowed in the reflective index. Existing theory prescribes a combined formative and reflective measurement model with multiple indicators and multiple causes and covering the period 2000–2024. However, my open functional approach outlined in the theory section will persistently and critically revisit the presence of causality, the causal direction, and the strength of the relationships theoretically and empirically specified in the model with a view to improve our understanding of social acceleration and its impact on democratic problem solving.



## *Work Package 2: Two Studies on Social Acceleration, Liberal-Democratic (Constitutional) Performance, and Lawmaking*

### *Study 2.1 The Impact of Social Acceleration on Liberal-Democratic Institutions (postdoc, student assistant, PI)*

From a temporal perspective, constitutions have a paradoxical character: they need to provide order and stability for the longer term by prescribing for the shorter term the norms and rules according to which democratic decisions to solve social problems must be taken (Lane 1996; Maddex 2008; Benz 2016; Grimm 2016). Because social acceleration demands faster decision making at the level of day-to-day politics, a rigid constitution or an unbending application of the meta-rules is likely to hinder fast decision making and problem solving. Study 2.1’s **research question** is: to what extent, under what conditions, and how does social acceleration affect liberal-democratic constitutional performance? The **hypothesis** is that the greater the pace of change, the more the tension increases between the formal rules of the constitution, the functioning of the institutions in practice, and the constitutionality of decision making and problem solving (Roznai 2017). This theoretical expectation implies that the tension will inevitably intensify over time in all countries that undergo social acceleration, regardless of their constitutional type. The **empirical strategy** therefore follows the logic of the **Most Different Systems Design** (Othner 2010; Ankar 2020) to select liberal democracies with diverse constitutional architectures (e.g., parliamentary vs. presidential, federal vs. unitary, unicameral vs. bicameral, civil law vs. common law) and different political cultures. Maximizing variation on these features informed the selection of Denmark, Estonia, India, Germany, the Netherlands, Switzerland, the United Kingdom, and the United States.

A **database on constitutional practice from 2000 to 2024** will be constructed, operationalizing and documenting the evolution of tensions between the formal constitution rules, institutional performance, and the constitutionality of democratic decision making. Tension is operationalized in terms of the number and intensity of political and legal disputes on constitutional matters. The database will therefore bring together information on the following three aspects (where possible and relevant):

- *number of (formal) proposals to change the constitution per year*. Data sources: national overviews of formal proposals to change the constitution; government, party, and committee documents; public and political debates (Delaney 2014; Matthews 2015).
- *number of court rulings or other types of declarations on the constitutionality of acts*. Sources: court rulings; declarations on the constitutionality of acts; existing databases (e.g., for the US, Supreme Court Database 2022); other relevant sources of information on the (un)constitutionality of laws.
- *data on national public debates on constitutional reform and conflicts*. Sources: systematically coded information on different classes of constitutional disputes taken from national journals, newspapers, internet sources such as blogs, etc.

Because natural language processing has improved tremendously, **machine translation** can successfully be used, while the **method** will be **supervised machine learning**, which has been shown to replicate hand-coded results effectively (Nelson et al. 2021). Building on recent developments in computational legal analysis (Livermore & Rockmore 2019; Katz et al. 2020), a training set of documents will be hand-coded for each country to instruct an algorithm to automate content coding (Grimmer et al. 2022; Eshima et al. 2024).

Selecting constitutionally and politically dissimilar countries increases the likelihood of falsifying the hypothesis, which is the design's strength. If the analysis shows that constitutional differences do not affect social acceleration's impact, it is a strong finding. If not, the design still makes it possible to identify which constitutional factors contribute to observed variations. Note that the common objection to MDSD, namely that it selects on equal values of the dependent variable (no variation), does not apply here. The cases are not selected based on the outcome variable; in fact, the outcome is unknown but theoretically *predicted* to be equal among dissimilar cases.

### *Study 2.2 The Impact of Social Acceleration on Lawmaking Institutions (postdoc, student assistant, PI)*

Study 2.2's **research question** is: to what extent, under what conditions, and how does social acceleration affect lawmaking? The **hypothesis** is that the greater the pace of change, the sooner laws become outdated, and the more frequently and quickly laws are changed, amended, and/or supplemented. The **empirical strategy** is to create a **dataset tracking the speed of lawmaking** across the eight countries (see study 2.1) and time (2000–2024) by tallying, in selected policy areas, *positive primary legislation* (new laws and amendments), *secondary legislation* (e.g., decrees, guidance, administrative measures), and – in common-law systems – *judge-made common law*. Two areas are selected from traditional and established fields, namely labour market and educational policy, and two areas are selected from areas directly related to new technology, namely internet regulation and artificial intelligence regulation.

**Machine translation** will also be used here. To determine whether changes reflect rapid shifts in society and analogous to Study 2.1, **supervised machine learning** will be used to code the content of primary, secondary, and judge-made law changes. Categorization is based on whether lawmaking addresses an issue with an old law, addresses shortcomings of recently introduced laws, or tackles unforeseen events or new problems.

### *Work package 3: Two Studies to Directly Test the Dilemma for Democratic Problem Solving*

#### *Study 3.1 Citizen/Politician Survey Experiments on Preferences and Attitudes Institutions (postdoc, student assistant, PI)*

Study 3.1 focuses on how citizens and politicians prioritize solving the dilemma for democratic problem solving. It is crucial to study both groups simultaneously to assess the quality of democratic governance in terms of representation, responsiveness, and effectiveness. Only then can we determine whether there are any systematic differences between citizens and politicians in their preferences and evaluations of solutions to problems. The **research question** is: under what conditions and to what extent do citizens and politicians a) opt for solutions that adhere to basic liberal-democratic rules, even if these come at the cost of public problem solving, or b) choose to ignore – or accept violations of – basic liberal-democratic rules to speed up decision making and enhance public problem solving? The **hypothesis** is that the greater the problem and/or time pressure, the more likely it is that citizens and politicians will prefer problem solving over liberal-democratic rules or values. The **empirical strategy** is to conduct web-based (citizens) and email (politicians) surveys in the eight selected countries to explore citizens' and politicians' approaches to democratic problem solving, using randomized experiments to compare their reactions to various scenarios. These scenarios manipulate

time (deliberation time; time required for problem solving) and problem-solving factors (chance of success/risk of failure of policy measures), providing precise tests of how citizens and politicians assess decisions and policies under different conditions. By randomly assigning respondents in the surveys to different counterfactual problems and decision-making scenarios – and measuring their evaluations of the decision and opinions on the policy/decision – the causal impact of each dimension on citizens’ opinions can be identified. This impact is relevant and generalizable to real-world scenarios (Brutger et al. 2023).

Respondents for the citizen surveys will be quota-sampled to achieve representativeness in terms of gender, age, geographical region, and education, i.e., the conventional set of socio-demographic background variables upon which surveys aim to obtain representativeness. The number of respondents to be selected depends on the number of experiments and the number of experimental conditions to be applied and is determined using a priori power analysis (Lakens & Caldwell 2021). Carefully conducted online surveys yield total survey error and coefficient estimates that are virtually identical to traditional telephone and mail interviews (Braunsberger et al. 2007; Ansolabehere & Schaffner 2014). Entropy balancing is used to avoid identifying country effects that are purely driven by compositional differences in the country samples (i.e., that variation in individual-level characteristics is driving country-level differences) (Hainmueller 2012).

The *politician surveys* are email-based questionnaires with experiments among local politicians. Local (rather than national) politicians are targeted to maximize the number of respondents, which is necessary to obtain precise causal estimates. The politician survey follows the same logic, form, and model as the citizen surveys and survey experiments outlined above.

Boxes 1 and 2 give examples of the kind of vignettes and questions this WP will work with and what respondents and politicians will see on their computer screens (variation and manipulation between brackets and in italics). Each individual can be exposed to multiple vignettes. This allows for direct comparisons between politicians and citizens without variation in content. In this way, the experiments generate more observations (and more statistical power) because there are several observations for each individual.

#### Box 1.

Imagine that the *[country]* government is confronted with the following problem: Scientists have discovered a gene editing method to cure a previously untreatable and fatal disease that affects *[control/treatment: a small number of people OR a rapidly increasing number of people]*. The long-term risks of the medical procedure are unknown. It will take *[control/treatment: one OR four year(s)]* of laboratory research to determine precisely whether the method’s side effects are dangerous or not.

Example question 1: To what extent do you agree or disagree that the government should bypass normal democratic procedures and quickly pass a law that allows doctors to apply the new method?

1. Disagree strongly; 2. Disagree somewhat; 3. Neither agree nor disagree; 4. Agree somewhat; 5. Agree strongly; 6. Don’t know.

Expectation: treatment group is more likely to agree.

(Alternative question: to what extent do you agree or disagree with the government’s decision to allow doctors to apply the new method immediately? Same answering options. Expectation: treatment group is more likely to agree.)

#### Box 2.

Imagine that economic growth is *[control/treatment: slow OR rapidly slowing down]* and that the local *[council]* wants to do something about it. Some propose to increase spending to stimulate the economy, risking a higher budget deficit. Others propose to cut spending to stimulate the economy, risking higher unemployment. The issue has been discussed *[control/treatments: (no specification) OR for one month]*, but it is impossible to reach a conclusion.

How should the local *[council]* decide what to do?

- a. The head of the *[council]* should cut the knot quickly, even if it may provoke a political crisis.
- b. The *[council]* should decide, even if deliberation may take a long time.
- c. Experts should decide swiftly, even if they may not be held accountable for their decision.
- d. The voters should decide in a referendum, even if it may take up to six months to organize it.

Expectation: treatment group is more likely to choose a or c.

Rigorous pilot surveys need to be conducted to test the quality of the questionnaires and treatments before the surveys are fielded, because survey questions and treatments may not always work as intended. A low response rate for the politician survey is a potential risk but can be done (see Walgrave et al. 2023). Encouragingly, a recent data collection effort undertaken by researchers at my own institute (Bækgaard et al. 2022) among local politicians in Denmark, Italy, Flanders, and the United States was successful. Response rates were high enough

to allow survey experiments. Moreover, that study provides a readily applicable template for the data collection strategy, the introduction letters, the wording of the questions, etc. It gives confidence that this part of the data collection is feasible.

*Study 3.2 Survey and Laboratory Experiments on Decision-Making Arrangements Institutions (postdoc, student assistant, PI)*

In Study 3.2 the **research question** is: under what conditions and to what extent are citizens willing to rely on exclusive, non-democratic decision-making arrangements? The **empirical strategy** assumes that there are two options: 1. It is simply rational to opt out of inclusive decision making under conditions of rapid change; 2. Stress, time pressure, and cognitive constraints stemming from rapid change modify preferences such that people spontaneously and intuitively prefer more exclusive decision making (Metcalf & Mischel 1999; DeScioli & Bokemper 2019; Petersen & Laustsen 2020). The rational mechanism is the baseline; the assumption is that people prefer quicker decision-making arrangements if they lack time. The second option holds that stress involves a depletion of cognitive resources for decision making (Mani et al. 2013) and that under such conditions it is likely that people defer to simpler decision-making arrangements, even if not rationally required. **Laboratory and survey experimental designs** will be used to discern between these two mechanisms. Participants will be exposed to a problem that could be solved through deference to a single leader or through some more inclusive decision-making arrangement. In the experiments, the objective time constraints (how long it takes for a decision to be enacted) are held constant, but the psychological constraints (available cognitive resources) are experimentally manipulated. This will demonstrate whether the presumed psychological consequences of rapid change bring about preferences for more authoritarian decision-making arrangements, independently of the rational requirements.

Box 3. Survey experiment (nationally representative sample of approximately 1200 online participants). Vignettes are constructed to test preferences for exclusive versus inclusive decision-making arrangements across several different situations. Each participant responds to the vignettes on a computer. Vignettes appear as streaming text moving across the screen. A two-condition experiment is added. *Control*: participants are exposed to the vignettes without further instructions. *Treatment*: participants respond to the vignettes while placed under a cognitive load, i.e., an experimental manipulation designed to deplete decision-making resources (Greene et al. 2008; Allen et al. 2014). Below the streaming text of the vignettes, a stream of numbers scrolls across the screen. The task is to hit a button each time the number 5 appears in the stream. Hence, participants need to divide their cognitive resources between the vignettes and the stream of numbers. This tests how depleted cognitive resources shape preferences for more authoritarian decision-making. Because the cognitive manipulation is completely unrelated to the wording of the vignettes, any change in preferences reflects a stress response rather than rational choice.

Box 4. Laboratory experiment example. The Ultimatum Game is used to test incentivized deference to powerful individuals (Hibbing & Alford 2004). The game consists of two players: Proposer and Responder. The Proposer receives a sum of money and is asked to propose how to divide this sum between him/herself and the Responder. The Responder can accept the proposal, in which case it is enacted. Or the Responder can reject the proposal, in which case neither the Proposer nor the Responder receives anything. Hence, lack of deference comes with a cost, and the focal question is whether people are less willing to pay this cost when cognitive resources are depleted. 200 participants in groups of 10 will be invited to participate. In each group, all individuals play every other individual, both as Proposer and as Responder. Using the strategy method (Brandts & Charness 2011), participants are asked to reject or accept each possible division of the money from each of the other players in a random order. It is a two-condition experiment. *Control*: participants respond to the offers without further instructions. *Treatment*: cognitive resources are depleted; participants are required to respond to the offers under time pressure. A counter in the corner of the screen tells them how many offers are left to respond to and how much time is left. Participants are instructed that for any offer they fail to respond to, the Proposer will receive the money, but they themselves will receive nothing. If stress responses due to the time constraints elicit greater preferences for deference to exclusive decision-making arrangements, we should observe that individuals in the treatment condition are more likely to accept low offers than in the control condition.

Both a survey experiment (Box 3) and laboratory experiments (Box 4) are required. The survey experiment (Box 3) maximises external validity via representative surveys. The lab experiment (example in Box 4) maximises measurement validity by studying actual behaviour. Given that these are experiments, internal validity is high across the board. As in Study 3.1, rigorous pilot surveys will be conducted. In addition, multiple

laboratory experiments will be done with slightly different but similar setups to the one described in Box 4. In addition, key laboratory experiments will be replicated to test robustness.

*Work Package 4: Government Strategies to Cope with the Dilemma for Democratic Problem Solving (PI, student assistant)*

Governments are increasingly attempting to adapt to social acceleration and the inherent dilemma for democratic problem solving. This adaptation is often pursued through digitalization and automated decision-making systems designed to speed up policymaking processes (Van Kersbergen & Vis, 2022). The primary goal is to investigate the extent to which governments use new technologies to adapt democratic processes and address the dilemma. Some governments anticipate that AI applications can enhance citizen engagement and expedite public deliberation, while others aim to accelerate lawmaking by automating judicial review. Policymakers may also attempt to exploit AI to identify social problems and propose solutions. However, although public digitalization (Gilardi 2022; Van Kersbergen & Svendsen 2022) can be effective, it can also exacerbate the pace of change and introduce new risks and challenges. These include digital skills gap, data insecurity, privacy loss, diminished political accountability, and potential discrimination, all of which could undermine democratic legitimacy. Moreover, there is a risk of governments falling into a responsiveness trap, becoming overburdened if they are too responsive to societal demands (Adam et al. 2019). The **research question** is: to what extent and under what conditions do governments use strategies such as digitalization to solve the dilemma for liberal-democratic problem solving, and with what consequences for democratic legitimacy and problem solving? Focusing on the downside but expecting to find insights on how to solve the dilemma, the **hypothesis** is that the more successful (public) digitalization is, the greater the chance that it reinforces the already high speed of change, produces new problems and risks, and exacerbates the responsiveness trap. The **empirical strategy** is to build a comprehensive database documenting how governments in the selected countries identify policy problems, formulate strategies, propose solutions, implement policies, and conduct evaluations (Knill & Tosun 2020). This will involve the analysis of hundreds of government documents of varying quality and languages from the countries selected in WP2. The process will be automated using **machine learning** and **machine translation**: 1) scraping and translating documents; 2) clustering similar types; 3) summarizing key messages; 4) categorizing them; and 5) analyzing them in terms of sentiment, themes, and trends (Loftis & Mortensen 2020; Grimmer et al. 2022). This process also involves continuously monitoring machine-generated results against existing knowledge and common sense to ensure accuracy and relevance. Given the success of earlier applications of these methods (e.g., Loftis & Mortensen 2020; Nelson et al. 2021), this approach is both feasible and promising.

## Synthesis

In the final year, the PI will synthesize the research results, using SLOMODEMO's new theoretical and empirical knowledge to offer valuable insights for policymakers, institutions, and citizens alike, offering a path forward in solving a critical challenge for our time: how to obtain a legitimate balance between democratic procedures and effective problem solving amidst rapid change.

## Planning and Organization

The PI (with assistants) conducts WP1 (1/1/2026–1/1/2027), WP4 (1/1/2027–1/1/2030), and the synthesis (1/1/2030–1/1/2031). Studies 3.1 and 3.2 (WP3) are conducted by two postdocs, a senior researcher and assistants. The empirical studies described in WP2 are conducted by two postdocs and assistants. The PI participates in all studies and guides the postdoc, senior researcher and assistants. All postdoc studies are planned for the period 1/9/2026–1/9/2029. The team will produce a range of outputs, including academic articles, a research monograph, podcasts, policy advice, and public opinion interventions.

## Ambition and Feasibility

The research program is theoretically and empirically ambitious. It aims: 1) to significantly advance the reconceptualization of liberal democracy as a problem-solving system; 2) to be the first to re-theorize, operationalize, and measure comprehensively social acceleration (WP1); and 3) to track social acceleration's impact on liberal democracy by studying the whole political system and process, including the polity (WP2), politics (WP3), and policy and performance (WP4) dimensions of democratic political systems. In addition, the project empirically analyzes eight diverse liberal democracies, exploits experimental designs, and uses recent methodological innovations for large-scale data gathering and analysis (e.g., machine learning). Feasibility is assured because each study is theoretically and methodologically very carefully crafted. Skill demands are high, so postdocs and a senior researcher rather than PhD students are employed. Postdocs will

moreover be supported by ample research assistance. The PI is an experienced research leader and has an excellent track record in research guidance. Aarhus university and the PI's extensive network embed the researchers firmly in an inspiring and productive environment. Hence, the project is ambitious *and* feasible.

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