Breaking with consensus frames. Understanding the reproduction of dominant discourses and expert/ lay hierarchies for the regeneration of food policy and democracy.

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Breaking with consensus frames. Understanding the reproduction of dominant discourses and expert/lay hierarchies for the regeneration of food policy and democracy.

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II Abstract

The fallibility of modern democracies' representative institutions in the face of an ever-changing world has given momentum to democratic innovation such as citizens' assemblies. As part of the deliberative democracy movement, citizens' assemblies are the most common implementation of deliberative settings and are as such an ideal setting to study and understand the dynamics of deliberation. The Swiss Citizens' Assembly for Food Policy (SCAFP), which took place over 6 months in 2022, comprised 85 citizens who generated policy recommendations for the government. Combining the measurement of intersubjective consistency, framing analysis of expert input and thematic analysis of citizens' feedback, this thesis investigates the tension that arises between the transformative potential of the SCAFP and the reproduction of power structures undermining it. The results suggest a low potential for transformation in relation to an ambiguous and general framing of sustainability by the experts, a lack of discursive representativeness of citizens and limitation due to a lack of inclusion of research in the organisation of the SCAFP. The use of sustainability as a consensus frame is shown to be a dominant category for food policies in which vague discourses are formed leaving much room for interpretation and tactical interests. This can be seen as an immaterial reproduction of political power structures inside this citizens' assembly that encompasses the need for (1) Understanding the role of framing in citizens' assemblies, (2) Critically reflecting on the role of knowledge inputs in citizens' assemblies, (3) Creating environments that promote accessible languages, other than technical or expert languages. Overall, deliberative democracy seems to have the potential to solve political deadlocks of representative governments, if the reproduction of power structure can be limited inside of the settings, they take place. Therefore, on top of balanced information, truly authentic alternative discourses need to be included and confront each other in the knowledge inputs which also necessitates thinking about how citizens can own the language that they use to name the world. and deliberate.

Keywords: democracy, citizens' assemblies, deliberation, framing analysis, power structures, consensus frame, language.

III Acknowledgements

When I first saw the possibility of writing my thesis on the Swiss Citizens' Assembly on Food Policy, for the first time in a long time I was very excited about my studies. I was also very uncertain about it probably because I did not know where it would lead me, what I would learn, and what I would find out. In my lived experience at ETH Zürich where I stayed for more than five years, I found myself taken into the big machinery that a university competing at the top of international rankings becomes. The urge for productivity and competition makes it very easy to lose oneself in it and follow the pace; very little space is there for criticism, and very little time for reflection.

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1 Introduction

There exists an increasing push toward a transformation of existing food systems away from the status quo. However, the instruments of modern democracies and representative governments seem to have difficulty transforming established systems. At the same time, the concentration of actors in the food system continues to increase and the dominance of a single discourse seems to persist (Béné, 2022; Clapp, 2021). This dominant discourse is anchored in strongly neoliberal considerations of the issues at hand (Béné, 2022; Fouilleux et al., 2017; Fraser, 2017; Lang, 2010). Furthermore, it reveals that there are strong inherent barriers to the socialisation of the food system crisis and the food system transformation. This situation casts suspicion on the discourse of the ruling elite, which is increasingly seen as incapable of representing the interests of citizens and prone to corruption (Glucksmann, 2023; Renterghem, 2023; Warren, 2021). This corroborates the historical analysis of representative governments, which shows their inherently anti-democratic characteristics (Manin, 1998). Moreover, in 2023, the International Institute for Democracy and Electoral Assistance (International IDEA) warned of an overall decline of democracy worldwide, with worrying deteriorations in the rule of law and press freedom in long-standing democracies such as Austria, Portugal and the Netherlands (International IDEA, 2023). Diagnostics of the fragility of representative institutions are countless and highlight the disillusion and distrust of common citizens towards politics and politicians (Tormey, 2015). In the face of democratic contestations, the OECD has called for the development of new innovative democratic institutions (OECD, 2020). In particular, deliberative democracy scholars see deliberation as a way out of certain types of political impasses such as issues where governments have no strong incentive for change and are reluctant to change in the face of electoral concerns or on topics that cleave public opinion (Mansbridge et al., 2021).

In Switzerland, the push for a deliberative turn of democracy is showcased by a citizens' assembly on the food system (SCAFP) held in 2022. Citizens' assemblies are a type of deliberative setting consisting of a small number of randomly selected citizens brought together to reason over an issue of public concern (Smith and Setälä, 2018). The SCAFP embeds itself in a larger process of transformation of a failing food policy and a global crisis of food systems. The food system crisis is analysed in this thesis under the concept of social-scientifically appropriate crisis suggested by Habermas (Habermas, 1973). More precisely, the analysis suggests that there exist inherent steering issues of food systems and that the crisis is also strongly present and acknowledged in the society. Even so, a multitude of barriers make the transformation of the food system insidious and favours the status quo. Among others, multinational agri-food corporations favour the protection of their own interests through political lobbying and conservative innovation (Clapp, 2021). In the case of Switzerland, the tension between the need for transformation and strong opposing interest groups culminated in the difficulty of the Swiss government to settle on the future agricultural policy AP22+ (Huber, 2022). In that context, the deliberative approach to democratic decision-making and empowerment of minorities taken in citizens' assemblies is gaining inertia and is supported by the Swiss government (Federal Council, 2020; OECD, 2020).

Deliberative mini-publics such as citizens' assemblies are increasingly seen as useful instruments when tools from traditional democracies are failing (Dryzek et al., 2019). Furthermore, citizens' assemblies are perceived as one of the most prominent tools of deliberative democracy in terms of impact (Courant, 2021) and for triggering a redefinition of the role and place of citizens inside modern democracies in Europe (Reuchamps and Suiter, 2016). Beyond Europe, there also exist old deliberative traditions or more recent developments in many cultures and countries from Japan and China (Tang et al., 2018), India (Parthasarathy and Rao, 2018), and Latin America (Pogrebinschi, 2018) to many African nations (Ani, 2018). Even though the role and place of deliberation are context and culture-dependent, and still widely debated among scholars, recent experiments with citizens' assemblies have yielded interesting results.

A positive example took place in Mali, in the form of a combination of a mini-public with indigenous methods for debate and dialogues leading to a governmental decision not to introduce genetically modified cotton (Pimbert and Barry, 2021). This example is one of the very few recent mini-publics that directly influenced policymaking (Pimbert and Barry, 2021). Beyond that, the most studied mini-publics took place in Europe and Northern America and generally had little effect on public decision-making (Pimbert and Barry, 2021). Even so, the success of citizens' assemblies varies widely, so that the few successful examples tend to disappear behind the growing number of assemblies proposed around the world (Courant, 2021; Courant and Sintomer, 2019; Harris, 2019). One very popular example of a citizens' assembly in Europe is an assembly in Ireland on same-sex marriage and abortion (Courant, 2021; Giraudet et al., 2022). Its particularity is a succession of four citizens' assemblies leading to major political outcomes through the adoption of three referendums (Courant, 2021). This combination of citizens' assembly with popular voting is one of the latest developments in the use of deliberative settings to complement representative institutions for cleaving topics. Indeed, the Irish example has shown that mini-publics need to be linked to the broader public to ensure democratic legitimacy (Courant, 2021).

Notwithstanding the latter policy-oriented movement of deliberative democracy, critics such as Hammond (2020) claim that it is too accommodationist and should aim at a more disruptive form to tackle issues such as sustainability transformation. However, the resonance of citizens' assembly outputs with the general public remains an essential aspect of deliberative legitimacy as shown by the French Citizens' Convention for Climate (See Giraudet et al., 2022). Concepts such as "open democracy" suggested by Hélène Landemore might help reconcile the need for disruption of power structures towards system transformation while keeping a link to the broader public for the legitimacy of citizens' assemblies (On the same topic see Girard, 2021; Hendriks and Wagenaar, 2023; Lafont, 2019; Landemore, 2018). Even so, the problem of ensuring that power structures of the public debate are not reproduced inside of citizens' assemblies is still not completely solved. This was in part an issue in the French Citizens' Convention for Climate mentioned before during which a mutual scepticism emerged between its participants and the broader public (Giraudet et al., 2022). Additionally, framing effects on citizens' deliberation by the steering body led to an ex-post dissatisfaction with the outputs of the participants

(Giraudet et al., 2022). Similar framing effects can emerge from expert knowledge that is an inherent part of citizens' assemblies (Giraudet et al., 2022; Machin, 2023).

For that matter, the importance of language in discursive practices of deliberative democracy is understudied and often underestimated. Inputs like experts' presentations can entail a range of coercive effects and self-interest (Mansbridge et al., 2021) that influence the understanding of the issue by the participants, known as the framing effect (Chong and Druckman, 2007a). When speaking about expertise, the framing effect is called elite framing as experts defend a certain position and as such have a hierarchical relationship with the citizens who have limited previous knowledge. This framing effect can be understood as emanating from deliberate attempts to structure public discourse in a way that privileges their goals and means of attaining them (McLeod, 2001).

This thesis will aim to understand the effects of frames and language on deliberation by combining two methods used to study deliberation. First, a Deliberative Reason Assembly (DRI) is computed to measure a change in intersubjective consistency over the deliberative process as well as the demographic characteristics of the participants. Intersubjective consistency is an indicator to measure the transformative potential of deliberation in terms of a common understanding of the issue at hand and the adoption of a common reasoning framework (Niemeyer and Veri, 2022). After that, an inductive framing analysis of the experts' presentations is performed to explore the framing of the information provided and its potential effect on the deliberation in the SCAFP and the DRI. Although both methods are not meant to be used together, they both rely on the discursive level of deliberation as an essential part of the creation and shifting of meaning and reasoning (Mendonça and Simões, 2022; Niemeyer and Veri, 2022). On one side, DRI is a measure of the outcome of deliberation which relies on assumptions that considerations inform individual preferences, and that deliberation renders a common understanding across participants correcting illogical and biased opinions (Niemeyer and Veri, 2022). On the other side, a framing analysis can map discursive contestation and assess effects created by certain discursive choices (Mendonça and Simões, 2022).

In addition to the two main approaches, two complementary approaches are used in this thesis. Firstly, participation in the citizens' assembly as a participant observer provides an understanding of the process and structure of the SCAFP. Secondly, the thematic analysis of the responses to the qualitative survey on citizens' perceptions of the experts' presentations adds depth to the framing analysis by combining different perspectives.

The contours of this thesis and the research questions can be seen in the wake of the results from two other evaluations of the SCAFP indicating that the citizens' assembly showed low transformative potential for the Swiss food system. This result was found both in the deliberation between the citizens (Amos, 2023) and in the recommendations issued by the SCAFP (Lehner, 2023). Amos' (2023) study proposes an explanation through the lack of contestation, an "information deficit", and a lack of direct frames

contestation. The study by Lehner (2023) found that the recommendation followed a capitalist realism that favours uncontested topics and reformative solutions. Taking another perspective, this thesis will look further into the reasons for the lack of transformative potential of the SCAFP.

The various approaches to the evaluation of the citizens' assembly aim to answer three research questions:

i. Was there a transformative potential of the SCAFP on the shared understanding of the issue (meta-consensus) and the adoption of a common reasoning framework?

ii. How was the informative content presented by the experts for the citizens framed during the SCAFP?

iii. What aspects of the assembly reinforced or limited the transformative potential?

To answer these questions, this work is structured in seven parts, starting with a literature review of the deliberative turn in Western democracies (Section 2). Section 2 is a historical critique of representative governments to move into the deliberative turn and some specificities of expert knowledge and mixed systems for citizens' assemblies. Thereafter, section 3 gives the larger context of this thesis by approaching food systems with a social-scientifically appropriate crisis framework and the reasons for the stubbornness in keeping up the status quo. Adding to that, it describes the more specific context of the Swiss Citizens' Assembly for Food Policy. Section 4 then sheds light on the data collection through surveys as well as the participant observation, the Deliberative Reason Index (DRI), the framing analysis and the thematic analysis methods. Directly following these are the results; in particular, Section 5 shows the lack of a transformative effect regarding the DRI and describes the consensus frame on sustainability as well as the perception of the experts' presentation by participants. Finally, the sixth section gives the interpretation of both individual results and their limitations to aim at a joint interpretation. Section 6 then hypothesizes on the origin of this result outside of the context of the SCAFP such as in the hegemonic political discourse of the food system and the "sheer cloudy vagueness"[1] of political language. Additionally, the construction of parallel discourses is suggested to help escape the deadlocks that oppositional discourses can create. The concluding section 7 provides further interrogations of the role of experts and language in deliberative settings such as citizens' assemblies.

[1] Citation from Orwell (2018), p. 136

2 Theoretical background

2.1 Democratic theory

Contemporary Western democracies are often considered political systems that have evolved from the ancient Greek ideal of democracy. To begin, this section introduces fundamental differences between these two models and highlights the anti-democratic aspects of representative governments. Subsequently, it discusses the concept of deliberation as a discursive complement to representation and elections, aimed at enhancing the democratic legitimacy of decision-making, focusing on the specific case of citizens' assemblies.

2.1.1 Modern democracy and the deliberative turn

To start discussing democratic institutions, it is necessary to introduce strong divergences between what is commonly seen as a democracy and what scholars say about it. Western representative governments are generally compared to the monarchies they succeeded. This transition is often explained by a change from divine power successions to a return of ancient Greek democracies materialised into elections and representative democracy (Manin, 1998). While it is true that one of the main characteristics of representative governments is the shift of legitimacy from heredity to election, another central distinctive trait is the complete absence of allocation of public functions by drawing of lots used in the Athenian democracy (Manin, 1998). Indeed, representative governments relying on election were instituted as governments adapted to the separation of labour and merchant societies, and not as a modern mode of the Athenian democracy (Manin, 1998).

The Athenian democracy used drawing of lots as a selection method for political functions complementary to the elected political functions (See Manin, 1998 for details on the role of drawing of lots in the Athenian democracy). Thereupon, the switch from heredity to election as a source of legitimacy sidelined the question of how to distribute public functions in the most equal way possible between the citizens (Manin, 1998). Moreover, Manin (1998) explains how the idea of giving political functions to randomly selected assemblies was lost with the instauration of representative governments, thus setting aside its egalitarian benefit and ignoring the inegalitarian and aristocratic tendencies of elections discussed in philosophical works from Aristoteles to Jean-Jacques Rousseau. The aristocratic tendencies can historically be described as the impossibility of similarity between governors and the ones governed by elective process, which favours individuals with distinctive marks of personality or social/economic status (Manin, 1998). In other words, it is "the government of a certain competence, one of the men skilled at seizing power by running for office." (Rancière, 2005, p. 49, translated by the author). Hence, it is the inability to have a government "of the people, by the people, for the people"[2] through an election, as the elected governors do not show

[2] The Gettysburg Address, Abraham Lincoln, 1863

similar characteristics to the electors. This combination of democratic and anti-democratic characteristics is what defines modern representative governments (Manin, 1998).

There exists extensive work focusing on the link between the citizens' preferences and political decision-making as an essential characteristic of representative democracy (Manin, 2021a). This conception of democracy takes an approach to the common will of citizens as emanating from given preferences that can be aggregated and transformed into political decision-making (Manin, 2021a). With deliberative democracy theory, the view of the common good is moving away from this aggregative conception and the role of the individual in politics started to evolve to encompass the autonomy and freedom of the citizen in the social construction of the common good (Floridia, 2018).

On the one hand, aggregative conceptions of democracy see the expression of the common good in social welfare function where individual preferences are exogenously given (Shapiro, 2009) and can be reconciled and aggregated prior to political interaction (Dryzek, 2002). On the other hand, deliberative scholars developed their conception in opposition to aggregation and see the common good as a convergence of interests with individual preferences able to be adapted to define and reach the common good (Mansbridge et al., 2011; Shapiro, 2009). The deliberative conception of democracy moves away from the aggregative conception of the common good and puts the process of preference formation at its centre (Manin, 2021a). On top of that, the deliberative turn counters the development of democratic realism dating back at least to Joseph Schumpeter (Manin, 2021a).

Joseph Schumpeter notably declared that elections do not produce something like a popular will for a certain political preference, but are about individuals competing for votes to make political decisions by themselves (Böker and Elstub, 2015; Manin, 1998). Moreover, democratic realism is a current of thought that proclaims voters as poor decision-makers subject to biases, incoherent choices and partisan loyalties (Achen and Bartels, 2017). The deliberative conception of democracy aims to correct the deficiency in preference formation existing in electoral democracy. It argues that these deficiencies are mostly due to a vision of citizens as individual thinkers (Chambers, 2018). However, evidence suggests humans can be very good group problem solvers and collective deliberators (Chambers, 2018; Dryzek et al., 2019; Landemore, 2012; Manin, 2021a).

Finally, collective deliberation offers at least two advantages over aggregation of preferences. One is that it allows for the plurality of discourse present in a liberal democracy to enter into a reflexive process (Manin, 2021a). The other is that the process of deliberation creates better informed and reasoned preferences which have a lower chance of being subject to biases and incoherence (Fishkin, 2009; Manin, 2021a; Mercier and Landemore, 2012). Certainly, the conception of the way preferences are formed is a central point in the justification of the ideal of deliberation as a way to reveal biased or questionable preferences (Floridia, 2018). What exactly is known about how democratic deliberation reaches a desirable outcome, and its practical implementation need to be clarified next.

2.1.2 Democratic deliberation, representative discursiveness and meta-consensus

A common conception of deliberation for informed collective decision-making is the necessity for disagreement, conflict and confrontation of arguments in mutual respect (Dryzek, 2002; Mansbridge et al., 2011). This perspective arises from a blending of two opposed views on the conception of discourses in democracy: consensus-oriented and reasoned (consociation) and confrontational, critically engaged and mobilising passions (agonism[3]) (Dryzek, 2005). Indeed it acknowledges that consociation can be useful in ensuring stability and continuity of governments whereas agonism can enhance the capacity of various groups to build a common world through social learning (Dryzek, 2005). Therefore, deliberative democracy sees validity in both claims and particularly values discursive confrontation in the public sphere through critical engagement (See Dryzek (2005) for a comprehensive explanation). The ability to transform political oppositions into discourses instead of other less desirable forms of confrontation can be argued to be a key characteristic of democracies (Warren, 2021).

The ideal followed by democratic deliberation has often been summarised in the prevailing of Jürgen Habermas' "unforced force of the better argument" (Habermas, 1996). Thereupon, there exist at least three non-controversial conditions under which democratic deliberation can occur namely the ethical condition, the epistemic condition and the inclusiveness condition (Calvert and Warren, 2014; Mansbridge et al., 2021). Firstly, democratic deliberation implies citizens' freedom of self-determination, or autonomy, in preference building through the justification of claims with reasons that they "own" (Calvert and Warren, 2014; Floridia, 2018). "Owning" one's reason can be opposed to simply repeating arguments heard from authorities or in media unreflectively and can be referred to as the ethical condition of deliberation (Calvert and Warren, 2014). On top of the ethical condition, there is an epistemic condition for deliberation, which relies on the necessity of access to all relevant information for the weighing of individual considerations to settle on preferences (Calvert and Warren, 2014). Finally, the inclusiveness condition builds on the two first conditions and is what makes deliberation democratic (Mansbridge et al., 2021). Indeed a characteristic of a democratic system is that all people affected by a decision should be included in the decision process (Warren, 2021). The inclusiveness condition is likewise used by Dryzek (2009) and interpreted as the need for discursive representativeness of a topic of deliberation including all interests and discourses present in a political setting (Dryzek, 2009; Dryzek and Niemeyer, 2008).

Discursive representation goes along with the necessity for confrontation of alternative discourses and sees in criticism among discourses an excellent democratic way to meliorate policies (Dryzek and Niemeyer, 2008). Even so, representing discourses by the number of citizens subscribing to it risks silencing minority discourses and favour group thinking by giving too much weight to dominant discourses which embody privilege and power (Dryzek and Niemeyer, 2008). Discursive representation is not simply a representation of opinions or preferences, it sees individuals as balancing various discourses at the same

[3] Agonistic democracy is a concept developed by Chantal Mouffe in opposition to deliberative democracy (See Mouffe, (1999))

time and keeping autonomy in choice (Dryzek and Niemeyer, 2008). However, for choice to exist, all relevant discourses that respect deliberative conditions such as mutual respect, need to be equally present in a deliberative setting (Dryzek and Niemeyer, 2008). On top of inclusiveness, Dryzek (2009) names authenticity and consequentiality as two more parameters to measure the deliberative capacity of democracy. Following the author, authentic means non-coercive and reciprocated deliberation and consequential means that it has an impact on collective decisions or social outcomes of deliberation (Dryzek, 2009).

The use of discursive representation as inclusiveness criteria becomes even more relevant as the formation of preferences in deliberation moves away from consensus (Curato et al., 2017) towards meta-consensus and inter-subjective rationality as a more realistic goal (Dryzek and Niemeyer, 2008, 2006). Meta-consensus and intersubjective rationality are deliberative in the sense that they emerge from the process that defines authentic deliberation, such as open-mindedness and reciprocity of deliberation or "enlarged thinking" outside of "private subjective conditions" (Benhabib, 2021; Niemeyer and Dryzek, 2007; Niemeyer and Veri, 2022). First, meta-consensus allows a reconciliation between consensus and the plurality of discourses in liberal democracies. It does so by setting a mutual agreement on the relevant considerations i.e. values and beliefs about a topic of deliberation (Dryzek and Niemeyer, 2006) without necessary agreement about the level of importance and veracity of these considerations (Niemeyer and Veri, 2022). In turn, it can be said that « outcomes [of deliberation] are democratically legitimate to the degree they are structured by free and reasoned meta-consensus among individuals subject to them » (Dryzek et Niemeyer, 2006, p. 648). A similar vision sees confrontational deliberation as a way to unify the field of understanding under which an issue is discussed (Manin, 2021b). The second goal, i.e. intersubjective rationality, is used to reflect the extent to which all concerns of the meta-consensus are used to establish individual positions (Niemeyer and Dryzek, 2007). When doing so, it is hypothesized that individual considerations inform individual preferences (See Mercier and Sperber, 2011) which creates intersubjective consistency between consideration and preferences. Consequentially, intersubjective consistency is used as an indicator of meta-consensus and intersubjective rationality (a shared reasoning framework) (Niemeyer and Dryzek, 2007; Niemeyer and Veri, 2022).

Intersubjective consistency opens up the transformative potential of deliberation to the common understanding of an issue at hand (meta-consensus) and a shared reasoning framework of how considerations affect preferences (Niemeyer and Veri, 2022). In other words, it values the proportionality of (dis-)agreement between consideration and preferences over the search for an independently existing better argument. Indeed, meta-consensus can be seen as a common standard of "reasonableness" by which each participant can be held accountable for what constitutes a good argument (Niemeyer and Veri, 2022). Finally, within a shared representation framework present in intersubjective consistency, deliberative reason can be situated at the level of discourses rather than individuals, allowing for contestation to be located within overlapping representations of an issue (Niemeyer and Veri, 2022). In turn, discursive

representation and intersubjective consistency can be used to evaluate deliberative processes in various citizen deliberation settings.

A large part of these citizen deliberations occur under so-called supportive conditions – with balanced information material, experts answering citizens' questions and facilitators ensuring topic-focused and inclusive argumentation (Gerber et al., 2018). In this thesis, the deliberative setting of interest is citizens' assemblies that are used to have a representative discourse of the public debate in a supported environment. Citizens' assemblies raise a whole range of questions regarding their inherent goals and conditions, and their role in the building of the deliberative capacity of democracies. In the following section, citizens' assemblies are introduced to their possible role in a semi-direct democracy such as Switzerland as well as the role and possible issues of expert input.

2.1.3 Citizens' assemblies, experts, and mixed system

Citizens' assemblies typically consist of a small number of citizens chosen to reason together over an issue of public concern through random or stratified selection[4] (Smith and Setälä, 2018). As such, citizens' assemblies can in part be seen as the reappearance of a political function drawn by lot which disappeared with the introduction of representative government (Smith and Setälä, 2018). They are studied for their internal deliberative quality and their contribution to the deliberative systems in terms of deliberative capacities (Beauvais and Warren, 2019). The deliberative capacity of a system can be defined as its capacity to accommodate authentic, inclusive and consequential deliberation regardless of the institution within which it takes place (Dryzek, 2009). The internal quality of deliberation can lead to an increase in the democratic legitimacy of the public decision-making process when mini-publics are used in a consultatory manner (Smith and Setälä, 2018). However, this relies on the assumption that political authorities have an incentive to include the result from mini-publics in the decision-making process and can be subject to misuse by authorities (see Smith and Setälä, 2018).

The available studies seem positive about the quality of citizen deliberation under conditions of participant heterogeneity, balanced information and facilitation in mini-publics such as citizens' assemblies (Gerber et al., 2018; Smith and Setälä, 2018). More precisely, «findings suggest a positive impact on knowledge, internal and external efficacy, confidence and satisfaction in the deliberative process and civic engagement amongst participants » (Smith et Setälä, 2018, p. 4). Citizens' assemblies as a "recommendation force" for the broader public also appear to be proven effective (Giraudet et al., 2022). However, the exact impact that citizens' assemblies should have on a collective decision-making process is still largely debated among scholars (Giraudet et al., 2022). On top of that, the role of experts in citizens' discourses is rarely considered and understudied (Leino et al., 2022; Mansbridge et al., 2021). This said citizens' assemblies are

[4] There is a debate on citizens' selection between random selection and stratification. Random selection ensures an equal chance to participate for everybody whereas stratification ensures the presence of various social groups and perspectives (for more details see Smith and Setälä, 2018).

popular for their potential interaction with referendums to connect localized deliberation with larger scale impact on democratic decision-making (Girard, 2021; Giraudet et al., 2022; Landemore, 2018). Nevertheless, deliberative settings such as citizens' assemblies have also been criticized for not considering sufficiently the power structures in which they take place (Shapiro, 2009).

One of these power structures can be found in the reproduction of the expert-lay hierarchical relationship generally present in citizens' assemblies (Machin, 2023). Indeed, expert discourses, particularly when touching political points, can entail coercive elements and self-interest that have to be accounted for and countered (Mansbridge et al., 2021). Furthermore, political discourses unlike everyday language are generally used strategically as an expert presents a particular point of view. If this is the case, there is a risk to immaterially reproduce power structures inside of citizens' assemblies rendering them questionable in their democratic function (Shapiro, 2009). In particular, participant diversity and expert contributions do not always ensure that discourses other than the dominant one are included in the deliberations and reflected upon (Smith and Setälä, 2018). The following will expose key elements of the role of experts in deliberation and the possible role citizens' assemblies could play in popular vote processes.

i) Expert knowledge and selection

The analysis of the role of experts in deliberative settings comes from a systemic approach of deliberative democracy that includes experts' inputs as an important influence on the formation and shift of discourses in deliberation (Mansbridge et al., 2021). In the decision-making process of Western democracies, the division of labour gives experts the role of informing and orienting decisions, but when and how it should be done remains understudied in classical deliberation approaches (Mansbridge et al., 2021). In particular, legitimate worries against democratic deliberation can arise if deliberation ignores specialized knowledge for issues that require it (Christiano, 2012). Notwithstanding the utility of experts to inform deliberative processes, they could also potentially hinder deliberation by i) sustaining the ignorance of lay citizens, ii) having extremely self-referential communication, and iii) letting self-interest arising from their academic or corporate affiliation influence their conception of common good and their recommendations (Mansbridge et al., 2021). These are issues touching on the inherent inequality between citizens and experts which can be contradictory to democratic decision-making (Christiano, 2012). In this section, the origin and way to limit inegalitarian tendencies of expertise are discussed and framing analysis is suggested as an empirical method to study the discourses of expertise.

The particular role of the expert in Western societies comes from its division of labour in which experts hold a certain authority that allows them to fill the space created by limited time, attention and knowledge of lay citizens (Warren, 1996). However, even if the knowledge of expertise is usually under the control of peers it can still entail systemic bias (Mansbridge et al., 2021; Warren, 1996). Furthermore, the division of labour that exists between experts and lay citizens can be prejudicial to democratic deliberation by undermining the equality between citizens (Christiano, 2012) and its compatibility with the ethical condition of deliberation (Mansbridge et al., 2021). This concern is crucial in deliberation as every citizen

(including experts) is supposed to be equal to ensure its democratic aspect. Discussed next is how these biases and inequalities can be limited in society through a pluralistic debate between communities of experts and in deliberative settings through the selection process of experts and the level of hierarchy between experts and citizens.

Firstly, in public debates, intermediary instances such as NGOs that translate expert discourses to citizens and vice versa have been mentioned as a way to reduce the hierarchical asymmetry between both lay and expert citizens (Christiano, 2012). On top of tackling translation issues between citizens and experts, groups of lay citizens (e.g., militant groups, interest groups) can actively influence the aims of experts' scientific research. This is a way to foster pluralism in research agenda disrupting the domination of scientific expertise by class or ethnic interests (Christiano, 2012). Therefore, it could help achieve a broad base and diverse community of experts to undertake robust debate and generate knowledge sensitive to all different parts of society (Christiano, 2012). Secondly, if this pluralism exists, the selection process of experts is essential in representing this debate inside of deliberative settings. In case class and ethnic interests dominate expertise, another proposed solution is to conduct the expert selection through a deliberative process. However, it seems unclear how to guarantee an unbiased representation of expert debate in that case.

On top of that, it is usually admitted that, in Habermasian terms, the epistemic advantages of the "unforced force of the better argument" can only be reached through contestation and critique between available arguments (Manin, 2021b). However, relying uniquely on the social and cultural diversity of experts is not necessarily enough to ensure that contestation and critique between experts effectively takes place (Manin, 2021b). Examples from Athenian democracy show that the deliberation of experts in front of citizens could create contestation of expert discourses and fight intellectual conformism and confirmatory bias (Manin, 2021b). For that matter, facilitation of deliberation can help opposing arguments to be confronted instead of only being expressed on their own. Another approach to reducing the expert/lay asymmetries has been a proposal that lay citizens could be part of the expertise on an issue under deliberation to counter the expert/lay hierarchy (Smith, 2009). This has been seen for example when Nepalese women responsible for wood collection were included in the expertise for the identification of endangered tree species (Agarwal, 2010; Mansbridge et al., 2021).

The method of this thesis focuses on the empirical evaluation of expert discourses to understand their potential influence on deliberation. For the analysis of informational discourses, the orators are said to provide frames of an issue to the deliberators, influencing the discussion and the formation of opinion by the citizens (Barisione, 2012). In the context of deliberative assemblies, it is generally admitted that an uncontested frame without authentic alternatives could potentially harm the process of deliberation (Calvert and Warren, 2014; Leino et al., 2022; Pellizzoni, 2001). This is why the analysis of frames provided by experts is so important and should be balanced by alternative and conflicting frames (Leino et al., 2022). What frames are and how they interact with deliberation will be discussed in chapter 2.2 after the following presentation on the role of citizens' assemblies in a mixed political system.

ii) A mixed system for citizens' assemblies

Not only is deliberation necessary in the deliberative ideal of democracy but it must also be carried out by all those affected by a decision (Manin, 2021a). Citizens' assemblies for that matter do not necessarily fulfil the second part. Even so, there is a possibility for them to contribute to democratic systems, beyond direct decision-making, for the deliberation of the many (Manin, 2021a). This comes partly as a critique of decision-making in citizens' assemblies as reducing the legitimacy of democratic systems through their lack of a participatory aspect (Böker, 2017; Lafont, 2017, 2015). More generally the legitimacy of mini-publics seems to appear "fragile with regard to the dominant forms of legitimacy (the many, elections, opinion, representativeness, expertise, mobilisation)" (Lefebvre, 2016, p. 320, as cited by Barbier and Bedu, 2021, translated by the author). Arguably, in order to legitimise mini-publics such as citizens' assemblies and endow them with decision-making powers, every individual affected by a decision must feel that they can participate in it. (Barbier and Bedu, 2021).

To solve inherent issues with the legitimacy of small deliberative settings, voices have been raised to combine mini-publics such as citizens' assemblies with referenda (Hendriks and Wagenaar, 2023). The idea is to include them in a deliberative system as part of a sequence of interaction: a mixed system consisting of a citizen assembly issuing democratic expertise that is subjected to the approval of the entire population (Girard, 2021). In this regard, citizens' assemblies have recently been seen as particularly interesting for cleaving debates, situations for which the impartiality of rulers can be doubted, when electoral worries make the rulers reluctant to act, and constitutional questions (Girard, 2021; Reuchamps and Suiter, 2016). At least three types of such direct combinations have already been tested in practice: 1) referendum-preparing assembly to explore the issue at hand and formulate options, 2) referendum-scrutinizing assembly to provide information, considerations and advice prior to voting, and 3) referendum-elaborating assembly to interpret and operationalize result in line with societal preferences (Hendriks and Wagenaar, 2023). Subsequently, this use of mini-publics could increase the quality of deliberation in the public sphere.

Similarly, Landemore (2018) suggests the combined use of "open mini-publics" and popular vote as a way to include deliberation into the popular vote processes. They receive the prefix "open" because participation in the citizens' selection lottery would be open to all and as accessible as possible (Landemore, 2018). Another particularity of these mini-publics would be a direct connection to the larger public regarding the reasoning and conclusion about the issue at hand (Landemore, 2018). Additionally, Landemore (2018) proposes to use a mini-public to establish a "pamphlet" on an initiative addressed to the larger public to help them prepare to vote (Landemore, 2018).

Furthermore, Cristina Lafont (2019) argues that this link between the public sphere and mini-publics is central to legitimising lottocratic institutions and forcing political systems to involve larger sections of the citizens in the political decision-making process. The author's participatory perspective on mini-publics focuses on contestatory, vigilant and anticipatory uses of mini-publics. First, in their contestatory function,

mini-publics could help minorities challenge consolidated majorities to spark debate in the broader public and transform public opinion (Lafont, 2019). The vigilant use of mini-publics could warn about the poor quality of information when mini-publics recommendations differ from the public sphere or put pressure on governments when the elected representatives have no incentive to tackle an issue or are "captured" by strong interest groups (Lafont, 2019). Finally, anticipatory uses of mini-publics can help enhance the visibility of what is at stake when prospective policies have unpredictable consequences (e.g. new technologies) or are surrounded by secrecy and influenced by powerful lobbies (e.g. international trade agreements) (Lafont, 2019). In that perspective, the uses of mini-publics should be institutionalized and regularly repeated to serve a participatory objective rather than deferring the power of deliberation from the public sphere towards mini-publics.

Nevertheless, there exist other perspectives on the use of mini-publics that are non-participatory and set the focus on the empowerment of the few as a democratic power shortcut. For example, MacKenzie and Warren (2012) argue that mini-publics can be used as "trusted information proxy" to guide citizens or as "anticipatory publics" to rapidly develop policies guided by mini-publics recommendations. Similarly, mini-public outputs have been thought of as the transmission of reasons to the broader public in the form of a meta-consensus (Niemeyer, 2020; Niemeyer and Jennstal, 2018). On top of that, other voices have suggested making them more disruptive in order to solve issues such as sustainability transformation or to develop new economic models (See for example: Durand et al., 2023; Hammond, 2020). However mini-publics such as citizens' assemblies are used, questions of legitimacy must be addressed to counter the risk of being manipulated or seen as illegitimate.

Before moving on to the context of the assembly analysed in this thesis, three crucial notions that will be used later on are explained next, starting with frames, then framing analysis and lastly the concept of consensus frames.

2.2 Frames, framing analysis and deliberation

The framing of information given to participants of deliberation is an important element that is often underestimated or not accounted for. On top of a fair representation of all discourses in the participants, the presence of authentically alternative discourses in experts needs to be explained. Indeed, there is a risk of manipulation of deliberation which could be an obstacle to intersubjective reasoning. First, the psychological concept of frames is explained to move towards the role of framing analysis and a specific type of frame: consensus frames.

2.2.1 Frames

Framing is a concept popularised in sociology by Erwin Goffman in his book *Framing Analysis: an Essay on the Organization of Experience* which tries to answer the question: Under what circumstances do we think things are real (Goffman, 1974). Frames are a proposition to explain how individuals in Western societies

make sense of their reality by creating meaning without being aware that this meaning is a projection of a frame of reference (Goffman, 1974). It has since then escaped its initial context towards a multi-perspectival approach such that:

> « Frames provide the widely understood context for understanding new phenomena. When a topic is "framed" its context is determined; its major tenets prescribed; individuals, groups, and organizations are assigned the roles of protagonist, antagonist, or spectator; and the legitimacy of varied strategies for action is defined. » (McLeod, 2001, p. 148)

Frames can be seen as a deliberate attempt of individuals or groups to structure public discourse in a way that privileges their goals and means of attaining them (McLeod, 2001). Among other factors, the structuring of public discourses and distribution of political and social power is strongly linked to media coverage through what is called priming (Carragee and Roefs, 2004; Entman, 2007; Fairhurst, 2010). Priming refers to the amount of time given to certain topics and types of media coverage that influences the perception of a public issue in a community that relates to that media (Fairhurst, 2010). Thereupon, available studies highlight the importance of financial and organizational resources to build more appealing frames (Chong and Druckman, 2007b; Entman, 2007). This could mean that power holders might be better able to frame public discourses through their economic wealth and social status. This analysis also seems historically astute for example in the USA where big corporations predominantly backed conservative parties (Hacker et al., 2005).

Furthermore, in the context of social movements, framing is an essential task in mobilizing potential adherents and filter antagonists to build collective action frames which define a group's belief and meaning to oppose objectionable activities and legitimise social movement activities (Benford and Snow, 2000; Gamson, 1996). Hence, be it for social movements or power holders, frames can change the way situations or issues are perceived. The next section presents possible effects of framing such as elite framing on deliberation.

2.2.2 Framing and deliberation

Framing analysis has gained momentum to evaluate the framing of public debates and deliberations generally referred to as elite framing. This influence of framing by an elite (e.g. politicians, experts, media) on citizens' frames is referred to as the framing effect (Chong and Druckman, 2007a). Elite framing alone does not pose manipulation issues, it can even have beneficiary effects for lay citizens. Indeed, framing can make political positions more understandable for citizens, help them weigh different positions, and reduce the complexity of decision-making (Leeper and Slothuus, 2018). Nevertheless, as framing limits the considerations used in them to a desired scope, they need to be numerous, informed, and competitive to ensure the reasoned formation of preferences (Leeper and Slothuus, 2018). Another condition is that media need to be numerous, well-funded, and free to ensure meaningful communication between elites

and citizens (Leeper and Slothuus, 2018). This puts great responsibility upon elites and media which could be problematic in the wake of governments' "increasing anti-democratic measures with regard to the press" and the "continued risks to media pluralism, media independence, and media freedom" (UNESCO, 2018).

If we take the coercive effect of elite framing seriously, a first observation is that horizontal (intersubjective) conversation can be limited through dominant elite rhetoric (Druckman and Nelson, 2003). Indeed, frames create involvement during which individuals become (partly) unaware of their cognitive attention and the orientation of their feelings (Goffman, 1974). The resulting effects include the altering of weight given to various considerations and the connection between core values and decisions which influence individual judgment and interpersonal deliberation (Calvert and Warren, 2014). This involvement is not necessarily coercive and its effects can be mitigated when a diversity of competing frames is present (Chong and Druckman, 2007a). However, there seem to be at least three types of frames violating the conditions for citizen deliberation. Calvert and Warren (2014) name dominant frames, polarizing frames, and group-based frames.

First, dominant frames primarily disrupt the epistemic condition of deliberation as they do not give access to all relevant considerations leading to low cognitive processing and insufficient testing of reason (Calvert and Warren, 2014). Then, polarizing frames violate the ethical condition and the epistemic condition by making people talk past each other leading to unreciprocated deliberation (Calvert and Warren, 2014). Finally, group-based frames are not compatible with the ethical conditions as they imply a pre-judgement of individuals, breaking mutual respect, trust and reciprocity between the speaker and the citizens (Calvert and Warren, 2014). A particular issue with dominant frames is that the sole exposition to alternative views might not be enough to dislodge highly dominant frames either because other frames are not strong enough or because the dominant frames are so embedded that nothing else can resonate in the same way (Calvert and Warren, 2014).

The most relevant coercive frame for this thesis is a particular type of dominant meta-frame called consensus frame. It has particularly gained attention in issues that involve complex concepts such as "justice", "security" and "sustainability" (Arcuri, 2019) and is presented next.

2.2.3 Consensus frames

Concepts such as "sustainability" much like "security" can be seen as elaborate meta-frames also called "consensus frames" in the sense that they invoke a nonreflexive consent to their values and objectives (Gamson, 1996). In other words, it would be difficult to mobilise frames in favour of insecurity or unsustainability. Even frames that effectively lead to these outcomes would rather strategically mobilise the positive concepts to claim ownership over a social problem (Mooney and Hunt, 2010). The lack of viable alternatives has made terms such as "sustainability" a commonly used term that receives widespread support as a political goal.

A characteristic of consensus frames is that they do not immediately lead to oppositional claims (Mooney and Hunt, 2010). However, they have the potency to create strong oppositional sides when their goals need to be translated into normative collective action frames (Gamson, 1996; Mooney and Hunt, 2010). This means that out of consensus frames, several diverging normative collective action frames can emerge. In their paper, Mooney and Hunt look at three collective action frames of food security: 1) The hunger and malnutrition frame, 2) The community food security frame, and 3) The risk minimising frame. Each of the three frames encompasses widely supported socio-political goals. However, they show that out of the apparent consensus attributed to food security, various collective action frames can emerge that create strong opposition to how the goals should be reached (Mooney and Hunt, 2010).

Following the analysis of Mooney and Hunt, frame analysis can also identify variations inside a collective action frame by using what Goffman (1974) called keying. The existing variations in normative collective action supported within a frame are called the keys of a frame which can be either "flat" or "sharp". A flat key "reinforces extant dominant interpretations and practices usually advanced by power holder" and a sharp key "offers critical alternative interpretations and practices usually voiced by challengers" (Mooney and Hunt, 2010). For example, the hunger and malnutrition food security frame described by Mooney and Hunt (2010) was separated as follows by the authors:

> « The mainstream flat key tends to be associated with high technology, globalizing, and individualizing tendencies; while the sharp key is more critical, oriented toward regional self-sufficiency, and committed to low-technology solutions. » (Mooney et Hunt, 2010, p. 478)

This thesis applies framing analysis to a recent Swiss Citizens' Assembly for Food Policy described in section 3.1.3. The underlying idea is that the information given to the citizens is embedded in a cultural framework and varies with the position and interest of the presenters (Mooney and Hunt, 2010). This implies that the meaning of information is mediated by the culture and the personal experience of the receiver (Goffman, 1974). Orators can use these pre-existing ankers to mobilise cultural backgrounds and trigger associations by favouring certain words, images, metaphors, values, etc (Goffman, 1974; Kuypers, 2010).

3 Context

3.1 Crisis, food system and transformation

The need for a food system transformation comes from the acknowledgement of a crisis that necessitates action to be solved. To understand the context in which the SCAFP took place, this section will discuss the presence of an objective crisis of the food system and its subjective perception in the society. Furthermore, it will aim at understanding why this transformation is not happening which will lead to the presentation of the Swiss Citizens' Assembly for Food Policy and its context.

3.1.1 A social-scientifically appropriate crisis of food systems

Following Habermas, for a crisis to be legitimately declared and acted upon the two conditions to look for are an objective crisis (integrated into the system) and the subjectivation (integrated into the lived world) of the same crisis (Habermas, 1973). This means that it is not sufficient for a problem to exist to be a crisis, it also needs to be acknowledged by the public. For example, climate change can be theorised and measured by scientists (objectivised) but only reaches the public through media, movies, pictures or the apparition of extreme climate events (subjectivised). The objectivity of a crisis arises from "unresolved steering problems" of a system, whereas the subjectivity of a crisis arises from its social integration which together lead to a social-scientifically appropriate crisis (Habermas, 1973). On top of this double origin of a crisis, a particularity of late capitalism is that the state has the role of steering and controlling the emergence of a crisis through administrative interventions into markets (Habermas, 1973). This situation described by Habermas is important for the relation between system crisis and lived-world crisis. Indeed, state intervention in markets strongly limits insurrectional movements as a crisis of the system moves into the lived world to a much lesser extent because of state intervention (Marmasse, 2019). Following that framework, what makes the food system a social-scientifically appropriate crisis?

To start, one must acknowledge that the crisis of food systems comes from an "unresolved steering problem". This means that the state interventions that should steer the system according to normatively defined goals are failing. An example, at the global scale, could be seen in the continuous attempt of governments to end world hunger and solve social problems through productionist food policies which systematically failed. Indeed, the productionist approach to increasing food production ended up creating a triple burden of under-, over-, and malnutrition (Lang, 2010). On top of that, Lang (2010) explains how the productionist food policies unfolded in additional issues in food systems touching on climate change, water, energy, biodiversity, land, soil, etc. This situation and continuous belief that productionist policies can still be steered to achieve their initial objective show a system failure (Lang, 2010) and sidelines essential issues such as poverty, unemployment nutrition or gender aspects (Fouilleux et al., 2017). The ongoing fragility of the food system has been particularly showcased by both the 1970s and 2005-8 food system shocks when food insecurity spread rapidly across the world (Clapp and Cohen, 2009; Horton, 2009; Lang, 2010; Rosin et al., 2013). Following Habermas, this situation could reasonably be described as

an unresolved steering problem of the system – thus the presence of an objective crisis of food systems. The latest rise in food insecurity in northern capitalistic countries only confirms the inability of governments to steer the system (Long et al., 2020). This being said, how is this crisis perceived in society? To what degree is it socially integrated?

To be sure, the worldwide peasantry movements and the food riots are only the latest examples of the lived world crisis of food systems. Indeed, food protests in many southern countries after the 2008 price surges are a clear example of the integration of the food systems crisis that left hundreds of millions hungry (Holt-Giminéz, 2012). On top of that, peasantry movements are a more global acknowledgement of the failure of the neoliberal food system and the need to push for alternative systems (Holt-Giminéz, 2012). More generally, food movements can be seen as non-structurally integrated counter-hegemonic discourses including civil society movements such as Slow Food movements, Via Campesina and other agrarian-based farmers' movements (Holt Giménez and Shattuck, 2011). They represent progressive and radical discourse on food systems that aim at countering and resolving failures of dominant productionist discourses (Holt Giménez and Shattuck, 2011).

Beyond the global social integration of the food system crisis, grassroots movements have proposed local alternatives to the food system crisis. Grassroot movements create alternative food system discourses and see the neoliberal food system as unable to achieve its promises (Antoni-Komar, 2020). Furthermore, food activists are involved in documenting and denouncing food system practices and creating alternatives to the dominant food system. Newspapers, magazines and TV news repeatedly document and criticise practices of the food system such as "pink slime" or addictive additives in children's food (Alkon and Guthman, 2017). There exist many more examples of such documentation that touch on a range of issues from animal production, hunger or pesticides[5]. On top of this documentation, activists and scholars work together to create alternative discourses and bring them to the public (Alkon and Guthman, 2017).

This multiplication of examples from civil society indicates that the food system crisis is socially well-integrated. However, the multiplication of counter-hegemonic movements only manages to increase the pressure on the hegemonic food system which adapted its discourse and remains unable to transform the system (Holt Giménez and Shattuck, 2011). This integration of contesting discourses by the hegemonic system without transformation is a mechanism that indicates that there must exist other mechanisms that block an effective transformation.

3.1.2 Barriers to food system transformation

Habermas names state interventionism as a barrier to the social integration of system crises and to the creation of insurrectional movements (Habermas, 1973). Indeed, for Habermas (1973) before the central

[5] For a selection of documentaries see for example https://foodtank.com/news/2023/09/eye-opening-food-systems-documentaries-to-watch/

role of state interventions to hinder the emergence of a crisis, disturbances in the system potentially had a devastating effect on the lived world which led to insurrectional movements (Marmasse, 2019). However, it seems that even though a crisis is acknowledged in its objective and subjective origins there are strong barriers to system transformation. Some of these barriers to change are discussed hereafter, first in general and then more specifically for food systems.

First, Jürgen Habermas and Nancy Fraser both see in the shift away from Polanyi's dual opposition of self-regulating systems and social struggle (Polanyi, 1944) an explanation for barriers to counter-hegemonic liberal discourse. On the one hand, Habermas (1973) identifies a difficulty in socially integrating crisis because of state intervention leading to a reduction of insurrectional movements. On the other, Fraser (2017) identifies a triple movement between marketization, social protection and emancipation that hinders the emergence of counter-hegemonic discourses. This is explained by the fact that «the triple movement foregrounds the fact that each can ally, in principle, with either of the other two poles against the third. » (Fraser, 2017, p. 38). When Nancy Fraser wrote this, it already seemed that the social protection critic of emancipation had paired up with the one from marketisation (Fraser, 2017). In turn, the neo-liberal discourses have gained strength through their respective critique of "oppressive protection" and "protection per se" hindering the generation of counter-hegemonic discourses (Fraser, 2017). On top of that triple movement, other explanations include the lack of consensus, the financialisation and the national/international mismatch (Fraser, 2017).

The neoliberal influence on limited transformation is also highlighted by the increasing economic and political power of corporations. Indeed, lobbying, working groups, and press framing are common instruments used by corporations to influence political decisions and the salience of a political issue (Culpepper, 2010). In the Habermassian framework of crisis, this could mean that the social integration of a crisis can be limited and maybe even counter-acted by business strategies. Corporate power concentration can not only affect politics directly but also indirectly, through the shaping of markets, technology and innovation (Clapp, 2021).

Another important aspect of limited transformation can arguably be seen in the dominant view of modern transformation that treats non-experts or lay citizens as epistemologically irrelevant (Wynne, 1998). In particular, the objectivation of boundaries between expert and lay knowledge assigning sole epistemological value to expert knowledge serves the stabilisation of forms of authority: a particular epistemic order mutually reinforces a particular social or political order (Wynne, 1998). Thus, the opening of science and politics to lay-citizen knowledge could help in the reconstruction of politics and the emergence of new social orders (Wynne, 1998). Keeping the focus on citizens, Didier Fassin (2023) suggests the use of social sciences to better understand and make the lived world of those affected by political decisions or inaction more visible to everyone and pressure governmental social regulation through critical studies.

Finally, taking a democratic perspective Dryzek et al. (2019) conceptualise a strong barrier to system transformation in what they call a crisis of communication which does not allow to discern relevant information from noise. In other words, even if a crisis is social-scientifically appropriate, the overabundance of citizens' expression creates a noise that does not allow seeing through and acting on it with representative democratic institutions (Dryzek et al., 2019). Phrased differently, the social integration of a crisis leads to a cacophony that renders countering the crisis very arduous if the expressions of citizens only take place outside of formalised institutions.

From state intervention, neo-liberal alliances with emancipation, corporate power, and expert-lay knowledge to the need for critical social sciences and the noise in communication, to what extent are these approaches applicable to food systems?

Béné (2022) touches on some of the aforementioned obstacles to transformation when he groups various papers into political-economic, governmental and scientific origins of barriers. The first element intervening in a food system could be assigned to the agri-business corporate ("Big-Food") economic interest in waging a campaign for a status quo through oriented information, financing and legal means (Mialon et al., 2015). The intervention of "Big Food" in food systems also creates a destabilisation and fragmentation of opposing discourses (Mialon et al., 2015). Still looking at the neoliberal deadlock for transformation, Clapp (2021) identifies an unduly strong concentration of actors in the global seed and agrochemical industry. This actor concentration gives substantive political and economic power to these firms, which undermines the achievement of key goals for the food system (Clapp, 2021). Furthermore, this corporate power in a food system is also used to challenge political programs in news media and court (Béné, 2022). All three perspectives on corporate power would also mean that the concentration of actors and their influence participate in the "unresolved steering problem" of food policies through a misalignment of politics with public interest. Finally, it also creates oppositional narratives that dispute the socialisation of the food system crisis.

Corporate power also seems to be linked with innovation in food systems. Indeed, the high concentration of actors in the seed and agrochemical industry leads to low innovation and protection of their assets and investments which leads to a lack of development of alternatives to established products (Clapp, 2021). This means that even when there is a willingness to change harmful products that are not deemed tolerable by the public, the situation is locked in through a lack of alternatives. Further on, in the current food system, policymaking relies on innovation as much as on expertise, which is known as evidence-based policymaking (Béné, 2022). Evidence-based policymaking becomes problematic as soon as we say with Knorr-Cetina (1981), Latour and Woolgar (2013), or Wynne (1998) that knowledge is a construct that relies on certain values, beliefs and traditions. Indeed, firstly it hierarchises the knowledge of experts above specialist lay knowledge as well as among types of expertise that fit better a particular policy (Wynne, 1998). For example, it can typically favour technical solutions that better fit momentary interests over social or political concerns (Béné, 2005). There exists a range of examples that show the misuse, distortion,

misinformation and sponsoring of knowledge that slow down the transformation of food systems (Béné, 2022).

Moreover, cherry-picking evidence and reframing particular issues for a particular political perspective are other consequences of evidence-based policymaking (Liverani et al., 2013). More specifically, complex social issues or structural issues often seem to be sidelined in favour of evidence of immediate effect, simple technical issues or specific economic or agronomic framing (Béné, 2022). This would mean that the evidence-based policymaking in the food system has the double effect of favouring simple technical expertise over others and lay specialists as well as ignoring for the most part social sciences that treat more complex issues and do not immediately lead to clear evidence. This, in turn, slows down the understanding of how to transform the system. From a scientific perspective, it also favours the depoliticisation of science and favours a certain type of conformism that only aims at creating more evidence (Parkhurst, 2017).

Finally, the appropriation of emancipation by neoliberalism was named as a barrier to transformation. A good example of this phenomenon in food systems could arguably be organic agriculture. Organic agriculture was initiated as a dissident movement against the neoliberal model and globalisation (Guzmán, 2006; Heckman, 2006). The first voluntary organic agriculture certifications originated in countries of the global North (United States, Europe and Australia) and were an expression of a philosophy rather than a market opportunity (Rundgren, 2002). However, today's organic agriculture labels have lost much of their original philosophy. State certifications or regulations and their incorporation into the production system have popularised it and at the same time favoured its use as a commercial or agricultural policy argument (Rundgren, 2002).

Even though the examples cited above are only a few among many others, it seems clear that barriers to transformations in food systems are strongly established. For that matter, the democratic perspective taken by Dryzek et al. (2019) suggests the use of citizens' assemblies to foster transformations. This is what will be presented next with the Swiss Citizens' Assembly for Food Policy.

3.1.3 Swiss Citizens' Assembly for Food Policy

i) Context of the Swiss Citizens' Assembly for Food Policy

The year 2020 witnessed a dual movement within Swiss agricultural policy, comprising two main aspects: 1) A series of popular initiatives that directly addressed the Swiss food system, and 2) A deadlock in the formulation of the future agricultural policy (AP22+).

Initially, in 2018, the Swiss population was presented with three initiatives directly related to agricultural policy for voting. Additionally, three more initiatives were already planned to be carried out between 2021 and 2022. The initiatives subjected to voting in 2018 were the "Fair Food Initiative" (Federal Council, 2018a), the "Initiative for Food Sovereignty" (Federal Council, 2018b), and the "Initiative for the Dignity of Farm Animals" (Federal Council, 2018c). Subsequently, in 2021, the "Initiative for Clean Drinking

Water and Healthy Food" (Federal Council, 2021a) and the "Initiative for a Switzerland without Artificial Pesticides" (Federal Council, 2021b) took place, followed by the "Factory Farming Initiative" against factory farming in 2022 (Federal Council, 2022). Although all six initiatives were ultimately rejected by voters, it is presumed that each initiative increased pressure on the political agenda to adapt the food system (Huber, 2022).

Contrasting the popular initiatives, there is a counter-movement within the political landscape represented by influential organizations advocating for a conservative agricultural policy. Among these, the Swiss farmers' syndicate holds a veto position in agenda setting due to its well-structured organization (Huber, 2022). Additionally, during that time, parliamentarians with direct ties to agricultural producers were overrepresented in comparison to professionals from other occupations in the Swiss population (Huber, 2022; Metz et al., 2021).

The clash between prominent representation of conservative agricultural interests and emerging voices from citizens, as seen in the popular initiatives, has often led to negotiations for a compromise. As early as 2014, a reform of Swiss agricultural policy resulted in partial success for both conservative and "Green" groups regarding the direction of the direct payment scheme (Metz et al., 2021). Specifically, conservatives were able to maintain substantial support for payments based on production metrics (e.g., number of animals), while greening of agricultural policy was achieved through increased payment based on non-commodity criteria (e.g., biodiversity payments) (Metz et al., 2021).

Similarly, in 2020 negotiations for the upcoming agricultural policy reform (AP22+) were repeatedly delayed, ultimately incorporating additional environmental aspects due to the pressure from pending popular initiatives (Huber, 2022). This demonstrates that changes in agricultural policy follow a slow, reformative pattern, primarily determined through negotiations between interest groups and politicians within the parliament. The limited voice of citizens in their numerous expressions for transformation could potentially support the hypothesis of a "crisis of communication" as suggested by Dryzek et al. (2019) which may be alleviated through deliberation, such as the establishment of a citizens' assembly.

In particular, the unsuccessful initiatives and the strong conservative interest groups influencing the orientation of politics could indicate a need for a higher quality of deliberation in the political system. Firstly, the organisation of mini-publics such as citizens' assemblies could help increase the quality of deliberation in the broader public over the question at hand in popular initiatives. Following Hendriks and Wagenaar (2023) or Landemore (2018) mini-publics could help to formulate better options to solve the issues at hand in a way that resonates with the broader public or better informs the broader public by providing balanced information and ruling out manipulative arguments (Hendriks and Wagenaar, 2023). Similarly, mini-publics could help reveal a mismatch between reasoned opinion from deliberation and actual public opinion to warn about the poor quality of information provided to make a choice when voting (See Lafont, 2019).

Following that and to adapt to the new paradigm in decision-making, in 2021 the Swiss Federal Council adopted a sustainable development strategy for 2030 incorporating key elements of open discussion and collaboration with civil society (Federal Council, 2020). This occurred shortly after the Organisation for Economic Cooperation and Development (OECD) released a document encouraging participation in the "deliberative wave" and experimentation with innovative democratic instruments (OECD, 2020).

Taking inspiration from these developments, the Biovision Foundation, the Association for an Agriculture with a Future (Landwirtschaft mit Zukunft), and the Sustainable Solutions Development Network (SDSN) seized the opportunity to propose a Swiss Citizens' Assembly for Food Policy (SCAFP, 2023). This initiative was subsequently organized as part of the joint project "Food Futur Switzerland" and was supported both financially and in terms of oversight by the Federal Office for Agriculture (FOAG), Federal Food Safety and Veterinary Office (FSVO) and the Federal Office for the Environment (FOEN) (SCAFP, 2023).

ii) Structure of the Swiss Citizens' Assembly for Food Policy

The information on the structure of the SCAFP was compiled from three different sources. Information was retrieved from the website of the SCAFP (SCAFP, 2023), and taken from the master's thesis written by Samira Amos (Amos, 2023). Furthermore, if no reference is given, the information is taken from my participation in the process through participant observation.

The SCAFP is the citizen assembly on the Swiss food system that took place from June 2022 to November 2022. The citizens' assembly consisted of 85 citizens selected by the independent market and research institute DemoSCOPE (Amos, 2023). The participants were selected to represent the Swiss population in terms of gender, age, language and settlement type (see Amos, 2023 for a description of the extensive selection process). The guiding question for the deliberation was the following: "What should a food policy for Switzerland look like that will provide everyone with healthy, sustainable, animal-friendly and fairly produced food by 2030?" (SCAFP, 2023). The selected participants were separated into ten groups. There were two groups for each of the following five topics: environment, economy, production, health and social aspects of the food system. The final objective of the assembly was to formulate policy recommendations (SCAFP, 2023). In each group, one facilitator and one or two assistant facilitators accompanied the deliberative process.

The deliberation process consisted of two main phases, the learning phase and the deliberation phase with a shorter listening phase in between to make the transition (Amos, 2023). The learning phase is the phase during which the participant had inputs from stakeholders and experts as well as the possibility to go on at least one learning journey for practical experience (SCAFP, 2023). The meetings were mostly online except for two presential days of the starting weekend, one presential day at the midterm weekend and two presential days at the final weekend (Amos, 2023). For a complete overview of the SCAFP process

please refer to (Amos, 2023). The recommendations were adopted by a majority vote at the final weekend and handed over to the Swiss Parliament during a press conference in February 2023.

Turning to the experts, whose inputs are analysed in the thesis, each thematic group received two inputs of 15 to 25 minutes. For the second presentation, participants could see a presentation outside of their own group if they wished to do so. On top of the topical presentation, one presentation was given to all participants to give an overview of the food system as a whole. The first input was usually dedicated to information about the food system and the second to policy recommendations. Where possible the two inputs were given by the same person. Furthermore, the recording of the presentation is available on the website of the SCAFP[6]. Table 1 shows the list of anonymized expert IDs and their research affiliation.

Table 1: Table of each SCAFP's expert input by topic and order of presentation with the presenters' anonymized IDs and their affiliation.

Topic	Presentation 1	Presentation 2
Social	S1 - Agroscope	S2 - University of Basel
Environment	E1 - Bern University of Applied Sciences	E1 - Bern University of Applied Sciences
Production	B1 - University of Bern	B1 - University of Bern
Health	H1 - Bern University of Applied Sciences	H1 - Bern University of Applied Sciences
Economy	W1 - Bern University of Applied Sciences	W1 - Bern University of Applied Sciences
Food system	F1 - M. Sonnevelt – ETH Zürich	N.A.

Table made by the author with the SCAFP's website:
https://www.buergerinnenrat.ch/de/sitzungen/arbeitstreffen/

After each presentation, participants had 20-30 minutes to ask questions to the respective experts. On top of experts' input, the learning phase also consisted of learning journeys aimed at giving an insight into agricultural practices relevant to the theme of the assembly. More specifically, the practices to visit were chosen by the *Biovision Foundation* and the Federal Council (Amos, 2023). Overall, the learning phase consisted of 4 online meetings including two experts' presentations as well as the learning journeys, all of which took place between the starting weekend and the listening phase. The listening phase was a coming together of the pairs of groups working on the same subject as well as the midterm weekend to prepare the deliberation phase (Amos, 2023). Finally, the formal deliberative phase started after the midterm

[6] Source: https://www.buergerinnenrat.ch/de/sitzungen/arbeitstreffen/

weekend and was spread over three meetings and the closing weekend concluded with the final voting of recommendations. For a comprehensive summary of the design of the SCAFP, please refer to the master's thesis by Amos (2023).

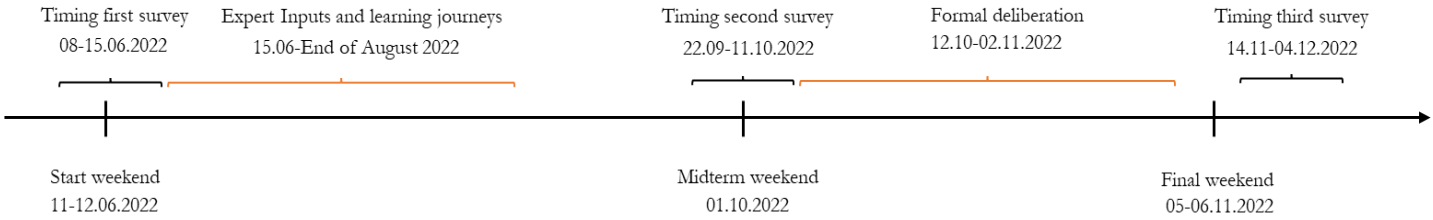

Figure 1: Timing of the three surveys in comparison with the process of the BEP, created by the author and based on the website of the BEP: https://www.buergerinnenrat.ch/de/prozess/

For a comprehension of the process of the SCAFP, Figure 1 shows the timing of the three presential meetings that also delimit the learning and listening phase from the formal deliberation. Figure 1 also displays the timing during which each of the three surveys, used for the Deliberative Reason Index, was filled out by the respondents. More information on the survey, the methods used in the thesis and the result will be presented in the next section starting with the Deliberative Reason Index followed up by the framing analysis.

4 Data collection and methods

The methods used for data collection and analysis in the thesis are presented in the following sections. Presented first is the survey used to collect data on demographics, considerations, preferences and the evaluation of the experts' presentations. Thereupon, the different methods are presented, starting with the Deliberative Reason Index, then the framing analysis of expert recordings and finally the thematic analysis of expert evaluations.

4.1 Participant observation

When I speak about the SCAFP and the results in this thesis, it is important to note that I was present during the assembly as an observer. Throughout my observatory task, I could familiarise myself with the process of the assembly and observe the discussion in one of the ten groups of citizens. This method aimed to provide a comprehensive understanding of the dynamics and interactions within a small group of citizens of the SCAFP while respecting the autonomy and integrity of the participants. This section describes step by step, the process of participant observation of the citizens' assembly on Swiss food policy, highlighting its limitations and implications for the thesis.

First, in a pre-observation preparation, I familiarised myself with the assembly's structure, procedure and objective as well as establishing a research focus to guide the observation. Then, I put the focus of my observation guide on the respect between citizens and the reciprocity in argumentation as well as changes of positions. The full observation guide used during participant observation of the SCAFP can be found in appendix C.

The consent of citizens was only asked on the day of the opening weekend of the SCAFP as it was unclear if I would receive the agreement from the organisation to perform my research. Just before the start of the assembly, I received the agreement of the organisation and the facilitators of the group I would follow and got introduced to the citizens in that group. Following this, I was able to obtain informed consent from all participants of my observation group, ensuring that they understood the purpose and nature of the study. I also agreed to maintain strict confidentiality and anonymity to protect the privacy of the participants. Finally, I had to communicate my role as an observer and agree to the non-interventionist approach requested by the organisers.

Moving on to the observation process itself, I was able to attend the assembly sessions as an observer, refraining from actively participating in or influencing the discussions. These sessions consisted of three face-to-face weekends and the remainder of online video calls. During the sessions, I took detailed notes, capturing information related to the observation guide and other relevant information such as specific interactions between participants and participants' reactions to the experts' presentations. For identification purposes, I wore a badge indicating my role as an observer during the face-to-face sessions and had to keep my camera switched off during the online video sessions.

Important limitations to my observations with this method came up starting with the fact that I could not take part in the breakout rooms between participants of my group during online meetings. Why this was impossible was never expressed clearly but might have had to do with the organiser's fear of interference between the research and the deliberation of the participants. Thereupon, I was only allowed to listen to the immediate reaction of the citizens after presentations, such as expert inputs, and the reports of breakout room discussions. As a result, the initially planned observation guide was in part abandoned for a less structured form of note-taking over short sequences of interactions. A particular focus was put on the inclusion of expert knowledge by the citizens or direct appraisal or criticism.

Therefore, the use of participant observation in the thesis is used as background information for the design and process of the SCAFP. Nevertheless, it helped me put the focus on particularly relevant aspects of the assembly and understand the insights and limitations of my results better.

4.2 Survey

Three surveys were sent out to the participants of the SCAFP in order to build the DRI. To capture reasons and how preferences are informed by these reasons, the survey for the DRI has two parts: 1) Questions on considerations and 2) ranking of preferences. The exact same survey is submitted three times to the same people to track changes of deliberative reason over time. Consequentially, the same participants have to respond multiple times in order to calculate DRI changes. The first survey was sent before the first meeting of the participants, the second after the last meeting of the information and group building phase and the third after the final meeting of the SCAFP. For each survey, a reminder was sent a few days after it was first sent out. For the precise timing of the surveys in the process of the SCAFP please refer to Figure 1.

The consideration and preference questions were built to capture the public debate around the theme of the assembly: The future of the food system in Switzerland. The questions were formulated by the author and based upon a reconstruction of the public debate around the Swiss food system through (1) general themes of trust, responsibility, justice, and food systems (2) Central themes of recent popular initiatives in Switzerland present in official voting booklets[7], and (3) Highly supported statements in opinion surveys (performed by GFS.BERN[8] and Tamedia[9]) that took place around popular initiatives related to the food system in Switzerland. The full table showing the list of questions with their motivation can be found in Appendix A. The queries of the survey are structured from the most general to the most specific, starting with statements on climate change such as "I think it is safe to say climate change is here." towards

[7] The booklets are publicly available online: https://swissvotes.ch/votes

[8] Survey results: https://cockpit.gfsbern.ch/fr/cockpit/srg_trend_032021_fr-3-2/

[9] Survey results: https://www.tamedia.ch/tl_files/content/Group/PDF%20Files/Deutsch/20210613_Tamedia_20Minuten_Bericht_NAB.pdf

statements on the agricultural system such as "Farmers already suffer enough from strict rules and paperwork. Family farmers should have more liberties" and justice such as "It is important to support small and local farming as they have the fewest resources to deal with impacts of climate change.". For a more comprehensive structure of the survey, the considerations were classified into seven categories: 1) Reality of change, 2) Responsibility of action, 3) Economy and markets, 4) Pollution and biodiversity, 5) Sustainable agriculture, 6) Global perspective, 7) Action and response. To evaluate the survey assertions, a seven-point Likert scale was used for the questions on considerations. In addition, seven policy types used to measure preferences had to be ranked from one (the preferred policy) to seven (the least preferred policy). An example of policy type is "Policies that emphasize fewer regulations (e.g., policies that promote free trade agreements by reducing food regulation)".

On top of the information needed to compute the DRI, demographic information and voting habits were inquired. To keep the participants' anonymity and to compare individual responses between the three surveys a personal identification code combining the initial, and three digits of the phone number was used. The survey was available to the respondents in three languages: German, French and Italian.

Finally, the second survey sent out in the middle of the deliberative process included an open-ended question for the participants to evaluate the experts' presentations. The question consisted of the following three sub-questions, the exact wording of which were :

1) How satisfied have you been with the experts' presentations so far (diversity, relevance, etc.)?

2) Was there anything that you didn't like/that you really appreciated?

3) Would you have liked to hear something different (different themes, different perspectives, etc.)?

The data collected with the survey was then used to calculate the Deliberative Reason Index and the thematic analysis presented next along with the inductive framing analysis based upon recorded expert presentations.

4.3 Deliberative Reason Index

The Deliberative Reason Index takes a group-level analytical approach to reasoning which captures deliberative reason as more than the sum of individual reasoning (Niemeyer and Veri, 2022). The index is constructed as a measure of intersubjective consistency between individuals (Niemeyer and Veri, 2022). Intersubjective consistency emerges from an agreement concerning relevant interests, values, and beliefs (meta-consensus) and a shared reasoning framework or representation (Niemeyer and Veri, 2022). The shared reasoning framework or representation of the issue implies coherence between individuals regarding how considerations affect preferences (Niemeyer and Veri, 2022). A high intersubjective consistency, then, indicates a «proportionality between reasonable disagreement (or agreement) among

pairs of individuals regarding considerations on one level and preferences on the other. » (Niemeyer et Veri, 2022, p. 99). In statistical terms, individuals showing a certain correlation in consideration should consistently have a proportional correlation over policy preferences. An interesting feature of the DRI is that consistency works in many ways as people who show no or negative correlation in consideration can consistently show no or negative correlation in their policy preferences.

To measure intersubjective consistency, the correlation in preferences between all pairs of individuals as well as the correlation in their considerations needs to be computed. This results in two measures of correlation for each pair of individuals that can be plotted using an axis for correlation in considerations and an axis for correlation in preferences (Figure 1). In Figure 1, the distance of each point (pair of individuals) from the 1:1 line is used to compute intersubjective consistency. The normalized distance from the 1:1 line is standardized following the methodology described by Niemeyer and Veri (2022) to obtain a measure of IC. A perfectly equal correlation in consideration and preferences of two individuals shows perfect consistency in consideration and preferences, hence the highest measure of deliberative reason. In the next step, taking the mean IC of an individual with all other participants results in the individual DRI. Individual DRI can be summarised further into the average individual DRI giving the DRI measure. All these operations were made with r-studio RStudio version 2023.06.1.

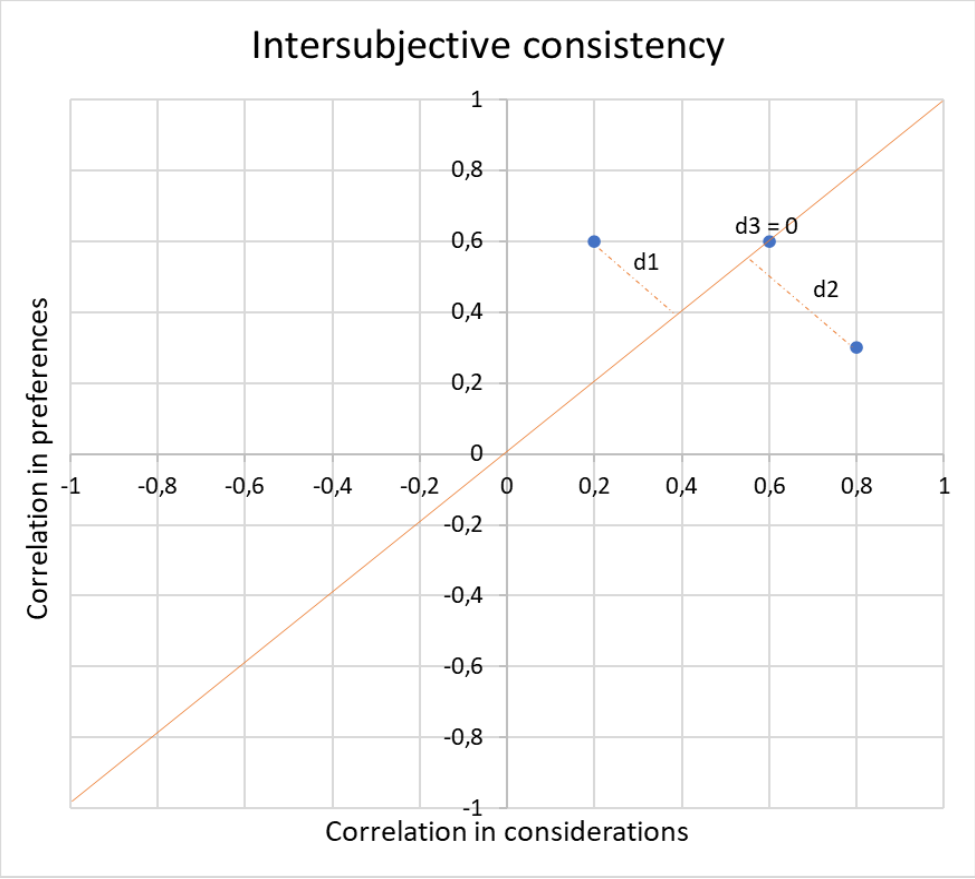

Figure 2: Visualisation of intersubjective consistency for the computation of the DRI: The orange line showing perfect intersubjective consistency (d=0)

As the DRI method is used to measure a change in intersubjective consistency over time, an individual must respond to at least the first and last surveys to be included in the results. Another situation arises when the same person has responded to all three surveys. The presence of these two different situations allows us to calculate changes in DRI in two distinct sub-groups of respondents. The first includes citizens who responded to all three surveys, which will be called PRE-MID-POST and includes a total of 17 individuals. The second is less restrictive since it includes all the individuals who only responded to the first and last surveys. It will be called PRE-POST and includes 28 individuals. To increase the robustness of the results of the PRE-POST and PRE-MID-POST sub-groups, they will be compared to the partial results from the PRE-MID and MID-POST groups. The latter two sub-groups consist of 25 and 24 individuals, respectively.

The results will be presented in the next section starting with general results from the pre-deliberation survey to show a selection of considerations of the participants. After that, the demographic characteristics of the participants are presented as well as the results from the Deliberative Reason Index.

4.4 Inductive framing analysis of experts' presentations

To understand how the discourses developed around the future of the Swiss food system, the framing analysis examines the main frame packages that play a role in describing, evaluating and picturing the issues and solutions (Lajoie-O'Malley et al., 2020; Van Gorp, 2007, 2005). A frame package consists of the core frame, the framing device and the reasoning device (Gamson and Modigliani, 1989; Mendonça and Simões, 2022; Van Gorp, 2007; Van Gorp and van der Goot, 2012). The framing device identifies words, metaphors, exemplary cases, visuals and further elements that construct the narrative and the rhetorical structure of the message (Kuypers, 2010; McLeod, 2001). The reasoning device makes sense of the problem definition, justification, causes, consequences and the implicit cultural phenomenon which can be used to reconstruct the pattern of interpretation used by the orator (Van Gorp and van der Goot, 2012). A main difference between the two devices is that the reasoning device does not need to be explicitly present in the discourse but can be extracted from the narrative (Van Gorp, 2007).

Potential consensus frames around the concepts of the main question of the assembly (*What should a food policy for Switzerland look like that makes healthy, sustainable, animal-friendly and fairly produced food available to everyone by 2030?*) are investigated. Additionally, a keying analysis allows the identification within a frame called the flat key (Dominant interpretation of a frame) and sharp key (challenging interpretation of a frame). For a consensus frame to be present, the definition of the debate or issue must be general and ambiguous enough (Brunori et al., 2013) allowing for it to be used to defend diverse interests and positions. Therefore, terms like "sustainability" and "fairness" are suitable candidates for a consensus frame in the SCAFP. Apart from consensus frames, other potential frame packages are investigated.

The data used for the analysis are the recorded experts' presentations of the citizens' assembly. The recordings include ten presentations spread over five themes (social, economic, environment, production, health) and one presentation on the Swiss food systems. All presentations were done with a set of slides prepared by the presenters. The recordings and the presentation slides can be found at the following address: https://www.buergerinnenrat.ch/de/sitzungen/arbeitstreffen/. Each of the five topics had two presentations dedicated specifically to it. Except for the social theme, the presenters were the same for both presentations. In the results of the framing analysis, the presentations are named by their topic followed by a number for their order of appearance. For example, the presentations Production 1 and Production 2 are respectively the first and the second presentation given on the theme of Production. An overview of the presenter for each topic and presentation can be found in Table 1. As the topics can have different presenters between the first and the second presentations, they are categorised individually so that two presentations on the same topic can be classified in different frames.

Table 2: Framing matrix used for the inductive framing analysis of the expert inputs adapted from Van Gorp and van der Goot (2012) and Mooney and Hunt (2010)

NAME OF FRAMES	
REASONING DEVICE	Problem definition
	Risks in the food system
	Solution definition
	Environmental goals
	Social goals
	Non-solution
	Justification for solution
	Responsibility
	Examples of Policy instruments
FRAMING DEVICES	Key concepts
	Word choice/ metaphors
	Moral/ emotional basis
ACTORS	Thematic group of the citizens' assembly

The results of the analysis are summarised in a framing matrix that is the basis for the description of the identified frames and keys. The framing matrix in Table 2 is a modified version of the framing matrix used by Van Gorp and van der Goot (2012). More precisely, the problem definition, solution definition, justification for the solution, key concepts, word choice/metaphors and moral/emotional basis have been taken unchanged from Van Gorp and van der Goot (2012). The other categories including risks in the food system, environmental goals, social goals, non-solution and justification for solution were adapted from the category key policy position used by Mooney and Hunt (2010) and adapted to food systems following the classification of Velten et al. (2015).

4.5 Thematic analysis of the participants' perception of experts' presentations

The answers of respondents to the survey's open-ended question on the presentation of information by experts were analysed following a thematic analysis. The thematic analysis is used to define patterns or themes in qualitative data (Braun and Clarke, 2006). Following Braun and Clarke, 2006 the method used in this analysis followed a 6-step analysis: familiarisation with the data, generation of initial codes, search for themes, reviewing of themes, definition of themes, and writing. An example and step-by-step explanation of this method can be found for example in Maguire and Delahunt (2017).

For the analysis of survey answers in this thesis first, answers that did not respond to the questions such as comments about other participants were excluded from the analysis. After that, the initial coding was done, in particular the coding of critical and non-critical responses. Inside of each of the two groups, the comments were further broken down into codes, to identify specific themes. Through an iterative process, between coding and theme identification, the themes were reviewed to finally identify the main themes.

5 Results

This section presents the results from the survey as well as from the analysis of experts' presentations starting with the more general results on pre-deliberative opinions and demographics of survey respondents directly followed by the DRI. After that, the analysis of the experts' presentations is presented in two parts, an inductive framing analysis and a thematic analysis of citizens' comments on the same presentations.

5.1 Pre-deliberative opinions of participants

In this initial result section, selected findings from the survey are presented. Of the 67 participants remaining at the conclusion of the assembly, 52 respondents provided answers to the consideration statements in the preliminary surveying round (pre-deliberation). The pre-deliberation results offer insight into the diversity of perspectives among participants and the pre-existing consensus or disagreement within the assembly. Figure 3 shows the results of a selection of statements from the overall results of the survey (See Appendix A for the full figure). Starting with general statements, the majority of participants perceived climate change as a problem - 76.9% disagree with the statement "Climate variation is normal, so why should this be a problem?" (Figure 3: statement 4). Regarding proposed solutions and actions, two prominent assertions were made by the surveyed participants: scepticism towards the efficacy of technology in addressing climate change (Figure 3: statement 1), and a belief that both individuals and Switzerland as a whole can make a difference (Figure 3: statements 2 and 3). When it comes to finding solutions for the food system, there was substantial agreement among participants regarding community involvement and a holistic approach (Figure 3: statements 11 and 12).

In the realm of solutions, the use of pesticides, fertilizers and antibiotics faced strong opposition from participants. Indeed, 90.4% of the respondents at least somewhat agreed that water pollution resulting from the aforementioned products needs to be addressed through usage reduction (Figure 3: statement 13). Additionally, 86.5% believed that "agricultural subsidies should promote sustainable, pesticide and antibiotic-free production" (Figure 3: statement 10). Similarly, 66.6% of the respondents agreed that the demand for a product alone is not sufficient justification for its supply and that sustainability could justify a limitation on freedom of choice (Figure 3: statement 5). With regards to other environmentally harmful products, such as palm oil, 76.9% of participants agreed that they should be taxed in a similar manner as tobacco products (Figure 3: statement 9). Still, according to the answers in the survey, a non-production-specific solution exists in the development of "short distribution channels and support of local production instead of supporting big agrifood corporations" (Figure 3: statement 14).

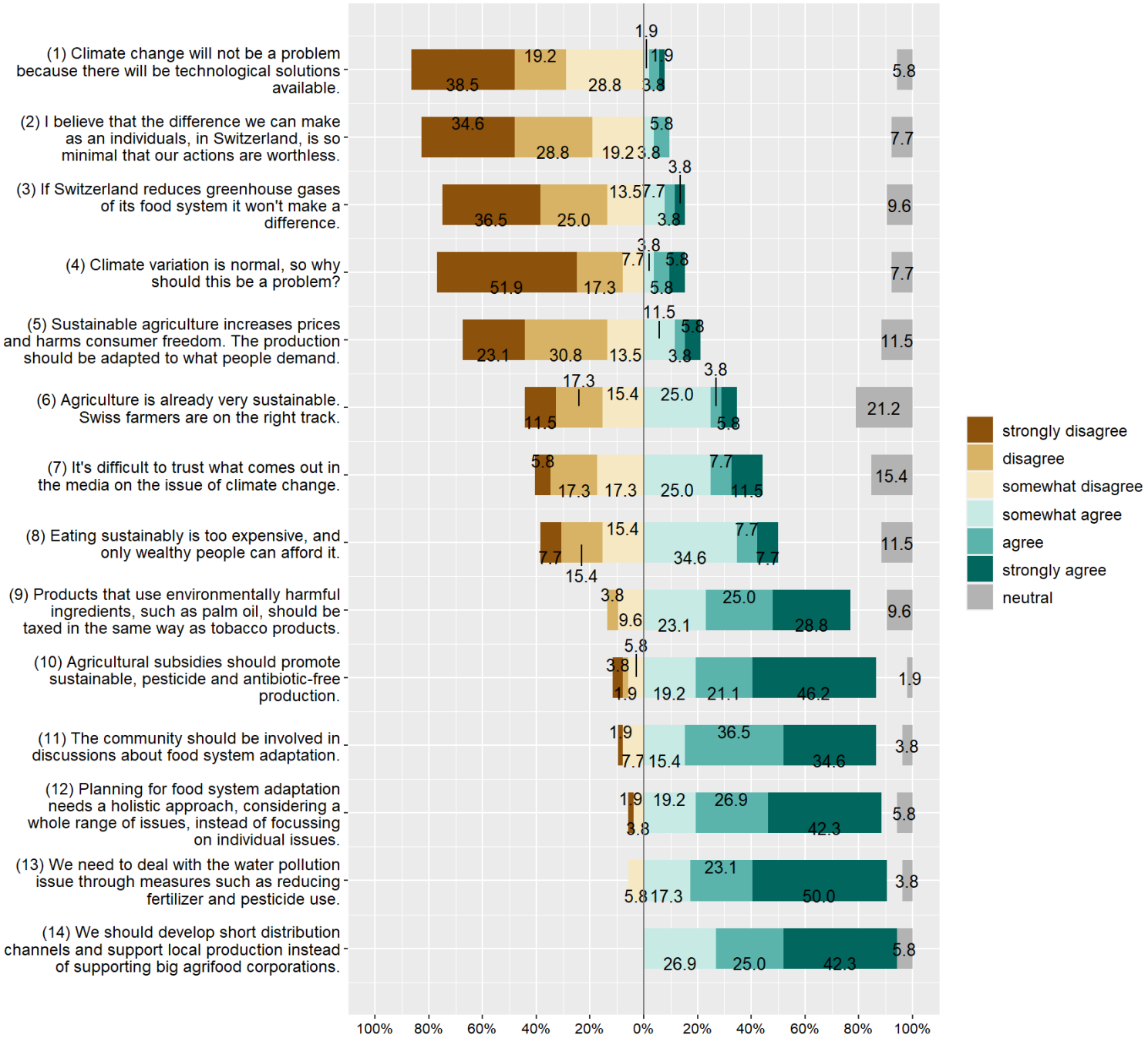

Figure 3: Answers to the first round of surveying for the respective 52 respondents for a selection of considerations

Ultimately, the three last statements in Figure 3 exhibit relatively symmetrical results. One of these statements reveals mitigated trust in media information about climate change. This finding can be compared with answers on trust in government and trust in scientists, which may be found in the full result table of Appendix B. Trust decreases in the following order: scientists, governments, and media. The remaining statements in Figure 3 are: "Agriculture is already very sustainable. Swiss farmers are on the right track." and "Eating sustainably is too expensive, and only wealthy people can afford it". Respondents display a slight tendency to disagree with the former statement and agree with the latter.

Notwithstanding the difficulty of interpreting these results, they may be due to the complexity of the questions asked. In these statements, the term 'sustainability' is used in an abstract manner, not connected to the use of pesticides, as seen in statement 10 of Figure 3. The absence of a shared definition of the concept, alongside divergent considerations on the subject, may explain these findings.

The overview of considerations can be completed with an overview of policy type preferences resulting from the Likert scale evaluation of the preference statements of the same 52 respondents. From the findings on considerations, there seemed to be a strong wish for less pesticide and fertilizer use (Figure 3: statement 10). Looking at the policy types favoured by the same respondents in Figure 4, the patterns found in the considerations are not entirely reflected in the favoured actions to take to fulfil the expressed considerations. For example, less than 50% agree with "Policies that involve radically sustainable food regulations" (Figure 4: statement 3). This is still substantially higher than the agreement for "Policies that emphasize fewer regulations" and "Leave the policy settings as they are" at 16.7% and 7.7% respectively. However, respondents were much more favourable to "Policies that involve moderately sustainable regulations" like banning certain types of pesticides (Figure 4: statement 4).

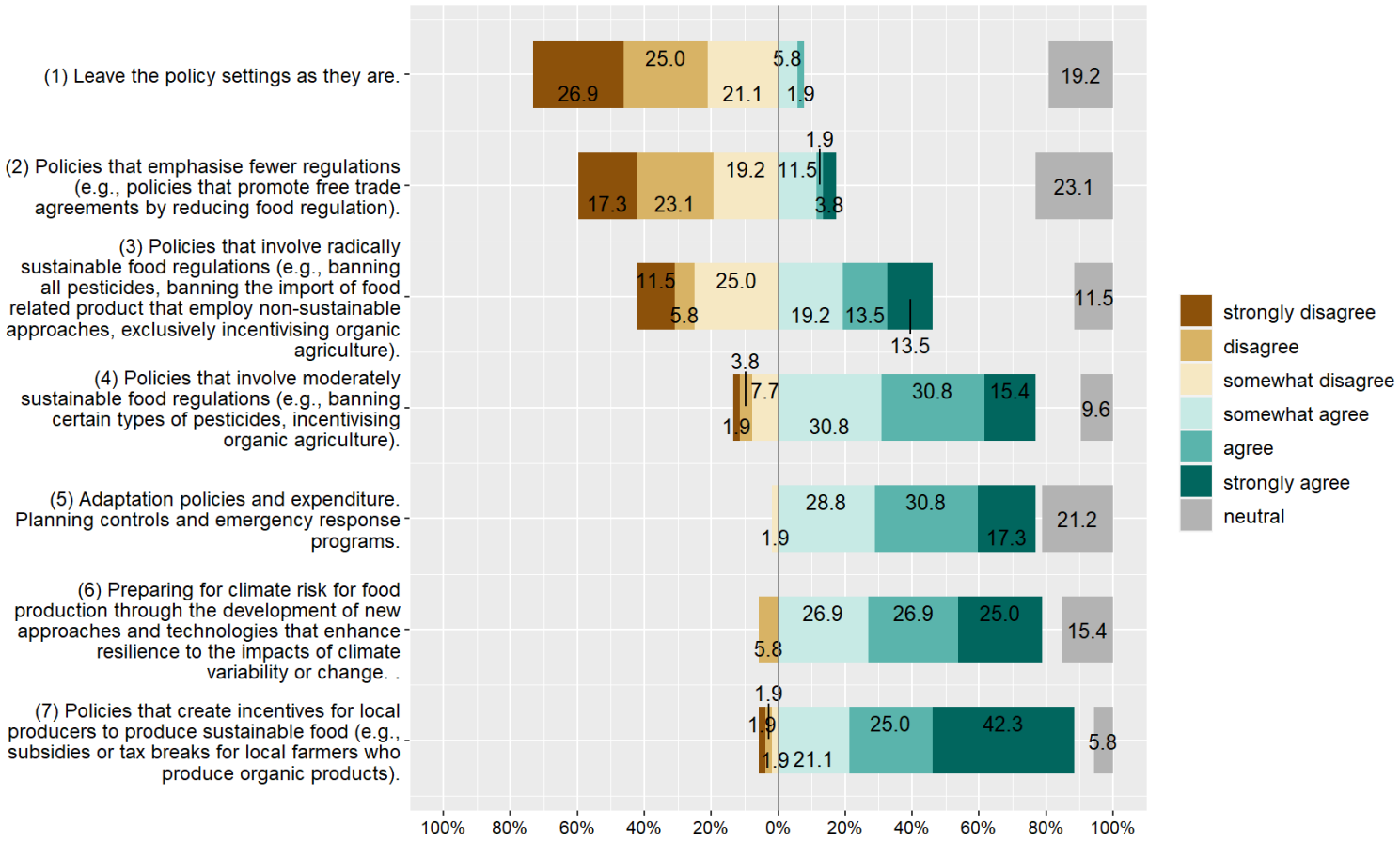

Figure 4: Answers to the first round of surveying for the respective 52 respondents for policy preferences

Two other appreciated policy types were "Adaptation policies and expenditure. Planning for controls and emergency response programs." and "Preparing for climate risk for food production through the development of new approaches and technologies" (Figure 4: statements 5 and 6). The latter two policy types are preventative policies, which seem to be appreciated by the respondents. Furthermore, statement 6 could indicate, like in the consideration statements, a certain trust in the role of science in creating future food systems. Finally, the most agreed upon policy type with 88.4% is the combination of sustainable production and locally produced food through incentives for local farmers (Figure 4: statement 7).

Responses to individual statements give an overview of some aspects of the participants' pre-existing perspectives on relevant topics such as their position on climate change, pesticide use, sustainable agriculture, and their preferred policy to act upon the system. The results in the next sections leave the individual perspective to examine the intersubjective agreement on considerations and preferences of pairs of individuals. First, the demographic characteristics of the survey respondents are presented moving on to intersubjective consistency and deliberative reason.

5.2 Demographic characteristics of participants

The demographic characteristics of the two subgroups, PRE-MID-POST and PRE-POST, as well as all survey respondents, were determined using the demographic section of the survey. Out of the 67 participants still present at the closing weekend of the SCAFP, 6 did not respond to either survey. Demographic data is available for the remaining 61 participants. A summary of the characteristics of each group, as well as Swiss average statistics, can be found in Table 3.

The comparison of the available data with the Swiss average reveals significant discrepancies. Firstly, there is a disproportionate percentage of participants from rural areas in the SCAFP, with 47.5% residing in the countryside compared to 15.2% according to the Swiss Federal Statistical Office (FSO) (See Table 3). However, it is unclear if this difference is due to the subjective perception of the countryside differing from the official state definition as precise residencies of participants are not available. Additionally, the education statistics indicate that participants had a longer educational period compared to the Swiss average, with fewer participants having stopped their studies after compulsory schooling (0% in the SCAFP versus 17.5% in Switzerland) and a higher representation of individuals with higher educational backgrounds (44.3% in the SCAFP versus 23.4% in Switzerland). This could be due in part to a self-selection bias of the participants who are more likely to participate if they have a higher education and thus a higher salary. It also raises the question of whether the monetary compensation granted to participants was high enough to ensure that the most vulnerable classes participated in the assembly. An additional factor could be the non-inclusion of the level of education in the criterion for the representativeness of the participants. On top of that, SCAFP participants demonstrated noticeably higher levels of political activity compared to the national average, with a participation rate of 78% in elections and votes compared to the Swiss average of 45%. These results are partly linked to a certain degree of

Table 3: Demographic characteristics of the participants to the citizens' assembly and its sub-groups in comparison to the Swiss demographics

	% Women	Mean, median and range for age in years	Living place in %			Maximum level of education in %					Native Language(s) in % (Total is more than 100% as an individual can have more than one language)					Mean frequency of participation in elections and votes	Mean position on the political scale
			City	Peripheries	Countryside	Mandatory school	High school	Apprenticeship	Higher vocational training	Higher education/University	German	French	Italian	Romanch	Other language		(1=far left to 10=far right, 11=prefer not to say)
PRE-MID-POST (n = 17)	41.2%	Mean: 57.1 Median: 61 Rang: 23-79	23.5%	23.5%	53.0%	0%	5.9%	11.8%	29.4%	52.9%	76.5%	23.5%	11.8%	5.9%	5.9%	9.1/10 or 91%	Mean: 4.8/10 Median:4.5 (n=16)
PRE-POST (n = 28)	35.8%	Mean: 54.3 Median: 56 Rang: 23-79	21.4%	21.4%	57.2%	0%	3.6%	14.3%	28.6%	53.6%	75%	17.9%	7.1%	7.1%	17.9%	8.8/10 or 88%	Mean: 5.0/10 Median:5.0 (n=27)
Overall survey responses (n=61)	47.5%	Mean: 50.6 Median: 54 Rang: 20-79	21.3%	31.1%	47.5%	0%	8.2%	21.3%	26.2%	44.3%	63.9%	23%	19.7%	4.9%	13.1%	7.8/10 or 78%	Mean: 4.8/10 Median:4.0 (n= 55)
Swiss population *	49.6% (2020)	Mean: 42.7 Median: 42.8 (2021)	84.8% (2019)		15.2% (2019)	17.5% (2021)	9.2% (2021)	32.5% (2021)	17.4% (2021)	23.4% (2021)	62% (2021)	23% (2021)	8% (2021)	0.5% (2021)	23% (2021)	Voting: 45.4% (2022) / Elections: 45.1% (2019)	N.A.

*Source: Swiss Federal Statistical Office, https://www.bfs.admin.ch/bfs/en/home/statistics.html

inevitable self-selection within mini-publics since participation in them is not compulsory (Smith and Setälä, 2018). In particular educated, politically active and interested citizens tend to be over-represented in mini-publics (Neblo et al., 2010; Smith and Setälä, 2018).

Finally, there were other, less stringent, deviations of the overall respondents to the Swiss average. For example, the average age was 8.1 years higher and the median age 11.2 years higher than the Swiss statistics with no respondent under the age of 20 years old. In addition, the linguistic statistics show an overrepresentation of Italian speakers (19.7% versus 8%) and an underrepresentation of non-national languages (13.1% versus 23%). In the sub-groups, some statistics were similar to the overall respondents, however, there exist noteworthy differences. In particular, the representation of women and less politically active citizens was lower in both subgroups. First, the PRE-MID-POST and PRE-POST subgroups respectively had 41.2% and 35.8% of women compared to an overall women share of 47.5%. Secondly, the average respondent had a 78% frequency of participation in elections and votes while the frequency in the PRE-MIS-POST and PRE-POST were 91% and 88%, respectively.

The previous paragraph highlighted significant discrepancies between the demographic data of the 61 participants in the SCAFP and the Swiss average. These discrepancies included a higher percentage of participants from rural areas, longer educational periods and higher levels of political activity. Now, the focus shifts to the measure of intersubjective consistency and DRI.

5.3 Deliberative Reason Index

Intersubjective consistency was calculated and plotted for each of the two subgroups using r-studio. The closer the points are to the 1:1 line, the higher the intersubjective consistency, resulting in a higher DRI.

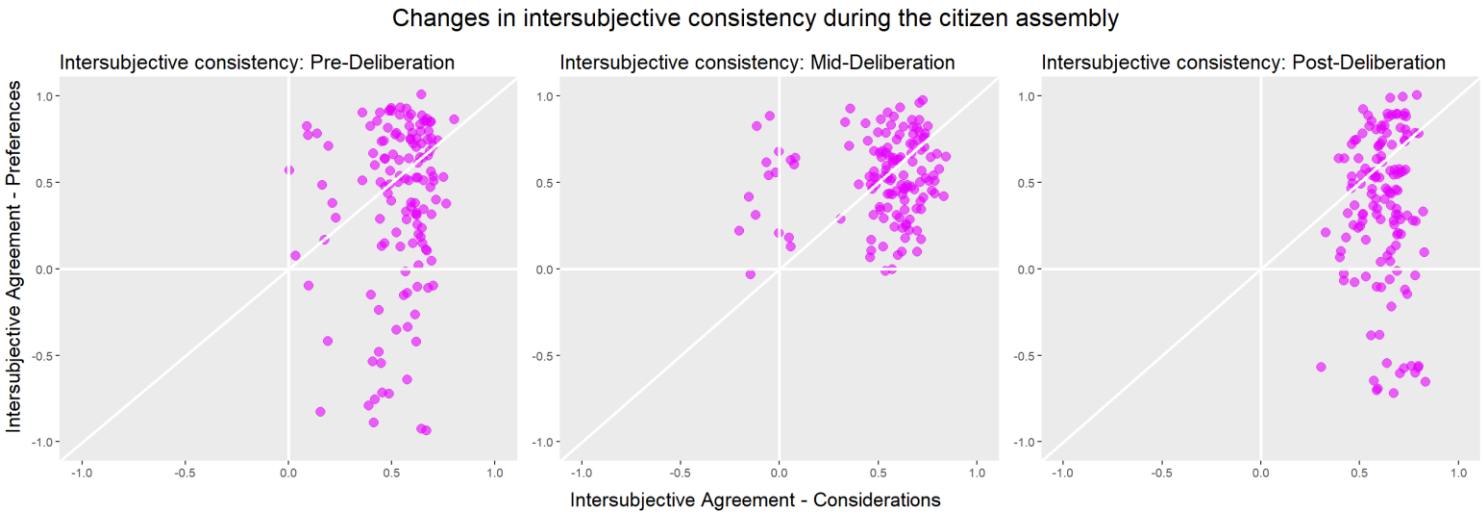

Figure 5: Mapping of the intersubjective consistency between preference agreement and consideration agreement for the sub-group PRE-MID-POST

A high DRI shows the presence of a meta-consensus which is a desirable end of deliberation. Figure 5 illustrates the evolution of intersubjective consistency at the three measurement points: pre-deliberation, mid-deliberation, and post-deliberation. Each point corresponds to a pair of individuals.

The results indicate an increase in intersubjective consistency within the subgroup of Figure 5 during the learning and group-building phase of the SCAFP - from the pre-deliberation survey to the mid-deliberation survey. However, this increase is lost during the formal deliberation phase of the assembly - from the mid-deliberation survey to the post-deliberation survey. The vertical distribution of the points in the PRE and POST stages indicates a high agreement of the respondents on considerations and scattered policy preferences agreement. The MID stage reveals a temporary increase in agreement over policy preferences in the middle of the assembly. Furthermore, between the MID and POST stages, the reduction of the lateral distribution of the points indicates an increase in agreement over considerations between the respondents.

Individual DRIs allow for moving from pairwise comparison to comparison of each individual to all others. Furthermore, it allows the identification of individual changes in deliberative reason. The individual DRIs for each phase are presented on the left of Figure 5 using boxplots and lines connecting the three dots of each respondent, as well as statistical significance from Wilcoxon-ranked tests above the boxes. The right graph of Figure 5 presents the mean level of DRI i.e., the mean of individual DRIs, in the three points of measurements.

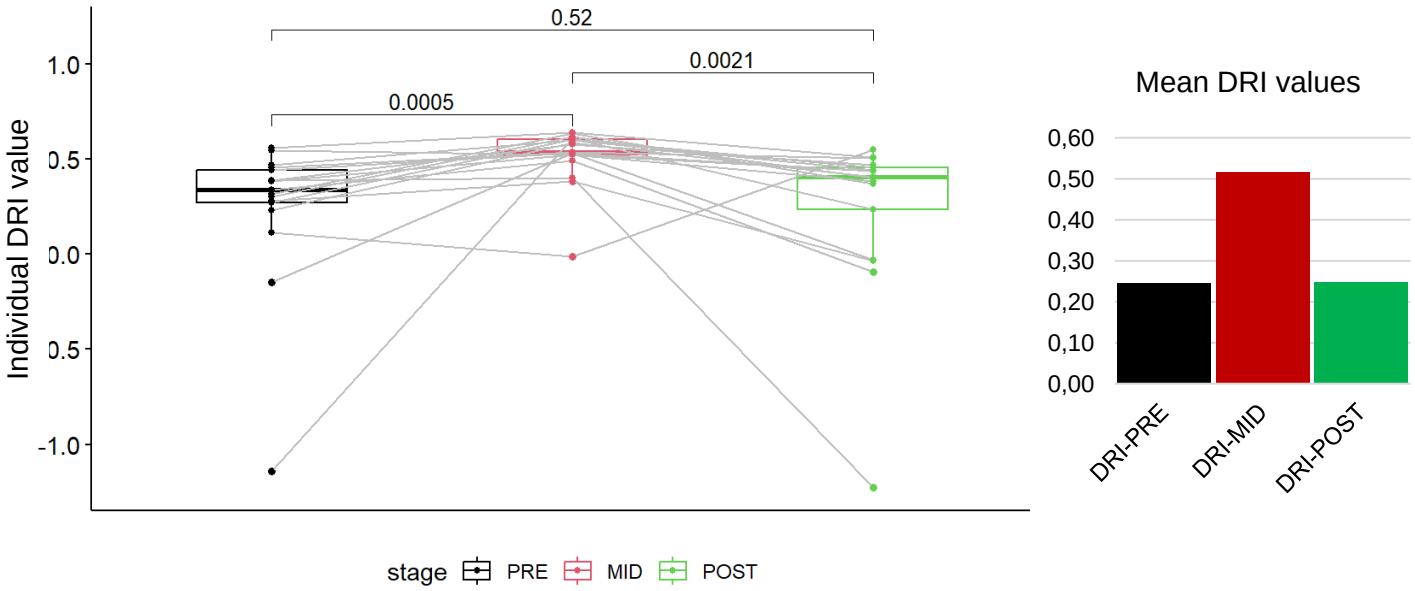

Figure 6: Boxplot (with quartile 1, quartile 2 and median) of Individual DRI (left) and mean DRI (right) for the sub-group PRE-MID-POST

The two plots in Figure 6 demonstrate a similar pattern to the change in intersubjective consistency (Figure 5). The mean individual DRI increases during the middle of the assembly, then returns to a level similar

to the beginning. Correspondingly, the increase in DRI between the pre-deliberation and mid-deliberation phases for this subgroup is highly significant (p=0.0005), with the subsequent reduction in DRI being slightly less significant (p=0.0021).

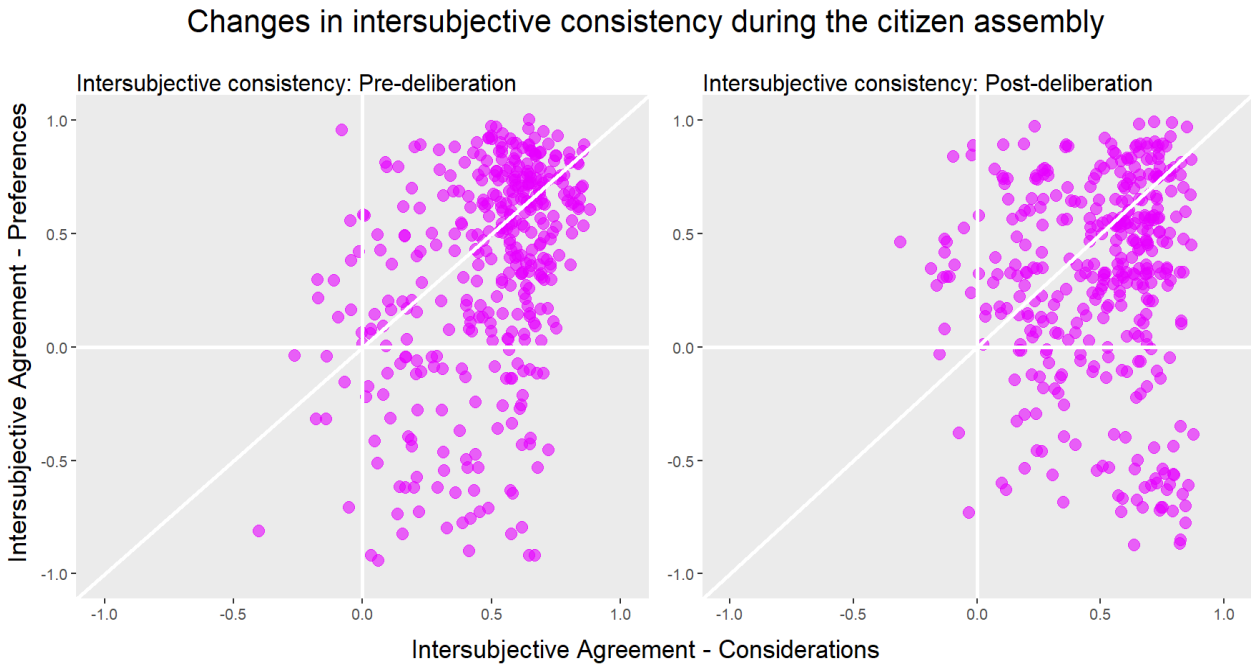

Figure 7: Mapping of the change in intersubjective consistency between preference agreement and consideration agreement for the sub-group PRE-POST

For the second subgroup, PRE-POST, the IC plot (Figure 7) is less straightforward to interpret, but the DRI plots (Figure 8) display a decrease in DRI between the pre-deliberation and post-deliberation surveys. The decrease in DRI from the beginning to the end of the deliberative process is marginally significant (p=0.086). While this result does not entirely align with the findings of the first subgroup, two observations can be made:

(1) There is no contradiction between the increase and subsequent decrease in DRI from the PRE-MID-POST and the second result, from the PRE-POST group. Indeed, both subgroups show similar behaviour between the PRE and POST subgroups.

(2) In both subgroups, there is no increase in DRI between the beginning and end of the citizen assembly.

However, it is important to carefully consider these results as both subgroups are based on a relatively small count of survey responses and are not representative of all participants (see Table 3). This will be further reviewed in the discussion section.

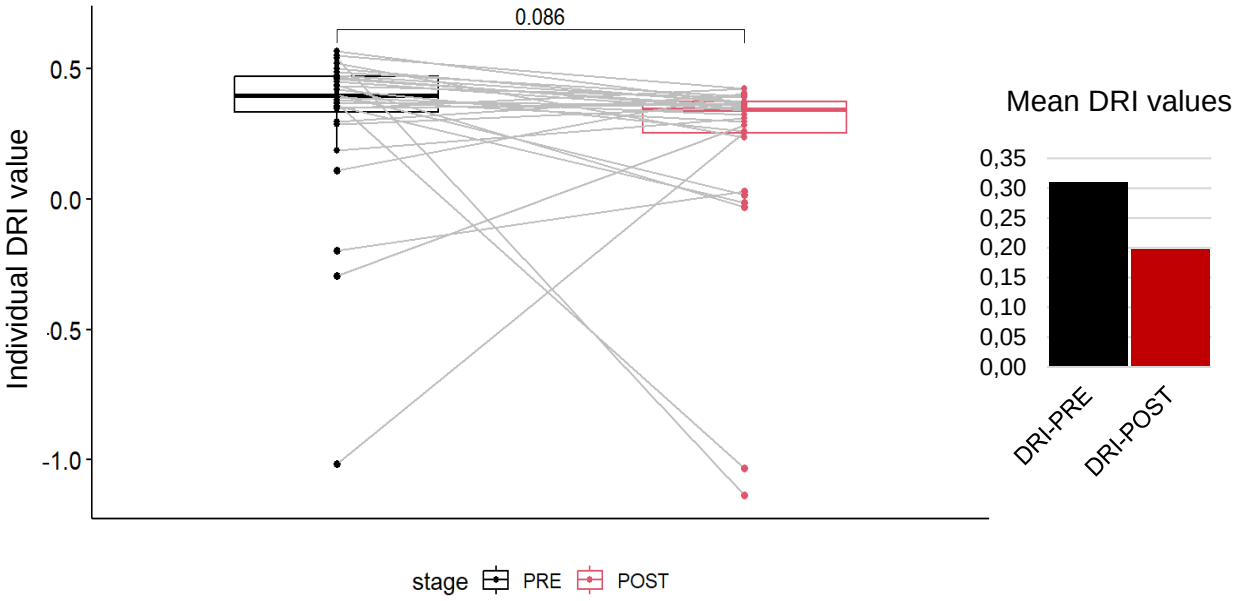

Figure 8: Boxplot (with quartile 1, quartile 2 and median) of Individual DRI (left) and mean DRI (right) for the sub-group PRE-POST

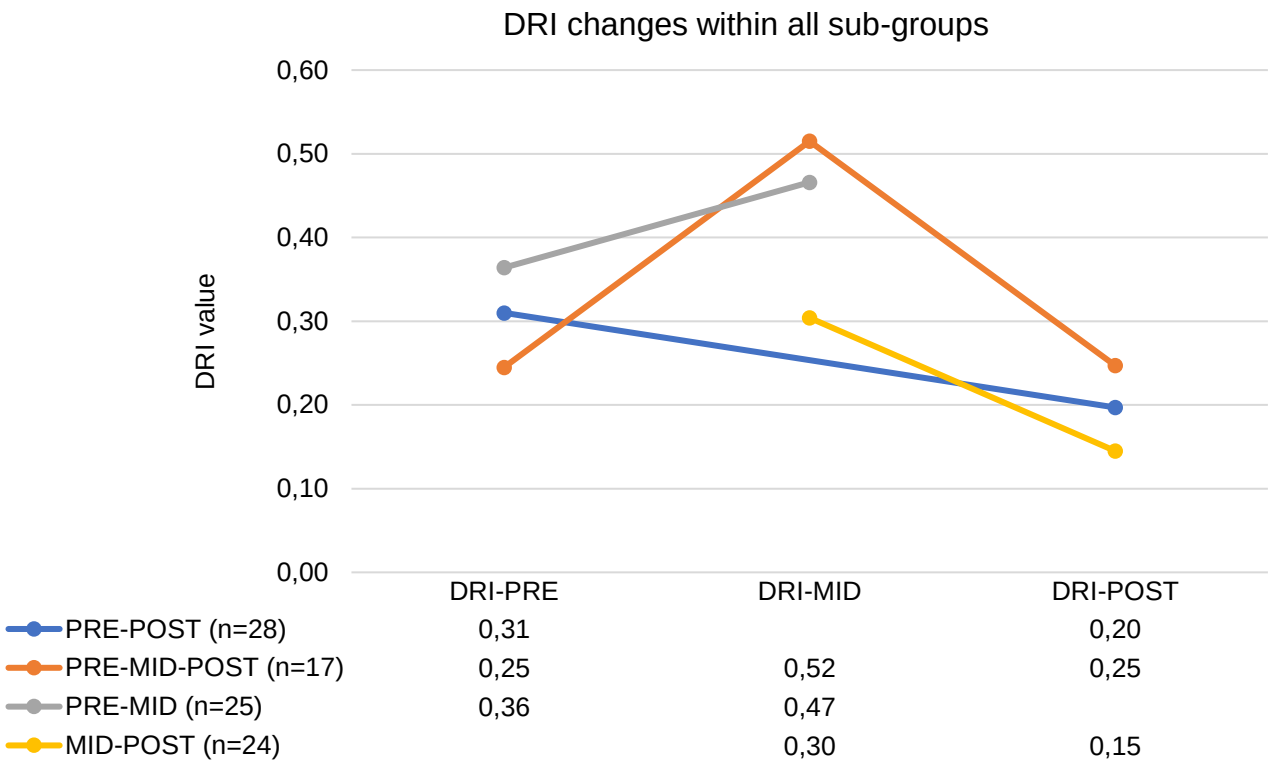

Figure 9: Change of DRI over the deliberative process for all possible sub-groups

To confirm these findings, the DRI changes for the remaining subgroups, PRE-MID and MID-POST, were computed. Figure 9 illustrates the DRI changes during the SCAFP for all subgroups. The direction of the effects in the PRE-MID and MID-POST subgroups correspond to the findings, showing respectively an increase in DRI until the middle of the assembly followed by a decrease in DRI between the middle and the end.

To summarise, the results indicate that there is an increase in intersubjective consistency and DRI in the middle of the assembly, but this increase is lost during the formal deliberation phase. This pattern is consistent across different subgroups within the assembly. While there is no increase in DRI between the beginning and end of the citizen assembly, the decrease in DRI from the beginning to the end is only marginally significant. In the next section, a sensitivity analysis shows the change in results when strong outliers are removed from the analysis.

5.3.1 Sensitivity analysis

For the sensitivity analysis of the DRI results, two strong outliers were temporarily excluded from the analysis namely, the two participants with DRI change between two measurement points exceeding 1.0. The two participants, identified as MS600 and AM151, had a significant negative influence on the magnitude of pre- and post-deliberation DRI values. After their removal, the variation in DRI decreased substantially while still reflecting the previously observed changes. The DRI values from this reduced group are 1) DRI-pre: 0.42, 2) DRI-mid: 0.52, 3) DRI-post: 0.47. From this new result, it is evident that the two citizens with the highest variation in DRI have a noticeable impact on the pre- and post-deliberation DRI levels. However, the increase in DRI between the pre-deliberation and mid-deliberation measures remains statistically significant ($p=0.041$), whereas the subsequent decrease loses statistical significance ($p=0.12$).

Regarding the characteristics of the two excluded respondents for the sensitivity analysis, they share a high level of political activity (90% participation), a similar age (35 and 42 years old), German language proficiency, and voting for the Green-liberal party. These characteristics do not show abnormal deviation from the overall participants (See Table 3) and can therefore reasonably be maintained in the analysis.

To complement the analysis of intersubjective consistency and DRI, a framing analysis was conducted to examine the discourses of the experts during the learning phase of the assembly surrounding the future of the Swiss food system.

5.4 Analysis of experts' presentations in the Swiss Citizens' Assembly for Food Policy

5.4.1 Inductive framing analysis

The framing analysis identified one core frame: a consensus frame around the term "sustainability". The consensus frame was identified as a techno-economic frame with its two keys. The keying of a frame is used to identify the variation in normative collective action supported within a frame. A flat key tends to be favoured by power holders to strengthen and uphold existing dominant interpretations and practices (Mooney and Hunt, 2010). On the other hand, challengers generally opt for a sharp key, which presents critical alternative interpretations and practices. (Mooney and Hunt, 2010). The summary of the techno-economic sustainability keys is presented in Table 4.

i) The consensus frame

The absence of definitions of the terms of the debate used during the experts' presentations during the SCAFP brings in the ambiguity and generality needed for a consensus frame. The terms "sustainability" and "food security" in particular are used in a broad manner, assuming a shared understanding among the audience. When an expert of the SCAFP addresses lay citizens with "The FAO says that food security is threatened", one cannot assume that the citizens have a common definition of food security. Even scholars do not agree on the concept of food security (Candel et al., 2014; Mooney and Hunt, 2010). The use of general and ambiguous language in the presentations prevents immediate opposition and fails to provide a comprehensive understanding of the issue and the concepts employed relying on an authoritative posture. The same can be argued about statements on sustainable food systems. To say that "food systems are not sustainable" has an indefinite number of interpretations depending on the concept of sustainability that is meant (e.g. weak sustainability, strong sustainability, economic sustainability, socio-economic sustainability, ecological sustainability, and other interpretations) and the personal position and interests (Van Gorp and van der Goot, 2012). The French, German and Italian terms "durable", "nachhaltig" and "sostenibile" can also mean "that last in time" which gives even more ambiguity to the term. The overall use of general and ambiguous language regarding sustainability led to the identification of a consensus frame on the sustainability of food systems. This finding is consistent with literature that identifies sustainability and food security as a consensus frame in food systems (Brunori and Galli, 2016; Candel et al., 2014; Galli et al., 2016; Mooney and Hunt, 2010). The inductive approach allows for characterising the consensus frame shared among the experts' presentations more precisely.

Table 4: Framing matrix with the results of the inductive framing analysis of expert inputs.

FRAMES		TECHNO-ECONOMIC SUSTAINABILITY FLAT	TECHNO-ECONOMIC SUSTAINABILITY SHARP
REASONING DEVICE	Problem definition	The food system will not be able to feed a growing world population.	Environmental and social pressures threaten food production.
	Risks in the food system	Personal, market and production	Social and environmental
	Solution definition	"Weak" ecological modernisation	"Strong" ecological modernisation
	Environmental goals	Production-specific (e.g.: ecosystem function conservation, natural resource conservation, productive capacity)	Production-specific (e.g.: natural resource conservation, productive capacity) and non-production-specific (e.g.: animal well-being, harmony with nature)
	Social goals	-	Child labour, work overload
	Non-solution	Reduce production, (unilateral) prohibition (e.g., Fossil fuel, pesticides, …)	-
	Justification for solution	Food security	Environmental/social protection
	Responsibility	On consumers, and retailers	On researchers, farmers, consumers, big corporations and the state
	Examples of policy instruments	Include sustainability criteria in the existing policy, international cooperation, nudging,	A turnaround in direct payment structure (less meat, more plants), CO2 tax, pesticide prohibitions, incentives to produce differently, …
FRAMING DEVICES	Key concepts	Efficiency, international competitiveness, adjustment of food policy and behaviours, farmer income, demand create supply, complexity, Elite wisdom, trade-offs	Environmental/social pressure, Open energy and nutriment cycles, de-intensify agriculture, Natural/human limits
	Word choice/ metaphors	"Steer consumption", "nudging", "Unfair competition from border countries", "International food security is in danger", "We need to feed the 10 billion inhabitants on the earth by 2050", "The system is complex", "Switzerland is a Grassland", "Be careful",	"The industrial logic of farming is problematic", "Stop the acceleration and control of natural cycles", "Pressure on resources", "Growth logic of the food system", "Input and retail market concentration",
	Moral/ emotional basis	Pragmatism, prudence, logic over emotions	Social responsibility, ethics
ACTORS	Thematic group of the citizens' assembly	Social 2, Environment 1+2, Health 1+2, Economics 1+2, Food System 1	Social 1, Production 1+2

ii) The techno-economic position

The techno-economic frame of sustainability is partially derived from the systematic review of sustainable agriculture by Velten et al. (2015) which identified two main frameworks of sustainable agriculture, one being the techno-economic framework. This framework involves an underlying perspective rooted in economics and the belief that the market mechanism can achieve a desired and optimal equilibrium through state incentives and regulations, known as an ordoliberal system. It combines a neo-liberal, globalized approach to markets with the recognition that markets alone can lead to inefficient outcomes. Table 5 shows how each thematic group of the assembly has been partially or fully covered by an economic approach.

Table 5: *Ordo-liberal framing of the topical presentation showing an economic framing of issues in the food system.*

Thematic	Economic framing	Framing of the issues
Social	Salary, Pension	Economic (ordo-liberal) framing
Environment	Ecosystem functionality, consumer behaviour	
Production	Industry, growth, market concentration	
Health	Cost of food-related disease, health insurance, nudging	
Economics	Competitiveness, productivity, international trade	

Another emblematic position of the techno-economic sustainability frame described by Velten et al. (2015) is its focus on ecological modernisation as a means of addressing identified issues. Ecological modernisation blends administrative rationality (i.e. government and strategic experts have a central role) and a strong belief in market mechanisms (Howes et al., 2010). This theory is well-established in addressing environmental issues as it does not question the fundamental workings of the system it seeks to change (Hovardas, 2016). Ecological modernisation theory argues that the ecological crisis can only be resolved by continuing on the path of modernisation through the greening of the economy (Rezaei-Moghaddam and Karami, 2008). According to this theory, economic growth can be decoupled from environmental harm through technological and institutional transformations facilitated by state-led intervention and expert guidance (Hovardas, 2016; Howes et al., 2010). In essence, ecological modernisation reconciles the ecological reason with the economic reason. In this theory, addressing environmental issues calls for governments and experts to integrate environmental policy goals in other policy areas (Murphy, 2000) leading to an increase in economic efficiency (Gouldson and Murphy, 1996). For this approach to be successful, ecological modernisation assumes that environmental damages can be monetized, which implies an economisation of ecology (Rezaei-Moghaddam and Karami, 2008). This means that the policy

instruments within ecological modernisation include the conservation of the economic value of nature in their comprehension of efficient production and a search for efficient resource use. Specific examples of these instruments as presented by experts in the SCAFP are highlighted in Table 5, along with their corresponding thematic groups.

Table 6: Policy recommendations that correspond to the framework of ecological modernisation with respective thematic groups.

Policy instruments that can be linked to the theory of ecological modernization*	**Thematic group(s)**
Financial aid for fair-trade products	Social
CO2-tax or certificates	Social, Production
Strengthen sustainability criteria in direct payment scheme for positive environmental impacts	Environment, Production, Economic, Food System
Threshold values (pesticide use, cattle density, fertilizers, etc…)	Environment, Production
Taxes to internalise negative environmental effects (e.g., climate tax, tax on meat, tax on animal feed import, tax on fossil fuel, tax on fertilizer import, lower value added tax for low environmental impact products, etc…)	Social, Production, Health, Environment
Apply the "true cost" of food	Production, Health
Sustainability criteria in international trade policy	Economic
Promote more efficient technologies / innovative techniques	Environment, Economic
Increase food standards (quality) through regulation or labels	Production, Health

**The following criteria are used to determine a link to ecological modernisation: (1) Monetarisation of the value of nature or humans, (2) compatibility of economic growth with environmental protection, (3) increased economic efficiency of resource use, (4) the leading role of the state and experts.*

The techno-economic frame described above represents commonalities in how experts contribute to the SCAFP. However, it is important to note that this frame is not a monolithic construct that attempts to homogenise the actors. Instead, it attempts to condense the shared subtext of the presenters, while recognizing that contradictions and inconsistencies may exist among actors within the same frame. Keying is used to explain this variability within the techno-economic frame, with flat and sharp keys being summarized in Table 4 and discussed further in the subsequent sections.

iii) The flat key: Cornucopianism

The Cornucopian key aligns with a weak ecological modernisation framework and supports mainstream development theory as a natural progression of the industrial model (Berger et al., 2001). Over and above the underlying development theories used to define sustainability, it is the direct payment policies that are favoured in this framework. The evidence of the continuation of this policy has been expressed directly in statements such as "the system of direct payments has shown its effectiveness" (Economic 2) or indirectly

through the need to "guide direct payments" (Environment 2). The prevailing viewpoint within this frame suggests that adjustment of the direct payment policies is all that is needed to address the new challenges of food policy. The rhetoric of adapting to new challenges was particularly evident in the health presentation, where the need to "nudge" (Health 2) consumer behaviours was emphasized. Other statements, such as "Solutions from yesterday are no solutions for tomorrow" (Economic 2) or "We should not forget that historically, the food system has its reason to be as it is" (Food System 1), demonstrate a belief that the food policy is on the right track to solve its problems. In other words, there is a conviction that while the system is given, it can be optimized through direct payments and behavioural changes to achieve its maximum potential.

Experts within this frame also appear to lack an understanding of the deliberative process, as they emphasize that participants should be cautious due to their lack of knowledge about the system ("You have to know that," "Be careful when," "Do not forget that," etc.), the complexity of the issue ("The system is complex," "You have to take into account all of the consequences of a policy," "Don't forget that every intervention has a potential negative effect," etc.), and the consultatory role of the SCAFP's participants ("Experts will look at your suggestions," "Experts will evaluate the feasibility of the measures," "If you set targets, parliamentarians will be able to think about them," etc.). Experts in the flat key tend to believe that citizens do not need to understand how the system works but should understand why it works the way it does. This rhetorical strategy favours the traditional roles of scientific and political elites, positioning them as better equipped than citizens to make decisions. This aligns with the weak ecological modernisation framework's "closed, rigid, and unilateral structure of political and economic development" (Dias et al., 2020).

The overarching justification of the food system as it exists today is that it guarantees enough food of good quality for everybody in the country. This aspect was explained as a structural necessity coming from an increasing population and decreasing resources (Health 2) or mentioned as food security (Environment 2; Food System 1; Economic 2) in the experts' presentations. The concept of food security embodied in the cornucopian key sets short-term economic welfare above long-term ecological arguments and national interest above transnational interests. It is a position that views the value of food as a commodity whose production is justified by the demand of the consumers. This means that if the food policy disrupts the demand of the consumers, they "will buy food abroad where it is cheaper" (Economic 2, Environment 2). It creates oppositions that rely on confusion between individuals and social phenomena. In this frame, the ethics of agricultural practices are pitted against individual consumer behaviour, disregarding the fact that consumption is a complex social behaviour influenced by identity, culture, pleasure and social norms (Benavent and Desjeux, 2022). The responsibility for consumption is shifted solely onto consumers, favouring psychological explanations over social ones (Benavent and Desjeux, 2022).

In conclusion, the cornucopian key of techno-economic sustainability is characterized by an anthropocentric view of the environment, a belief in economic liberalism and progress, and an emphasis

on continuous optimization of the food policy. The anthropocentric perspective sees the environment primarily as a resource that can be optimized through economic efficiency driven by technological progress. The issue of limited planetary resources is downplayed in favour of economic welfare and efficiency. Additionally, the frame portrays the food policy as an ongoing optimisation process guided by economic, scientific and political elites, similar to the weak ecological modernisation framework (Dias et al., 2020).

iv) The sharp key: Environmental protection

In the framework of ecological modernisation, the sharp key is more akin to the strong conception of ecological modernisation as described in Dias et al. (2020). This perspective takes a structural approach to the economic system and emphasizes democratic decision-making and participation in ecological modernisation. It challenges the assumptions of the dominant view found in the flat key, while still being grounded in the principles of economics and ecological modernization.

The focus on the structural approach to the economic system is evident in the critique of the highly industrialized agricultural system, particularly its reliance on growth and its negative impact on the environment. The concept of "acceleration and control of natural cycles" and the "pressure on resources" are specifically called into question (Production 1).

Within this frame, the democratic and open decision-making process and the participatory approach to ecological modernisation can be found in the experts' view of shared responsibility among consumers and actors in the system. The framework denounces the excessive concentration of actors and their inaction in redistributing margins to farmers. At the same time, it recognises the role of consumers, research and farmers in driving change within the food system. This emphasis on equal involvement from all stakeholders and addressing power imbalances distinguishes the sharp key from the flat key. However, it is important to note that the sharp key remains a techno-economic framework that prioritises the economic dimension and views the implementation of ecological modernization policies as a solution to the crisis.

Another notable difference between the sharp key and the flat key is the inclusion of non-production-specific environmental goals in the former. Non-production-specific environmental goals prioritize environmental protection as an objective of its own and for the benefit of the collective (Velten et al., 2015). In contrast, production-specific environmental goals view sustainable agriculture as a set of specific practices that protect the environment as a basis for agricultural production (James, 2006; Velten et al., 2015). The sharp key highlights non-production-specific goals such as animal welfare and the respect of natural cycles (Production 1). Additionally, it addresses social objectives, such as addressing child labour and overworked farmers, which are specific to this perspective.

5.4.2 Thematic analysis of the participants' perception of experts' presentations

The results of the framing analysis presented above describe a consensus frame on sustainability which is an ambiguous and general framing of sustainability. It also becomes clear that the experts take a techno-economic frame of sustainability as a premise, which in its predominant interpretation (Cornucopianism) has a strong economic orientation that positions experts and politicians as better suited to solving problems in the food system. This is particularly emphasized in the fact that presenters explained why the system works as it is today and not how it works. To complete this result, the analysis of the qualitative evaluation of experts' presentations by survey respondents is presented hereafter.

For the open-ended question on experts' presentations, 32 answers were registered. Among the respondents, there are at least five answers for each of the five presentation topics so that they cover diverse experts' presentations. Following the method described earlier, the answers were cleaned and classified into two groups: Non-critical and critical comments. This resulted in the identification of 9 critical comments and 23 critical comments. The non-critical comments were mostly non-specific comments indicating "good presentations", "informative presentations" or "relevant presentations". Conversely, the critical comments are to a large extent longer and more precise. Thanks to this precision, they give meaning to the results of the framing analysis and make them more robust. To make this link

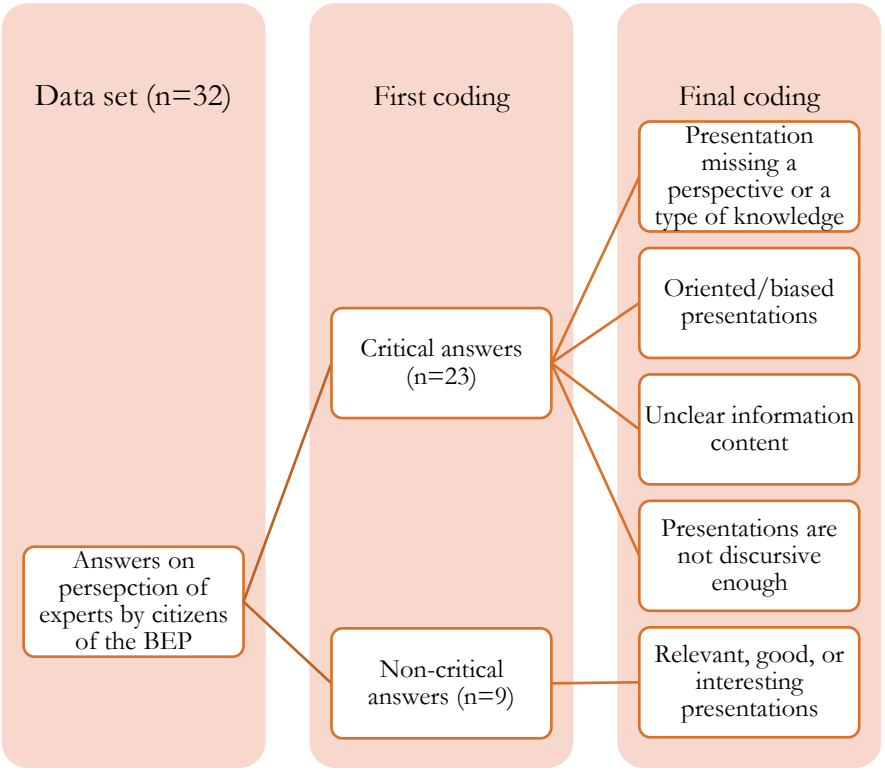

Figure 10: Decision tree for the thematic analysis of the qualitative survey answer on the expert presentation

between the analysis of the experts' framings and the participants' perception of the experts' presentations, the citizens' comments are investigated through a thematic analysis.

The main recurring theme was identified as "Presentation missing a perspective or a type of knowledge" present in 14 comments. The second most recurring theme (5 participants) was "Oriented/biased presentations", followed by the themes "Unclear information content" and "Not discursive enough" with respectively 4 and 2 participants out of 32 respondents. Figure 10 illustrates the decision tree for the themes and Table 7 shows the codes used for each theme.

Table 7: Final themes and coding for the qualitative survey answers on the experts' presentations

Theme*: Presentations missing a perspective or a type of knowledge	**Theme:** Oriented/biased presentations	**Theme:** Unclear information content	**Theme:** Presentations are not discursive enough
Codes: -Theoretical presentations -Academized presentations -Missing information -Missing actors in food production, transformation and retail -Missing militant groups or engagement of presenters -Missing type of knowledge -Missing social context	**Codes:** -Oriented towards bio/vegan -Oriented towards consensus -Oriented by the personal preferences of experts	**Codes:** -Scope too broad -Information not precise enough -Unclear how to use the information -Superficial presentations	**Codes:** -Monologue of experts -No debate between experts

**Themes are defined as patterns identified in the participants' answers. First, the qualitative data is transformed into codes that describe an answer or part of it. After that, codes that show similar patterns are grouped into themes.*

5.5 Opinion changes on sustainability

Going back to intersubjective consistency, the results showed two distinctive shapes present in the respondents' IC plots (Figure 5). Firstly, the pre-, and post-deliberation plots of Figure 5 show no shared reasoning framework between the citizens as intersubjective agreement on consideration is not matched consistently in preferences. Secondly, the mid-deliberation plot of Figure 5 shows a temporarily shared reasoning framework through an increase in preference agreement for similar agreement in consideration. It suggests that consistent with previous studies using the DRI, citizens tend to adjust their agreement over preferences to a greater extent than their agreement over considerations to correct inconsistencies (Niemeyer et al., 2023).

As mentioned above, the adjustment in intersubjective consistency mainly occurred through an overall shift in agreement over preferences. This is why Figure 11 delves into how preferences varied in the PRE-MID-POST subgroup, consisting of 17 individuals. Following the same pattern as the DRI, three policy types ("Policies that involve radically sustainable food regulation," "Policies that create incentives for local producers to produce sustainable food," and "Leave the policy settings as they are") exhibited a temporary change in agreement level before returning to their initial level at the end of the deliberative process. These changes indicate a temporary increase in preference for sustainability policies and a decrease in the wish for the status quo. In contrast, "Policies that involve moderately sustainable regulations" and "Adaptation policies and expenditure" consistently lost popularity during the deliberative process. Finally, "Policies that emphasise fewer regulations" and "the development of new approaches and technologies" gained traction over time.

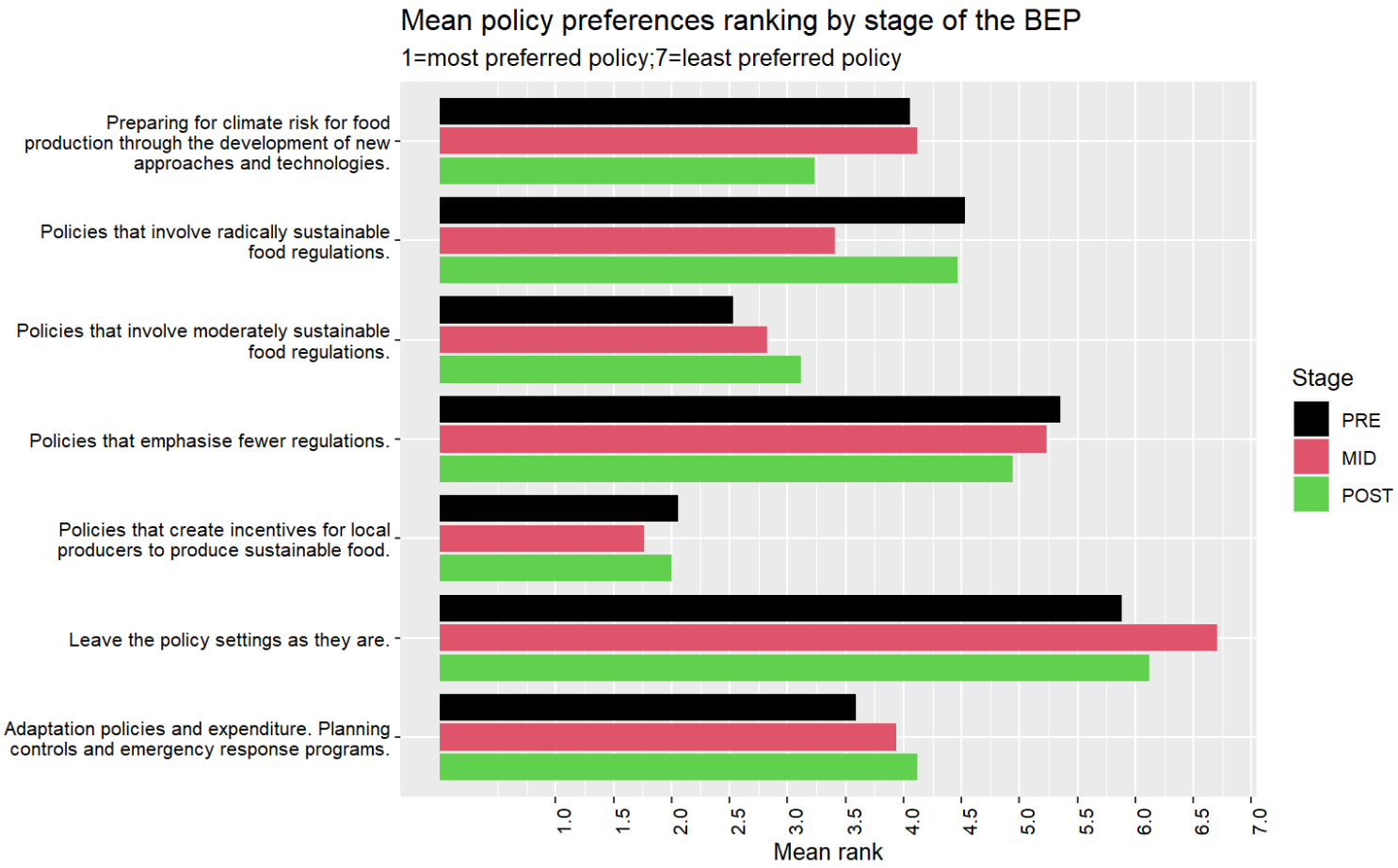

Figure 11: Evolution of policy preferences over the deliberative process in the PRE-MID-POST subgroup

From the result of the framing analysis (consensus frame on sustainability), it is noteworthy to observe that two policies aimed at increasing sustainability experienced a temporary surge in agreement before reverting to their original preference level. Conversely, the status quo policy experienced a decline in ranking during the mid-deliberation survey but regained popularity in the post-deliberation survey. In other

words, during the mid-deliberation survey, participants adjusted their agreement over preferences toward more sustainable policy types and away from the status quo. This suggests that the reasoning device adopted in mid-deliberation could be linked with shared reasoning over sustainability policies. To go further, the shared reasoning device adopted by the participants could be linked to the consensus frame on sustainability present in the experts' presentations, which will be discussed in the next section.

5.6 Framing effect on democratic deliberation and reasoning frameworks

The Deliberative Reason Index is used as a measure of the changes in deliberative reason but cannot explain why it changes. This is where the framing analysis can be used to discuss the reason for variations in deliberative reason. The combination of both methods is favoured by some shared epistemological assumptions. Framing analysis and DRI both operate at the intersubjective and discursive levels, the first one by focusing on the intersubjective creation of meaning (Mendonça and Simões, 2022) and the latter by evaluating shared reasoning frameworks (Niemeyer, 2019). Furthermore, the strong increase and subsequent decrease in DRI after the formal deliberation phase is unusual and calls for further investigation. Even though the DRI relies on a small sample of participants in this study, the absence of an increase in DRI between the beginning and the end of the assembly and the temporary increase raises questions as to why the DRI behaved this way.

In the first step, to try and explain the behaviour of the DRI, a regression of changes in DRI on demographic characteristics and voting habits was performed (See Appendix D). The biggest observed effect seen in the table of Appendix D is the PRE-MID higher DRI change in respondence with a lower level of education (Estimate =1.203, p=0.065). This means that the increase in DRI after the learning phase of the assembly was more pronounced in lower-education respondents. Attributing this effect to a framing effect of experts on the participant would be coherent with a growing body of literature claiming that individuals with lower levels of education tend to be more affected by framing effects (See Fan (2017) for examples).

Thereupon, the particularity of the framing of expert inputs as a consensus frame cannot be ignored as having a potential effect on the deliberative process. As mentioned before, framing effects can be harmful to deliberation even though they are inherent to communication and allow for the use of cognitive shortcuts for elites (Mendonça and Simões, 2022). In the context of deliberation, Calvert and Warren, 2014 acknowledge the necessity of frames for political strategy in democracy while maintaining that frames can have counter-productive effects through the manipulation of individual judgements or the challenging of the ethical condition of deliberation (Calvert and Warren, 2014). More precisely, the authors name dominant and unchallenged frames as factors undermining the cognitive freedom of participants to take a position in deliberative settings (Calvert and Warren, 2014). This is due to their insufficient testing of reasons and shallow cognitive processing (Calvert and Warren, 2014).

In this thesis, it was found that the citizens did not find a common reasoning framework during the assembly between the beginning and the end of the SCAFP. This lack of transformative effect can be explained in part by the missing data point, the missing demographic representativeness of the subgroups compared to all participants and the lack of discursive representativeness in the SCAFP. Nevertheless, there was also a momentary adoption of a common reasoning framework after the learning phase. This could support the hypothesis that the mid-deliberation increase in DRI is due to a temporary adoption of the rationale of the experts present during the learning phase. The reasoning framework of the experts can be seen as particularly efficient in being transferred upon the participants of the citizens' assembly because (1) The dominant expert framing of information did not have an authentically challenging frame, and (2) the ambiguity and generality of the consensus frame gives an impression of theoretical consensus in expert discourse that does not rise immediate opposition.

Figure 12 schematically illustrates the effects of the consensus framework, which is by definition uncontested, on the DRI. The ambiguity and generality that it takes with it limit the weighting and reflection over all relevant considerations which is an epistemic condition of deliberative reason (Calvert and Warren, 2014; Niemeyer, 2019). This arguably creates a framing effect by the experts that is showcased by the increase in DRI until the midterm weekend. As the participants move into the formal deliberation phase, they need to form collective action frames to produce policy proposals. As soon as the assembly moves into this phase, the citizens take back their previous reasoning frameworks because they did not reflexively agree with the experts' framework. This pre-deliberative agreement or reflexively expert-dependent agreement without deliberative confrontation is typical for dominant framing that is not authentically challenged (Calvert and Warren, 2014). The autonomous reflection is in turn postponed until after the learning phase where the private ambivalences with the expert discourses reappear together with diverging normative collective action frame.

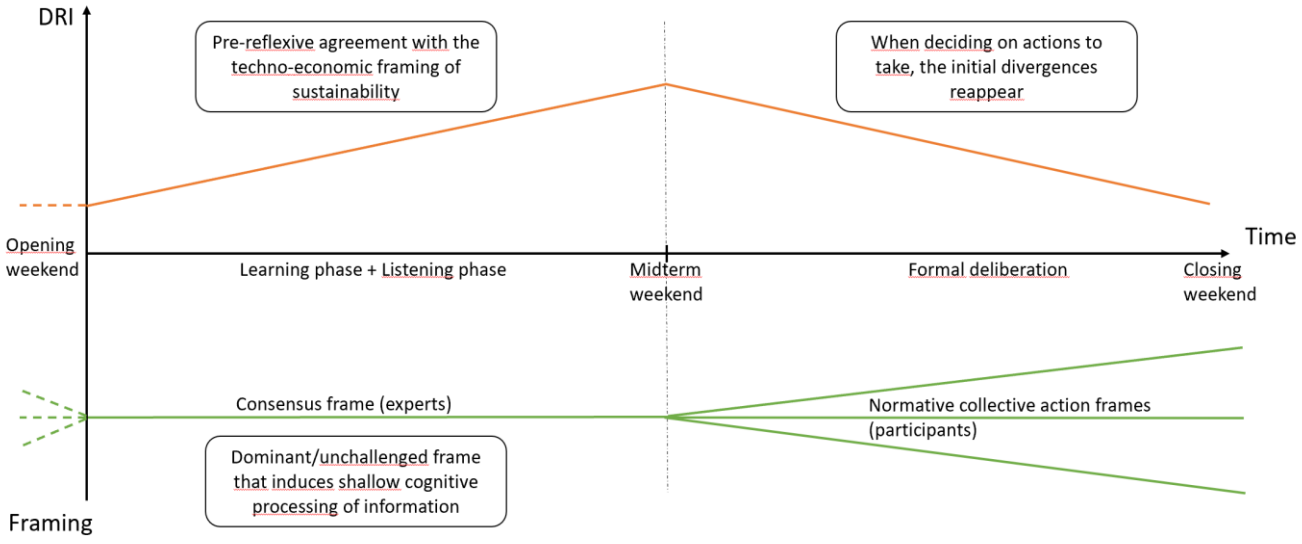

Figure 12: Illustration of the combined result of DRI and Framing analysis and their possible interpretation

Finally, to broaden the scope of analysis, the occurrence of sustainability framing is not only present in the experts' inputs. Indeed for the same citizens' assembly, Lehner (2023) noted a prevalence of the term "sustainability" in the output recommendations of the citizens. Notwithstanding the difficulty in establishing a link between experts' inputs and citizens' recommendations, the consensus frame certainly did not help in enabling reflection on the concept of sustainability. Even so, the use of sustainability in policy recommendations does not come as a surprise as it is a widespread term that can also simply mean something that lasts in time. Nevertheless, looking at the results suggest that experts potentially impaired the deliberation between citizens by their coercive effect on citizens' autonomous reason-giving. More generally, the ethical condition is likely to have been altered by the expert inputs, creating a shallow cognitive processing of information by citizens which postponed the contestation of expert discourses to the formal deliberation phase. Again, this result is to be taken carefully as it relies on a low number of answers to compute the DRI. Nonetheless, two other studies on the same citizens' assembly showed a lack of transformative potential of the SCAFP that complement the one in this thesis (See Amos (2023) and Lehner (2023)).

6 Discussion

6.1 The role of framing analysis and perception of experts in the Swiss Citizens' Assembly for Food Policy

The framing analysis set out to understand what and how information was transmitted from experts to citizens in the Swiss Citizens' Assembly for Food Policy. The frames themselves are not homogenous constructs which aim at rigid categorisation. Actors in the same frame can have variations in their discourses. The frame captures a condensation of the underlying framing and reasoning devices that are used by the orators. Furthermore, frames are fluid devices so that the limits between different frames are fuzzy and overlaps between frames are possible.

What makes framing analysis particularly interesting in the context of citizens' assemblies is that framing analyses:

> "(…) assess not so much the impact of loose elements in a text but the impact of the implicitly present cultural phenomena conveyed by all these elements as a whole and to relate them to the dynamic processes in which social reality is constructed." (Van Gorp, 2007, p.73).

This means that framing analysis sees discourses not as simple descriptions but as positionalities which make the presence of social realities in discourses visible (Mendonça and Simões, 2022). Moreover, it shares some epistemological assumptions with deliberative theory such as the intersubjective creation of meaning, through interaction, cooperation, and discursive exchange, that move away from methodological individualism (Mendonça and Simões, 2022).

To give depth to the framing analysis it can be crossed with the thematic analysis of the participants' perception of the experts' presentations. The previously identified hierarchical, dominant and general framing employed by the experts is discernible to varying degrees in the feedback offered by the citizens. Notably, the prevailing critical theme in the feedback revolves around missing perspectives and actors in experts' presentations. Most prominently, the absence of farmers was highlighted, followed by other actors in the food system such as retailers and distributors. In addition to that, the lack of inclusion of social contexts, politicians, action groups and specialised knowledge such as nutritional issues were raised as concerns. Finally, one participant expressed the absence of experts "with a thought outside the chorus and predefined schemes". This recurrent theme (i.e. Presentations missing a perspective or a type of knowledge) present in 14 out of the 32 feedback could support the findings of the framing analysis of a dominant framing in the experts' presentations.

Furthermore, alongside these critiques, there are less abundant yet incisive criticisms of the experts' presentations, including a theme such as "Oriented/Biased Presentations". Under this theme, three

respondents noted a similar, discernible orientation of presentations towards "man-made Climate change", "environmental organisations and ecology groups" or "vegetarian/vegan and organic [production]". In addition, the two remaining respondents in this theme perceived an orientation of experts' presentations towards compromise and the experts' self-interest. The first respondent commented, "Right from the start, there was always a kind of break that said, if you demand this, this association and this interest group will be completely against it.". The second wrote: "Most of the time it seems as if each expert simply emphasises the issue that concerns them the most.".

Four respondents expressed an "Unclear information content of presentations". They found it difficult to use the information of the experts because the presentations were: 1) "Too broad", 2) "Too superficial", 3) "Had no comprehensive ground upon which to argue", or 4) "Difficult to categorise as a layperson". This theme is particularly interesting to compare to the general and ambiguous aspects of experts' presentations in the framing analysis. Indeed, the unclarity expressed by the respondent could have the same effect as the consensus frame which renders a direct opposition to the experts' presentations very difficult. As a matter of fact, the difficulty to categorise information and find an anchoring for argumentation is very close to the negative effects that consensus frames can have on the reasoning and opposition to expert frames.

Finally, 2 feedback could be included in the theme "Presentations are not discursive enough". One respondent mentioned the absence of discussion between experts: "Allowing them to debate and develop their arguments, with an opportunity for the detractors to respond, would be another way of forging our opinions on the basis of the issues raised.". The other respondent mentioned the one-directional aspect of presentation as a limitation: "Instead of a monologue, I would have liked more dialogue. Suggestion: In addition to the experts' presentation, the topic could have been announced in advance so that more specific questions could have been prepared.". These two last comments are another result suggesting the difficulty of participants to answer to and oppose expert framing during the SCAFP.

Overall, the thematic analysis shows two things. First at least some aspects of the dominant expert framing of techno-economic sustainability were perceived by the respondents. More precisely, at least 14 citizens out of 32 respondents would have valued the presence of lay specialists (e.g., farmers, retailers) among the experts. Secondly, the postponing of opposition created by the consensus frame was also perceived by some citizens in the SCAFP.

Beyond the citizens' feedback, the broader question arises regarding the origins of the expert frames within the SCAFP, namely: Is it a true representation of expert discourses in the public debate or a bias in their selection? This question will be addressed next.

6.2 Origins of framing in the experts' presentations

It is interesting to notice that the theme of the assembly was more complex than a common sustainability approach, it had a much broader scope, namely: *What should a food policy for Switzerland look like that makes healthy, sustainable, animal-friendly and fairly produced food available to everyone by 2030?* However, in the experts' presentations fair production and animal friendliness were only mentioned in the sharp key of the "consensus frame". On top of that, the health presentations primarily explored the link between health and sustainability. The decisions of the experts to centre their presentations around the concept of sustainability could likely emanate from the fact that sustainability as a "consensus frame" is widely present in the public sphere, the industry, and institutions. Nevertheless, the possibility that it could in part be due to the defined question of the SCAFP is not to be excluded.

Support for this observation can be found in several other published framing analyses on topics related to food systems. For example, Mooney and Hunt (2010) identified three distinct consensus frames on food security in the United States, even among actors who are not directly involved in food systems. These frames included institutional actors such as the World Bank, the World Trade Organization, the Food and Agriculture Organization and the United States Department of Agriculture, as well as various industry actors. Notably, environmentalist movements, sustainable agriculture movements, human rights groups, and even the FBI and Homeland Security are mentioned in relation to the "consensus frame" in food systems (Mooney and Hunt, 2010). Similarly, a study examining the Italian public debate on charitable food redistribution revealed two consensus frames, one on food poverty and another on food waste (Arcuri, 2019). To go further, Brunori et al. (2013) described how three successive consensus frames in food discourse significantly influenced the market and public sphere in Italy. These frames are labelled as the "Modernisation consensus," the "Turn to quality consensus," and the "Food crisis and food security consensus." Another study highlighted the risk of establishing a new consensus frame around "justice" as an abstract appeal for fairness in food systems, potentially replacing the existing consensus frame on food security (Moragues-Faus, 2017). Finally, an analysis of the Common Agricultural Policy post-2013 identified a consensus frame on food security, while a study based on documents from the World Bank, the Food and Agriculture Organization and the Organisation for Economic Co-operation and Development described a dominant narrative that reinforced the status quo of industrial agriculture and the food system (Lajoie-O'Malley et al., 2020).

Therefore, the presence of consensus frames in the SCAFP is assumed to be more likely to originate in its generalised presence in public debates rather than from the selection process of experts. This raises questions on the effect of such a consensus frame over democratic deliberation. Indeed, if the framing effects of dominant public discourses cannot be filtered out through the selection processes it is likely that they will also affect citizens' deliberation in citizens' assemblies. The links between framing analysis and democratic deliberation have been little studied empirically to date, hence the next section will bring the two methods together in an attempt to explain changes in deliberative reason.

6.3 Expert/lay hierarchy and reproduction of dominant discourses in consensus frames

In this analysis, the existence of "consensus frames" in expert discourses regarding sustainability does not systematically pose a direct issue for deliberation. Notably, these frames provide a starting point for deliberation, allowing for the inclusion of different perspectives, interests and positions (Brunori et al., 2013). Actors with varying views on sustainability can engage in fruitful discussions by agreeing on sustainability as the premise for deliberation (Brunori and Galli, 2016). However, when it comes to transmitting knowledge from experts to the general public, the use of "consensus frames" can become problematic. Indeed, notwithstanding their advantage of creating a common space of exchange between fields (public, market and private sphere) they risk shifting the conflict over a social problem toward a "complex linguistic game" (Brunori et al., 2013) and lead to inadequate solutions and reductionistic conceptualisation of an issue (Arcuri, 2019; Moragues-Faus, 2017). In other words, the substitution of key deliberative prerequisites such as the ethical and the epistemic conditions through a "complex linguistic game" can have a coercive effect on deliberation. First experts are in a better position to understand the game through their familiarity with the subject or the concept. Second, citizens might be unable to differentiate between discourses, relating only to the dominant interpretation of a frame.

Remarkably, discourses that are overly general and vague can create an illusion of theoretical consensus, even though experts may be discussing different aspects of sustainability. Moreover, as sustainability is a term that has a common definition in everyday language, referring to something that lasts over time, it is essential to provide contextualisation and explanations when using it with lay citizens or individuals who may not have an in-depth understanding of the concept. Furthermore, the equivocal nature of such political concepts - which form the core of consensus frames – poses political and ethical concerns when they are used in arguments that seem to be linguistically correct. As an author and journalist, George Orwell was very sensitive to the use and transformation of languages in his time. His essay *Politics and the English Language* from 1946 is an interesting take on the development of words that can be strategically manipulated to justify almost anything (Orwell, 2018). Indeed, dominant political languages tend to undermine their own premises through their contradictions and ambivalences that allow for value inversion (e.g. wage war to foster peace or use capital punishment to curb violence) (Edelman, 1985). While it can be argued that political language cannot be anything else than « an endless chain of ambiguous associations and constructions that offer wide potentialities for interpretation and for manipulation » (Edelman, 1985, p. 14), scientific inputs should not fall under the same fate. In turn, the effect of consensus frames in knowledge inputs for citizens' deliberation needs to be studied and accounted for.

In conclusion, framing analysis provides valuable insights into how information is transmitted in citizens' assemblies. Understanding the fluid nature of frames and the need for participants to engage with diverse social realities is vital for achieving deliberative reason. Indeed, experts' discourses can be biased and coercive, thus undermining the condition for democratic deliberation. It is also important to critically examine the impact of consensus frames, which can be problematic in the context of transmitting

knowledge to lay citizens. Previous studies have identified numerous consensus frames in food discourse, emphasizing the significance of these frames in shaping public debate and policy decisions (Brunori et al., 2013; Mooney and Hunt, 2010; Moragues-Faus, 2017).

6.4 Beyond confrontation: The power in language

Scientists agree that a transformation of the food system away from the status quo is necessary. However, despite decades of sustainable development and ecological modernisation politics, sustainability of any kind is still far from being reached. This can be attributed to a multitude of factors such as conflicting economic development, implementation failure or miscommunication (Howes et al., 2017). The mentioned factors also include a lack of evaluation of these policies to determine their effectiveness in achieving sustainability (Howes et al., 2017). Even so, sustainability is not primarily a measurement method, but a field confronting underlying interests, representation and discourses that can influence decision-making and desired outcomes in very diverse ways (Brunori and Galli, 2016). This vagueness allows it to be used by a broad range of actors holding contradictory positions (Galli et al., 2016). There exist suggestions to establish a common understanding of sustainability through participatory processes to give it an unambiguous interpretation (See Van Bueren and De Jong, 2007). Similarly, from a deliberative perspective, deliberation could be used to change the interpretation of sustainable transformation towards more disruptive changes (Hammond, 2020a, 2020b). However, the use of deliberation as a catalyst of sustainable transformation makes a «prioritization of its critical dimension over its representative one» (Hammond, 2020, p. 228) which sidelines the question of legitimacy for the broader public.

Following that, this section explores the use of parallel or truly authentic discourses and languages to overcome the question of sustainability transformation. This is justified firstly by the inherently hierarchical characteristics of the main interpretation of sustainability discourses focused on expert language and knowledge as seen in the dominant discourse of the SCAFP. Secondly, the commercial, scientific and political appropriation of sustainability by the dominant discourses creates a seeming practical consensus around the concept of "sustainability". This suggests exploring other solutions, less focused on opposition between sustainability perspectives and much more on authentic alternative or parallel modes of thinking that neither favour strong frames nor create a strong asymmetry between expert citizens and lay citizens. As suggested in the analysis of the SCAFP, the lack of a true alternative discourse in experts' presentations could be problematic for deliberative processes.

To start, sustainability seeks to address existing unsustainable situations and, in doing so, remains within the same rhetorical and linguistic frame as a confrontational force. This is because framing is an inherent aspect of today's democratic institutions, which "incentivise frames, just because democracies crowd much conflict into speech and then structure speech competitively - into campaigns, soundbites, legislative debates, advocacy and media market appeal" (Calvert and Warren, 2014, p. 204). Consequently, the

production of frames becomes an institutionalized process utilized by both power holders and challengers, leading to a competition for sophisticated framing techniques, including focus-group testing, to determine the most effective strategies (Calvert and Warren, 2014). Therefore, sustainability as a widely accepted policy objective and consensus frame, can be employed without incurring political risks and can be optimised to ensure the use of the most persuasive framing techniques, referred to as a strong frame (Calvert and Warren, 2014). Once a strong frame is established, it is difficult to counter it with weaker frames (Chong and Druckman, 2007). The framing analysis of the SCAFP's experts, for example, shows a strong economic and neoliberal framing of the food system which resonates well with citizens, as shown by the capitalist realism present in the participants' discourses and recommendations (Lehner, 2023).

Moreover, as suggested by Nancy Fraser (2017) economic actors can utilise emancipatory movements such as sustainability as a strategic advantage by presenting broadly accepted political or scientific goals as commercial arguments. To put it in the words of Paul Feyerabend: "What it [modern "scientific"[10] democracy] offers is an unholy alliance of science and capitalism (or science and state capitalism in the people's democracies) (…)" (Feyerabend, 1986, p. 68). Consequently, sustainability can become a justification for "unholy alliances" among political, scientific and economic actors. Such an alliance in turn builds its strength in the appropriation of contesting or opposing forces and cannot accommodate fully authentic alternatives (Feyerabend, 1986). For sustainability, this would mean that although it serves as a consensus frame, facilitating deliberation between elites, it simultaneously reinforces the dominant neoliberal discourses - and further alienates citizens from the language used by these elites. This alienation can in part happen through the general and ambiguous language and frames developed by dominant discourses. As seen in section 6.1, the distance created between experts and lay citizens by the language of the experts was also touched upon by two citizens of the SCAFP saying that the presentations "Had no comprehensive ground upon which to argue" and were "Difficult to categorise as a layperson". Additionally, Samira Amos' (2023) analysis of the SCAFP points out that the participants perceived academic knowledge as dominating the learning phase of the assembly which could have been a barrier to translating the received knowledge into their own realities.

The process of generalisation and ambiguity of political language was previously described in George Orwell's essay, *Politics and the English Language* (Orwell, 2018). George Orwell identified a shift in language toward a lack of vivid imagery and an increasing vagueness as an obstacle to the "regeneration" of politics. An example he gives is meaningless words, especially political concepts. Words like "democracy", "fascism", "socialism", "freedom", "realistic" or "justice" all have several different meanings that cannot be reconciled (Orwell, 2018). The political actors who use these words even resist a common definition, because otherwise, they would no longer be able to employ this language to serve their interests (Orwell, 2018). Democracy for example, according to George Orwell, immediately evokes something to be praised

[10] The brackets are from the original text.

but cannot be fixed on a definition. Such words can also be used in a deliberately dishonest way to defend the indefensible:

> "Things like the continuance of British rule in India, the Russian purges and deportations, the dropping of the atom bombs on Japan, can indeed be defended, but only by arguments which are too brutal for most people to face, and which do not square with the professed aims of political parties. Thus political language has to consist largely of euphemism, question-begging and sheer cloudy vagueness." (Orwell, 2018, p.136)

I argue here that, in the same way, the dissonance between declared political objectives that conceal brutal forces and their actual results can be used to appropriate social protests and emancipatory movements. This is suggested throughout this thesis with the concept of sustainability that was shown to be used in a general and ambiguous manner by the experts present in the SCAFP without a clear link between declared goals and actual results.

Although the context in which George Orwell wrote these words differs from the one in question here, the effects are similar as present-day suffering and injustices are sidelined to prioritise strategic decision-making that can be meticulously designed to avoid immediate opposition and minimize political risk. This deliberate stretching and general framing of political concepts like sustainability creates an impoverishment of the understanding of people's relationship to the world which can be strategically exploited to bargain a political project. In other words, "this form of policymaking minimizes public attention and maximizes bargaining among directly interested groups that come to know each other's resources well" (Edelman, 1985, p. 14). While this may appear as an extensive generalization of the usage of the concept of sustainability, a recent example might just support that hypothesis.

In 2023, in Switzerland, the Swiss People's Party (SVP) launched a political campaign against excessive population growth through immigration. The campaign advocated for a popular initiative called the "Sustainability Initiative", with the slogan "Say No to a Switzerland with 10 Million Inhabitants." (SVP, 2023). This represents a cynical exploitation of sustainability as a framing strategy, yet it remains a manifestation of sustainability as a frame that potentially resonates with the Swiss population. While it is possible to counter such consensus frames by reframing sustainability differently, it is uncertain whether this differentiation will be acknowledged politically and understood by lay citizens. Similarly, if the techno-economic framing of sustainability used by the experts in the SCAFP resonates with the participants, it might be difficult to counter it by reframing sustainability differently.

Language has often been analysed as a vessel for the reproduction of domination or hegemony of established systems. To take just two examples, Frantz Fanon and Roland Barthes see it respectively as an instrument of colonial domination and ideological domination. Frantz Fanon expresses the close link between the language and people's relation to the world:

> "A person who possesses language also possesses the world expressed and implied by that language. We can see what we are getting at: there is an extraordinary power in the possession of language." (Fanon, 2015, p. 14, translated by the author).

In other words, the use of one's own language is a strong emancipatory action against dominant normative orders. This places the way in which the world is named at the centre of colonial domination structures creation and reproduction. Analogically, technical and expert language can be at the centre of epistemic domination structures reproduction including the expert/lay hierarchies. For mini-publics such as the SCAFP, the epistemic domination must be strongly limited to ensure the conditions for high-quality deliberation (i.e., the autonomy of preference building and the inclusion of all relevant information).

Similarly, Roland Barthes sees in language a terrible strength that becomes doxa when it is linked to power:

> "(…) we are all caught up in the truth of languages (…). For each language (each fiction) fights for hegemony; if it has power, it spreads everywhere in the current and daily life of society, it becomes doxa, nature: it is the supposedly apolitical language of politicians and government officials, it is the language of the press, radio and television, it is the language of conversation." (Barthes, 1973, p. 47, translated by the author)

To extend that thought, even in deliberation, a language doxa can be reproduced and exert coercive power over the participants. For example, the techno-economic sustainability framing found in the SCAFP could be considered a doxa if it is unreflexively accepted as the "natural" interpretation of sustainability. As such, it is also a way for dominant political discourses to rationalise existing social inequalities by adapting their language while sidelining the resolution of the issues at hand (Edelman, 1985).

Needless to say, this does not mean that deliberation is pointless, but rather that the type of language and type of knowledge used in mini-publics should be taken into account, especially as they can limit the shared understanding of a problem and its solutions. Additionally, the particular position of experts inside deliberative settings should therefore not be underestimated as a way to reproduce power structure inside of deliberative settings. Especially, the confrontation of different discourses but also different languages i.e., not only expert language, could bring about an opening of the expert-lay relationship that so strongly defines modern democratic policymaking.

In particular, evidence-based policymaking is a central component of the present food policymaking (Béné, 2022). As suggested by Hans Blumenberg in his text *Antropologische Annäherung and die Aktualität der Rhetorik,* the alliance of science and public decision-making shows largely disappointing results (Blumenberg, 2001). Indeed, when advising political decision-makers scientists have to follow the procedures of politicians whose role gives them a compulsion tact (Handlungszwang) while science continually works with a lack of evidence (Evidenzmangel) (Blumenberg, 2001):

> "(…) committees of scientists cannot proceed any differently than the institutions they have to advise, namely rhetorically, namely aiming at a factual consensus that cannot be the consensus of their theoretical norms." (Blumenberg, 2001, p. 423, translated by the author).

Therefore, evidence-based policymaking violates the scientific norm by making assertoric statements for statements that can only be expressed problematically due to the lack of evidence (Blumenberg, 2001). Following that, evidence-based policymaking fails to create scientific accountability towards people affected by a political decision as it follows a practical consensus not traceable to a theoretical consensus (Blumenberg, 2001). As such, states create systems of knowledge and expertise that are not accessible or influenceable by ordinary people and subnational communities (Jasanoff, 2016). Such knowledge systems violate the self-rule of citizens and fail to be democratically legitimate (Jasanoff, 2016; Pickering et al., 2022). From the experts' inputs in the SCAFP, consensus frames such as the techno-economic sustainability frame can be seen as a practical consensus used for public decision-making not relying on a theoretical consensus on which to find scientific legitimacy. For deliberation, the presence of practical consensus in the knowledge inputs that do not rely on scientifically justifiable theories and are distant and inaccessible to them can undermine both the autonomy of decision-making and the access to all relevant information for the deliberators.

Overall, consensus frames and technical language can undermine deliberation following «the idea that reasoning is an exercise that presupposes access to language » (Pettit, 2008, p. 3). Access to language in the way that they need to take the floor and express themselves in the language that is not imposed by a specific knowledge and expertise system. Subsequently, one should ask: Is the language used to understand the issues adequate to solve them?

6.5 Limitations

6.5.1 Deliberative Reason Index

The DRI intends to measure the deliberative reason – a common understanding of the issue at hand and the adoption of a shared reasoning device - and its rate of fluctuations over time. This study relies on results from incomplete data as shown in the low number of respondents in each subgroup. Part of the explanation for this may lie in the fact that participation in the survey was not part of the Citizens' Assembly. In other words, the surveys were not compulsory and were treated separately in the organiser's communication. Consequently, the first limitation of the measurement of deliberative reason arises from these circumstances. Out of the 67 participants present at the end of the assembly, only 17 could be used in the PRE-MID-POST analysis of the DRI. On top of that, the sub-groups that are used in the analysis have demographic characteristics that differ from the participants as a whole. For example, the respondents in the subgroups had a higher maximum education level and higher political participation

compared to the average participant (See Table 2). This distinction is crucial, as previous research (See Niemeyer et al., 2023) suggests that fluctuations in deliberative reason can be influenced by the structure of a deliberative assembly and individual characteristics.

For that matter, a linear regression of changes in DRI in the PRE-MID-POST group was performed upon available demographic characteristics. The results from the full table in Appendix D show only slightly significant results on some characteristics. Notably, The PRE-MID increases in DRI were more pronounced in women ($p=0.084$), older respondents ($p=0.052$), and lower education ($p=0.065$). Thereupon, the MID-POST changes show no statistically significant correlation with individual characteristics. The overall changes PRE-POST on their side were more likely to be negative in women ($p=0.091$).

Furthermore, it is important to acknowledge the limited demographic representativeness of the Swiss population in this study. Notably, the data lacks participants who discontinued their studies after mandatory education. Additionally, the average age of the participants in the study is 8 years higher than the average Swiss citizen, with no participants below the age of 20. These demographic differences can be attributed, in part, to the organizer's decision to only select citizens who had reached 16 years of age (Amos, 2023). Beyond demographics, the data also indicates that participants, on average, report higher political participation than the Swiss average. Concerning political orientation, the responses indicate a left-leaning position on a left-wing to right-wing scale, with the average answer settling at 4.8 out of 10 and the median answer at 4 out of 10. It is also worth noting that 6 participants chose not to answer the latter question, making interpretation more challenging. The limited demographic representativeness could also indicate deficient discursive representativeness in the SCAFP. For example, the absence of workers with mandatory school education could suggest that their discourse – if they have a distinctive discourse – on the food system was absent from the assembly.

6.5.2 Framing analysis

An important aspect of the inductive framing analysis is that it did not include the learning journey which participants went on during the SCAFP. Indeed, learning journeys were included in the assembly to give practical knowledge of the food system to the participants. Acknowledging that they were part of the learning phase of the SCAFP, the analysis does not expect a major framing effect of the learning journeys on the participants. This is seen so for at least two reasons: 1) Framing effects are mainly attributed to elites (experts, media, politicians, …) with societal authority wanting to structure public discourses towards certain means and goals (McLeod, 2001), and 2) Learning journeys were not directly linked to the experts' presentations and only indirectly incorporated in the group work of the learning phase (Amos, 2023). More precisely, the analysis by Amos (2023) suggests that the experts' presentations were perceived as more dominant by the participants and more directly linked to the rest of the process (Amos, 2023). Finally, time to reflect upon the learning journeys was much more limited compared to the experts' presentations

(Amos, 2023). Nevertheless, framing effects from the learning journeys on citizens of the SCAFP cannot be excluded.

6.5.3 Thematic analysis

Similarly to the Deliberative Reason Index, the thematic analysis relied on data collected through the surveys. More specifically, it uses data collected in the second survey, after the learning phase. This leads to the limitation of the small number of responses. The thematic analysis uses incomplete data from 32 respondents out of the 67 participants still present at the end of the assembly.

7 Conclusion

The evaluation of deliberative processes is an integral part of comprehending the mechanisms at play and incorporating them as potential innovative democratic instruments. Democratic innovation is crucial for adapting political systems to a changing world and countering anti-democratic tendencies that arise in conjunction with it. Concerning the Swiss Citizens' Assembly for Food Policy, the evaluation was conducted by three master's students who each wrote a separate thesis, including this one (See Amos (2023) and Lehner (2023) for the other two master's theses). The main outcome shared across the three theses on the SCAFP is the limited transformative potential of this citizens' assembly. An understanding of these shortcomings is essential for the design of future citizens' assemblies, especially since the legitimacy of small deliberative settings remains a central question in Western democracies. However, the SCAFP also demonstrated that citizens could come together and engage in respectful discussions regarding matters of political concern. Amos (2023) recognizes the significant contribution of the SCAFP to future food policy by aligning with the goals of the Swiss Federal Council. Similarly, Lehner (2023) acknowledges that participants took ownership of the deliberative process and its outcomes, providing a starting point for building a transformed food system.

Consequently, the SCAFP can be viewed as an initial step towards developing the future food policy in Switzerland. Indeed, it facilitated a learning process that helps to comprehend the conditions under which successful citizens' assemblies can be organized, reproduced or adapted to address various public concerns. Specifically, for complex topics such as the Swiss food system, establishing an ongoing state of deliberation across all political instances that is democratically legitimate may be the first necessary step before deciding on solutions. In other words, deliberative settings like the SCAFP can facilitate finding an appropriate political rhythm that allows for both deliberation and representation, stability and disruption, transformation and legitimacy. This will also necessitate understanding and limiting the reproduction of power structures inside deliberative settings. As indicated in this study, this understanding is crucial to prevent these structures from exerting coercive power over democratic deliberation.

Thereupon, consensus frames can pose challenges, particularly in citizens' assemblies. The question arises as to how to avoid this type of framing in the development of assemblies to prevent reproducing their coercive nature in citizens' deliberations. This study of the Swiss Citizens' Assembly for Food Policy sheds light on the role of dominant and unchallenged frames in shaping deliberative processes. Recognizing and analysing the different frames utilized by experts and other actors allows for a deeper understanding of how dominant discourses are perpetuated and how power dynamics can be sustained within citizens' assemblies. Expanding on this, the research underscores the critical examination of the role of experts within citizens' assemblies. While experts can bring valuable knowledge to the table, it is vital to question their influence and potential biases. By engaging in critical thinking about the involvement and role of experts, citizens' assemblies can ensure a more inclusive and democratic decision-making process. Finally, the impact of technical and expert language on deliberation is another significant factor to consider. The

use of specialized language can create barriers and impede meaningful participation from lay citizens. Therefore, addressing this issue by fostering an environment that encourages open dialogue and promotes the use of accessible language is essential.

Overall, understanding the perpetuation of dominant discourses, as well as the role of framing, experts and language in deliberation, enhances our understanding of how citizens' assemblies can effectively contribute to the regeneration of food policy and democracy. By taking these factors into account and actively working towards inclusive and accessible deliberation, citizens' assemblies could serve as powerful tools for democratic decision-making, for policy formulation, as vigilantes of poor quality of public debates, to anticipate consequences of policies made in uncertainty or secrecy, and to contest dominant discourse democratically.

Finally, it is important to acknowledge the significance of opposing dominant discourses while also recognizing the importance of creating parallel non-opposing discourses in the regeneration of politics. As described by Lehner (2023), the absence of true alternatives can limit the range of thoughts, keeping them within established pathways. When these pathways no longer offer acceptable or viable solutions, parallel pathways must be available. Deliberative democracy, in addition to participating in the decision-making process, could contribute to the construction of alternatives. These alternatives encompass our modality and our relationship with the world, the place of life in our societies, the place of work in our economies, the role of science in knowledge creation, the place for dignity, beauty, complexity and how to name the world we live in.

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9 APPENDIX

A. Survey questions on consideration and preferences

	SURVEY QUESTIONS WITH CORRESPONDING JUSTIFICATION: (A) GENERAL THEME ON TRUST, RESPONSIBILITY, JUSTICE AND FOOD SYSTEMS, (B) CENTRAL THEMES OF RECENT POPULAR INITIATIVES IN SWITZERLAND PRESENT IN OFFICIAL VOTING BOOKLETS, AND (C) HIGHLY SUPPORTED OPINION IN SURVEYS THAT TOOK PLACE AROUND POPULAR INITIATIVES RELATED TO THE FOOD SYSTEM	**A**	**B**	**C**
REALITY OF CHANGE				
Q10_1	Climate variation is normal, so why should this be a problem?	X		
Q10_2	Climate change will not be a problem because there will be technological solutions available.	X		
Q10_3	I think it is safe to say climate change is here.	X		
Q10_4	The negative effects of climate change on local commerce should be taken into account.	X		
Q10_5	I do not trust what scientists say about climate change.	X		
Q10_6	I do not trust what I hear about climate change from the government.	X		
Q10_7	It is difficult to trust what comes out in the media on the issue of climate change.	X		
Q10_8	There is not enough information to definitively say that climate change is real.	X		
RESPONSABILITY OF ACTION				
Q20_1	There is not much point in me doing anything to make agriculture more sustainable. No one else is going to.	X		
Q20_2	I do not know what to do. I am very concerned and would like to do something, but I don't have a realistic shortlist of things that would really make a difference.	X		
Q20_3	I believe that the difference we can have as an individual, in Switzerland, is so minimal that our actions are worthless.			X
Q20_4	I am not going to do anything to address the impacts of the agri-food system because it is not a major issue.			X
ECONOMY AND MARKETS				
Q30_1	I am happy to pay a higher price for local or organic food products	X		
Q30_2	Eating sustainably is too expensive, and only wealthy people can afford it	X		
Q30_3	Agricultural subsidies should promote sustainable, pesticide and antibiotic-free production.			X
Q30_4	Sustainable agriculture increases prices and harms consumer freedom. The production should be adapted to what people demand.		X	
Q30_5	Food accessibility (price) and security (availability) is NOT COMPATIBLE with a sustainable food system			X
Q30_6	Strong regulation of food production will eventually damage our economic relationship with other countries		X	
Q30_7	We should develop short distribution channels and support local production instead of supporting big agrifood corporations	X		
Q30_8	We need to focus on adaptation actions that are concerned with the economic future of the country.		X	
POLLUTION AND BIODIVERSITY				
Q40_1	Actions on the food system in Switzerland will lead to increased imports and a shift of pollution abroad		X	
Q40_2	We need actions to protect inhabitants and biodiversity from harmful pesticides.		X	
Q40_3	As long as we use animals in agriculture, it cannot be sustainable	X		
Q40_4	We need to deal with the water pollution issue through measures such as reducing fertilizer and pesticide use.		X	
SUSTAINABLE AGRICULTURE				
Q50_1	Banning pesticides might help the local biodiversity but decreases our food production capacity and autonomy		X	
Q50_2	Agriculture is already very sustainable. Swiss farmers are on the right track			X

Q50_3	Intensive food production can go along with the protection of the environment and health			X
Q50_4	Farmers already suffer enough from strict rules and paperwork. Family farmers should have more liberties			X
Q50_5	The main focus of planning for adaptation should be to prepare the food system for extreme weather events, such as drought and flooding.	X		
Q50_6	Products that use environmentally harmful ingredients, such as palm oil, should be taxed in the same way as tobacco products.	X		
Q50_7	If Switzerland reduces greenhouse gas emissions in its food system, it won't make a difference.			X
GLOBAL PERSPECTIVE				
Q60_1	It is important to plan for migration by people displaced by malnutrition and famine.	X		
Q60_2	We should focus on protecting human systems rather than environmental ecosystems.		X	
Q60_3	The Swiss food system depends on imports from other countries, and it is in our interest to help find an effective global solution.	X		
Q60_4	Some communities are more affected than others by the global agri-food system, but this is not a priority issue.	X		
Q60_5	The Swiss food system is particularly vulnerable to climate change, and it is in our interest to help find an effective global solution.	X		
Q60_6	Climate warming will ultimately benefit food production globally as plants better growth in higher temperature	X		
ACTION AND RESPONSES				
Q70_1	It is NOT necessary to engage with the community when deciding what are the most important issues for planning for food system changes.	X		
Q70_2	Planning for food system adaptation needs a holistic approach, considering a whole range of issues, instead of focusing on individual issues.	X		
Q70_3	There is no urgent need to prepare for an increase in illness and death caused by intensive use of pesticides/antibiotics	X		
Q70_4	The community should be involved in discussions about food system adaptation.	X		
Q70_5	It is important to support small-land local farming as they have the fewest resources to deal with the impacts of climate change.	X		
PREFERENCES				
Q90_1	Leave the policy settings as they are.	X		
Q90_2	Policies that emphasise fewer regulations (e.g., policies that promote free trade agreements by reducing food regulation)	X		
Q90_3	Policies that involve moderate sustainable regulations (e.g., banning certain types of pesticides, incentivising organic agriculture)	X		
Q90_4	Policies that involve a radical sustainable food regulation (e.g., banning all pesticides, banning the importation of food-related products that employ non-sustainable approaches, exclusively incentivising organic agriculture)	X		
Q90_5	Policies that create incentives for local producers to produce sustainable food (e.g., subsidies or tax breaks for local farmers who produce organic products)	X		
Q90_6	Adaptation policies and expenditure. Planning controls and emergency response programs.	X		
Q90_7	Preparing for climate risk for food production through the development of new approaches and technologies that enhance resilience to the impacts of climate variability or change.	X		

B. Full table of answers to the first round of surveying (n=52)

C. Observation guide for participant observation

Date:	Start time:	End time:	Comment :			
Theme:	Participant 1:	Participant 2:	Participant 3:	Participant 4:	Participant 5:	Participant 6:
Participation: (How many times each one speaks + long short times)						
Respect: (Who interrupts whom + counterarguments: a) ignored, b) included but degraded, c)included neutral, d) included and valued						
Constructive politics: (speaker: a) sit in its position, b) alternative proposal c) mediating proposal)						
Content of justification: a) Explicit group interest, b) no interests or common good, c)common good utilitarian, d) common good least advantaged						
Interactions between participants						

After session reflexions	Date:				
Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
General reflexions:					

D. Regression results of individual characteristics on DRI changes in the PRE-MID-POST subgroup

	PRE-MID		MID-POST		PRE-POST	
	Estimate (Sd)	p-value	Estimate (Sd)	p-value	Estimate (Sd)	p-value
(Intercept)	0.016 (0.659)	0.981	0.723 (1.389)	0.621	0.739 (1.251)	0.576
Sex: Woman	0.278 (0.134)	0.084*	-0.235 (0.283)	0.438	-0.513 (0.255)	0.091*
Age	0.014 (0.006)	0.052*	-0.001 (0.012)	0.965	-0.014 (0.011)	0.233
Living place: Countryside	0.321 (0.198)	0.155	0.341 (0.417)	0.444	0.663 (0.376)	0.128
Living place: Agglomeration	-0.163 (0.256)	0.548	0.511 (0.539)	0.380	0.348 (0.486)	0.500
Number of children	-0.090 (0.054)	0.142	0.065 (0.113)	0.583	-0.025 (0.102)	0.815
Education: Apprenticeship	1.203 (0.534)	0.065*	-1.349 (1.125)	0.276	-0.146 (1.013)	0.890
Education: Higher vocational training	0.678 (0.453)	0.185	-1.188 (0.955)	0.260	-0.510 (0.861)	0.575
Education: Higher education/University	0.194 (0.402)	0.647	-1.370 (0.848)	0.157	-1.176 (0.764)	0.175
Political scale (1=far left, 10=far right)	0.043 (0.047)	0.393	-0.039 (0.099)	0.706	0.004 (0.089)	0.965
Political participation (Frequency)	0.053 (0.050)	0.329	0.019 (0.105)	0.859	0.072 (0.095)	0.474

Linear regression: Dependent variable ~ Gender + Age + Living place + Children + Education + Political scale + Political participation

Intercept characteristics: Sex: Male; Living place: City; Education: High school

Significance levels: * = p < 0.10; ** = p< 0.05; *** = p< 0.01