Playing with Reason

Exploring how people experience embodying rationalities
other than their own

Made in Japan—La Grande Odalisque (1964) by Martial Raysse

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Positionality

Throughout this thesis, I was constantly inspired and influenced by a diverse range of scholars. The initial spark for my thesis topic emerged from reading a book written by the philosopher and ethologist Vinciance Despret. I am indebted to her insightful work; she has introduced me to ideas that are now companions to me. She profoundly altered my way of thinking and her work shaped the logic and approach of this thesis. All the more so since she led me to other inspiring scholars such as Isabelle Stengers, Bruno Latour and Baptiste Morizot, all of whose ideas have contributed to this thesis.

Despret's work also brought me back to feminist studies, encompassing materialist, lesbian or intersectional approaches. These feminist theories have continuously nourished my ideas as a young woman trying to make sense of the intricacies and the extent of power dynamics at play around me. It is through this feminist lens that I tackled which turned out to be a sensitive thesis topic.

Given my French and American heritage, this research was particularly challenging and sometimes even awkward for me because it delves in a Western philosophical tradition to which I am deeply tied and feel great ambivalence towards. Additionally, having pursued a bachelor's degree in engineering, embedded in a logic of modernization, addressing questions of truth and knowledge further increased my ambivalence towards the topic of reason. Consequently, tensions can surely be felt throughout this thesis as my own position regarding reason and its implications was constantly, and is still, evolving.

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1. Introduction

1.1 Problem statement

Climate change, unsustainable food systems and water crises are both global and localized challenges that encompass environmental and social components. They are complex challenges that demand complex solutions (Akamani, 2016; Akamani et al., 2016). Pluralism is being suggested as a valuable approach to address the complex ecological and social challenges we face today (Healy, 2003; Turnhout et al., 2020; Wiegleb & Bruns, 2018). Pluralism is understood as both the representation and legitimization in political spheres of diverse actors, knowledge, perspectives and values (Escobar, 2017; Flathman, 2005; Healy, 2003). It is valuable because it creates the possibility to uncover the complexity of problems by seeing them from multiple perspectives and through different knowledge lenses (Turnhout et al., 2021; Wiegleb & Bruns, 2018). Moreover, pluralism has the ability to make visible new pathways for transformation that would otherwise be impossible, and thus enables debate over new political choices regarding how to address these challenges (Healy, 2003). Lastly, one of pluralism's core asset is to further enriches political debates through the recognition and legitimization of disagreement (Flathman, 2005).

However, in practice, technocratic approaches remain the norm to tackle complex problems (Hatanaka, 2020). Expert knowledge, especially scientific knowledge from the field of natural sciences, claims epistemic monopoly in addressing such issues (Healy, 2003; Wiegleb & Bruns, 2018). This is because science is often considered able to exhaustively address problems and fully inform political decisions (Buuren, 2009; Wiegleb & Bruns, 2018). However, scholars argue that scientific knowledge in these cases is limited as the problems are multifaceted and of a political nature (Buuren, 2009; Healy, 2003).

Furthermore, according to Buuren (2009), science is used as the primary source of knowledge due to its assumed ability to objectively rationalize problems. Buuren (2009) confronts this view by arguing that scientific knowledge is constantly negotiated in politics and therefore is far from being a neutral arbiter. The author further underlines how the problematization of a political problem is in itself a process of knowledge-making, which has significant repercussions on political outcomes.

In sum, scientific knowledge currently used in politics under an argument of omniscience and neutrality, is actually subjective, negotiated, political and limited in addressing our current crises. Thus, the hegemony of science, and its translation into technocratic political approaches in which experts are the main source of knowledge (Hatanaka, 2020), needs to be challenged if we aim to tackle complex issues through pluralism (Turnhout et al., 2020).

Technocratic reasoning, however, is only one component of a dominant rationality that shapes the logic of our current political thinking and thus the ways in which complex problems are addressed. Actors involved in tackling such issues are not only expected to comply with scientific frameworks and accept rational and scientific arguments that claim universality, but also to agree with what it means to be reasonable according to pre-established principles dictated by a much broader single dominant

rationality (Turnhout et al., 2020). In this sense, the imposed, and thus dominant, rationality in politics is multifold; it is not only technocratic but also patriarchal and capitalist (Escobar, 2020; Farrall, 2019; Healy, 2003; Losada Cubillos et al., 2023; Plumwood, 1993).

As well as being critiqued as antagonistic to pluralism by delegitimizing certain actors and knowledge, the dominant rationality has been shown to hinder sustainable transitions because it perpetuates a status quo to maintain those in power (Flyvbjerg, 1998; Healy, 2003). In other words, the dominant rationality underlines the logic of our political systems to maintain elite influence (Marcus, 2013; Plumwood, 1993). By doing so, it sustains unequal power relations towards both humans and non-humans (Plumwood, 1993), which further contributes to the social and environmental crises we face (Escobar, 2020; Leach et al., 2020). By defining what is rational to maintain unequal power dynamics to the advantage of elites, the dominant rationality limits the possibilities of more sustainable transformations that would involve systemic changes (Escobar, 2020; Healy, 2003). Consequently, this imposed rationality can be seen as a hegemonic rationality that must be challenged if we aspire to create more just and sustainable futures (Escobar, 2020; Farrall, 2019; Healy, 2003; Turnhout et al., 2020).

Embracing pluralism in politics becomes thus both a means and an aim. A means because it has the ability to politicize the hegemony of science and the dominant rationality in political spheres (Healy, 2003; Turnhout et al., 2020). An aim because achieving pluralism creates the possibility to put light on sustainable pathways towards transformation in order to address current complex problems (Healy, 2003; Leach et al., 2020; Norström et al., 2020; Turnhout et al., 2020).

Engaging with pluralism is especially relevant for food governance, as it involves complex and wicked problems that demand inclusive governance processes (Koski et al., 2018). However many attempts to make food governance more inclusive have been criticized as they tend only to add deliberative methods to technocratic procedures (Hatanaka, 2020). In other words, there is a rise of participatory food governance processes, but the underlying political approach remains expert and economic driven, and therefore does not allow space for true deliberation. Rather than seeking pluralism in which diverse actors are not solely invited to political discussion but in which their perspectives, values and knowledge are actually legitimized, including a wide range of actors becomes mostly a metric upon which governance processes are assessed as inclusive.

Thus challenges to achieving pluralism lie not only in the inclusion of different types of knowledge and actors in governance, but also in the legitimacy and credibility of the knowledge used, and its ability to address pressing food systems issues (Turnhout et al., 2021). It becomes essential to find ways to facilitate and operationalize the inclusion of these different actors with respective types of knowledge and perspectives in governance (Healy, 2003; Koski et al., 2018). Otherwise, these processes can do more harm than good as they risk reproducing and reinforcing the very mechanisms of discrimination they aim to address, such as knowledge hierarchization (Norström et al., 2020; Turnhout et al., 2021).

However, this pursuit of challenging the imposition of the hegemonic rationality through pluralism invites us to question on what grounds does this rationality claim monopoly. Numerous scholars have pointed to reason, the Western philosophical concept framed by Plato as a universal truth, the sole source of scientific knowledge, independent of power relationships, antagonistic to emotion, as a core

source of discrimination and power maintenance in politics (Despret, 1999; Escobar, 2020; Flyvbjerg, 1998; Healy, 2003; Marcus, 2013; Plumwood, 1993). In fact, this platonic version of reason, further fortified by the Enlightenment, creates a possibility to discredit types of knowledge and actors perceived as too emotional or irrational (Despret, 1999). In this sense, notions such as reason and universalism are used to legitimized liberal masculine thinking, the dominant rationality, while delegitimizing counter-hegemonic movements (Farrall, 2019).

Feminist scholars have also highly critiqued reason by showing how it has historically been constructed around elite white men and therefore has delegitimized women and other groups perceived as too emotional (Plumwood, 1993). Likewise, according to Flyvbjerg (1998), reason is mainly defined by powerful actors. Reason thus, far from being merely objective, is among other things, a tool used by powerful actors to present their rationality as neutral and universal (Farrall, 2019; Flyvbjerg, 1998; Plumwood, 1993). Despite much criticism from various fields (Wahl-Jorgensen, 2019), this dominant version of reason continues to widely shape Western politics and perpetuate unfair power dynamics (Marcus, 2013).

In sum, the imposition of the hegemonic rationality used under the veil of reason's neutrality in politics firstly permits scientific knowledge, especially from the fields of natural sciences, to be maintained as the unique legitimate form of knowledge, even though science has been found to be limited in addressing complex political issues. Then, it often persists and impedes, or is used to impede, the legitimacy of voices that differ from its established frameworks, whether economic or scientific, under the argument of not being rational, provable, measurable or objective. Finally, it is a powerful tool for discrimination by those who hold power to perpetuate a status quo through delegitimizing actors or knowledge that do not support the system they profit from. Therefore, if we have any aspiration to shed light on new pathways of transition towards more sustainable and just societies, it is essential and necessary to address the dominant rationality and therefore the dominant version of reason in politics through pluralism (Escobar, 2020; Healy, 2003; Turnhout et al., 2020).

Towards this end, this thesis is divided in three main parts, encompassing a total of seven chapters. The first part focuses on theory. In the following section of Chapter 1, I first elaborate on pluralism as it is a key notion of this study. Following this, Chapter 2 expands on a literature review on reason and its link to politics, as well as on the potential of serious games as means for engaging with topics such as reason and how to design one. Then I outline in Chapter 3 how this thesis followed an iterative design process and present the theoretical framework and research questions. The second part of this study then focusses on the development and use of a serious game aimed at enabling a first step towards pluralism. A serious game has been used as it has been shown to be a useful tool to engage with complex concepts in a safe environment to then create social change (Rodela et al., 2019). Although the assessment of the effectiveness of serious games is a difficult task, literature shows that the learnings from serious games can potentially be translated into actions outside the game setting (Medema et al., 2016). Consequently, serious games could hold the potential to support pluralism. Thus, Chapter 4 covers a discussion on the development of the serious game, as well as a presentation of the final product and the method by which data was collected using this game and later analyzed. Lastly, the final part of this thesis answers the research questions. The results from the game sessions are presented in Chapter 5 and systematically analysed in Chapter 6 to shed light on how people experience adopting a rationality different from their own and how this relates to pluralism. Finally,

Chapter 7 establishes a connection between the findings of this study and the initial problem statement in a conclusion.

I would like to add that with this thesis I do not aim to invalidate science nor reason. The main critique exposed is the use of reason and rationality as a tool of domination, or justification of domination, under the guise of neutral concepts. This thesis, inspired by the work of Stengers (2022) on an ecology of practices, implicitly leads to questioning and exploring how science, reason and rationality can be valued without having to discriminate against other forms of knowledge, rationalities and actors. Additionally, I also acknowledged that not all types of knowledge and actors may be useful in politics, but this topic will not be discussed. As reason and rationality are vast topics, I only attempt in this thesis to unravel the dominant version of reason and its interaction with the dominant rationality in order to support political pluralism.

1.2 Pluralism

This work draws on pluralism as a central notion. Pluralism as a political philosophy, has been understood and applied in numerous different ways. For this thesis, I call upon William James' conceptualization of pluralism.

James' theory of pluralism starts with the postulate of the pluriverse. According to him, there are a multitude of worlds in the world (Savransky, 2019). These different worlds, both social and natural, are continuously in the making (Escobar, 2017). In this sense, James firmly rejects a monistic vision of the world. However, he also refuses to dismiss the existence of oneness in the world. Thus for James, the world is both one and many (Savransky, 2019). He argues that there are different degrees of multiple oneness that allow the world to hold together but they are never absolute (Savransky, 2019). James is thus thoroughly opposed to claims of universalism and absolutism (Escobar, 2017; Savransky, 2019). For him, no theory is able to grasp the entirety of a phenomenon, a person or the world. There is always something left unexplained (Flathman, 2005). He therefore always is in favor of thinking the complexity and multiplicity of the world through words such as 'if', 'and' and 'with', instead of 'either/or'. In short, his theory of the pluriverse is, according to Connolly (2020), a "philosophy of a messy universe" (p.70).

James' pluriverse is full of diverse stories that run parallel. They sometime meet, intertwine and interfere, but these different threads, these worlds, never form a complete single unity in our minds (Savransky, 2019). According to James, plurality and oneness coexist to continuously create and nurture the differences that are the basis of our fabric of reality (Savransky, 2019).

For James, pluralities are what create these different worlds within our world, and they can be found in everything. In his work, he discusses cognitive, metaphysical, psychological, ethical, aesthetical, and religious pluralities (Flathman, 2005). He also argues that there are differences not only among beings and groups but also within each one of us (Savransky, 2019). James theory cares for these differences, these divergent forms of life, present in all and everything.

His theory entails a radical pluralistic philosophy of experience (Savransky, 2019). In fact, James warns us of reification; he argues that all beings are different of each other but also within themselves and

that they are all unceasingly changing (Escobar, 2017). It is through lived experiences that pluralities evolve, change and are continually put to work. Likewise, it is through these variable and dynamic pluralities that worlds are elaborated and thus themselves incessantly put in motion.

However, James discusses the difficulty of valuing pluralities. He acknowledges the tendency we have of being blind to differences, especially in regards to the feelings of others, whether of creatures or people (Escobar, 2017). He believes differences in the world should be recognized, tolerated, appreciated and further nurtured. But he also warns us about the risk of easily celebrating differences and searching for commonalities that can bind us together instead of truly valuing plurality (Escobar, 2017).

To embrace and pursue plurality then leads to translating the philosophy of the pluriverse into a form of political pluralism (Connolly, 2020). Pluralism, according to James, means staying with the problem of the pluriverse, it is a pragmatic response to the pluriverse (Savransky, 2019). In this sense, James does not want to solve the problem of the pluriverse, he wishes to give worth to its creative and productive effects.

According to Flathman (2005), James argues clear values associated with political pluralism. Firstly, the active and sustained presence of lived pluralities nourishes our awareness of the universe's diversity and the need for perspicacity and creativity to make sense of it. By engaging with other people and thus pluralities, we can make each other more sensitive to them. Secondly, pluralities create and sustain conflict which brings out what is best in both thought and action. They as well have the capabilities to resist domination and homogenization. At the same time, pluralities promote cooperation and the generation of mutual respect and appreciation. Finally, the process of pluralism brings to light options, choices, that foster both the individual in all its particularities and creativity.

Jamesian pluralism can thus be seen as a political philosophy that promotes, in political spheres, representations of different worlds and legitimations of differences between and within beings, in order to shed light on different political choices aimed at fostering pluralities. In this sense, pluralism can be seen as a self-sustaining process (Savransky, 2019). In the pluriverse, pluralities coexist in order to construct it, and political pluralism is sensitive to these differences and cultivates, enlarges them, thus creating and fostering pluralities that dynamically construct the pluriverse.

Pluralist political theories following James' understanding of pluralism have particularly paid attention to legitimizing different values, cultures and ontologies (Escobar, 2017). According to Escobar (2017), James' theory is a strong foundation for democratic participation and calls for political participatory processes in which citizens engage with people who differ from them. The creation of such political spaces enables "others" to be heard, valued and legitimized, rather than simply perceived and heard as stereotypical categories. Still following Escobar, if such spaces fail to be created, elite-driven democracy will potentially persist as our single, yet narrow, political option.

2. Literature review

The literature review is divided into three main parts. In the first section, the relationship between reason, rationality and politics is discussed. Both concepts of reason and rationality are first defined, and their interaction explained. Practical examples are also given on how this interaction greatly shapes our current political systems. Then, I expand on how serious games can be useful tools to address the issues raised by this thesis, and which keys steps should be followed to design one. I lastly outline alternative versions of reason that will further serve as inspiration for the game design.

2.1. Reason, Rationality and Politics

The book written by Despret (1999) about different versions of emotions serves as an entry point to the concept of reason. Versions, such as I understand them, could be compared to narratives. They are means to make sense of and to bring to life, processes, events, and concepts. Both are equally constructed and are neither based on the register of truth nor fiction. They are also dynamic, perpetually constructed, reworked, and reshaped. But unlike narrative, the word version reinforces the aspect of inherent inaccurate translations and therefore highlights the possibility of different versions coexisting without having to exclude each other. It also allows to differentiate between strong and weak versions. According to the author, strong versions are those that allow a multitude of versions on the same subject to coexist.

The fourth chapter of Despret's book gives an analysis of how a dominant version of emotions in the West, yet relatively weak, has historically been and continues to be characterized by an opposition between emotions and reason. In doing so, Despret explores the origins of the concept of reason and its link to politics.

The author frames the genesis of the dichotomy emotion-reason as Plato's solution to his problematization of universalism. Plato's quest for truth, in metaphysical terms, means to seek universal knowledge. Both Plato and Socrates, perceive the capacity to stabilize the uncertainties and indeterminacies that human relations and interactions create as a requirement for universal knowledge, embodied by science. Since knowledge is considered objective, the means to access it should thus be common to all. For Plato, it requires distancing oneself from anything that could affect one's perception of reality. According to this logic, reason is framed as an objective disinterested true knowledge. Still following Despret's analysis, Plato then places under the realm of "passions" (which can be considered today as emotions), anything that impedes access to a common truth. From that point on, emotions and knowledge in the West became irreconcilable. Emotions, purely constructed in opposition to reason, were defined as anything that alters humans' perception of the world and blind humans to reality. Hence, they should be controlled. In Despret's view, the versions of emotions and reason depicted here are not the only existing one, but they are the most dominant.

In sum, the dominant version of reason is philosophical and epistemological, and can be equated with Weber's theoretical rationality defined as the ability to grasp reality through thoughts (Kalberg, 1980). Put differently, it is the faculty to think objectively, without emotions, about the reality that surrounds us and is what distinguishes humans from other animals (Korsgaard, 2009). The dominant version of

reason is commonly accepted in Western societies. It even plays out in everyday language in which reason is regarded as good, and emotions as bad (Clore, 2011).

Rationality on the other hand, is a relation between ideas and action (Swidler, 1973). Rationality, unlike reason, can be seen as social and ontological. It encompasses Weber's practical rationality (which leads to everyday means-end action based on interest), substantive rationality (which leads to value-rational action) and formal rationality (which leads to means-end rational action based on laws, rules, or regulations) (Kalberg, 1980). Different rationalities therefore coexist, and are based on different interests, values, rules and regulations. For instance, economical rationality is practical and based on rational choice theory, evaluation, calculation and often aims for profit (Nardin, 2015).

However, reason and rationality closely interact. Despret (1999) is again helpful in understanding this relationship as she shows how the notion of reason is political in both the sense that it is connected to power relations among humans and that it shapes the political sphere. To do so, Despret first explains how the initial problematization of universalism is political. According to her, Plato creates a problem by seeing universalism as a prerequisite to creating a just and socially ordered society. For Plato, having a multitude of epistemologies creates multiple realities which are incompatible with the notion of politics. Reason thus is a necessary building block of politics and the political, and accessing it is a prerequisite for taking part in politics and acquiring political power. In addition, controlling one's emotions becomes a condition for governing others and legitimizes making decisions concerning other "irrational" human beings.

Truth was, until this problematization, only present in relation to an individual and reality. It was only a question of how each person related to reality, whether they controlled their emotions or were fooled by them. But Despret sees it from now on moving and expanding into relations among humans. With a new fundamental concern arising: how to deal with others who claim objective knowledge different from one's own? Following this idea, Despret goes further and questions if Plato's motif of using universalism, which according to him is a condition to the existence of politics, was led by a stronger will to discriminate rather than a will to universalize. As this requirement creates discrimination against what is inherently human: emotions. It permits the disqualification of actors and knowledge under the criteria of emotionality.

The dominant version of reason thus creates hierarchies of actors and knowledge depending on how truthful they are. And, I would argue, that the dominant version of reason creates hierarchies of rationalities. The image that allows me to understand best the relationship between rationality and reason is that of a ladder composed of several rungs. The ladder represents the dominant version of reason with its promised means to attain truth on top, and each rung is a different rationality. On top of the ladder thus stands the rationality that is closest to truth, at the bottom the most emotional, irrational, subjective one.

However, if we question universalism and one's capacity to access pure truth, reason is defined and used by powerful actors to maintain their status (Despret, 1999; Escobar, 2020; Flyvbjerg, 1998; Healy, 2003; Marcus, 2013; Plumwood, 1993). In this sense, the Western philosophical version of reason allows powerful actors to claim their patriarchal, capitalist and technocratic rationality as neutral, detached from any power dynamics (Farrall, 2019; Healy, 2003; Plumwood, 1993). This rationality can

be seen as a single dominant one in which all the different components, patriarchy, capitalism and science, are intertwined and entangled to create a block: capitalist rationality becomes patriarchal just as scientific rationality becomes conquering and masculine (Chollet, 2018; Farrall, 2019; Levesque, 2020).

The Western rationality takes in the eyes of society the purest form of reason, it is perceived as the most valid rationality, the best, the truest (Farrall, 2019). It therefore resides at the top of the ladder as a hegemonic rationality. The meaning of hegemony, in this context, refers to the diffusion and popularization of elite world views of reason and rationality in order to maintain and exercise political leadership (Bates, 1975). Insidiously, the hegemonic rationality admits sometimes that it cannot fully have access to the truth, it acknowledges its limits (Marcus, 2013), and therefore allows the existence of other rationalities. But these non-hegemonic rationalities never have the hope of dethroning the dominant one, since this latter can at any moment call upon reason as a protection (Farrall, 2019).

The reason-rationality interaction clearly plays out in political spheres. Marcus (2013) argues the field of politics is deeply shaped by the dominant version of reason. He states that reason and rational knowledge, strongly influenced by Plato's thought, are assumed in politics to have access to objective non-negotiable truths. Albeit sometimes acknowledged as imperfect, reason is considered the only legitimate source of political decision-making. This tolerance to the potential flaws of rationality is partly due to the fear that emotions, its perceived antagonist, will override thought processes. Two examples will serve to illustrate how the dominant version of reason plays out in current political systems, and how it permits the imposition of the Western hegemonic rationality.

First, expert participation is encouraged in political settings as they are assumed to have access to truth (Marcus, 2013). This especially involves the inclusion of scientists since science is the incarnation of rationality, in the sense of Plato. In politics, science plays an important role, including framing debates, even in deliberative governance settings (Wynne, 2005). For many scholars, scientific rationality, characteristic of Western hegemonic rationality, is essential to politics, and people who do not perceive the world as scientists do are considered as illegitimate in political spheres (Marcus, 2013).

As a consequence, actors are expected to comply to pre-established scientific principles and notions of what is considered rational or irrational (Turnhout et al., 2020). Outcomes from deliberative settings, however high in democratic value, that do not meet these conditions are often discredited. This was recently the case for the recommendations of the 150 participants of the *Association des Citoyens de la Convention Climat* in France. The recommendations made to address climate change were promised to be fully considered by the assembly, without preselection. Yet three of them were set aside, before any deliberation, by French President Macron because they were, in his view, politically unacceptable (Willis et al., 2022). One of them was to include in the constitution the crime of ecocide (Willis et al., 2022). Likewise, during the 2021 UN Food Systems Summit, a multi-stakeholder initiative, a scientific group was responsible for framing food systems transformation and evaluating solutions proposed during the event (Canfield et al., 2021). The scientific group only consisted of natural scientists and economists. Thus, the idea of reason as access to a single truth, allows scientific rationality to be used as a means of discrimination and limitation of democratic opinions under an argument of irrationality.

A second illustration is how emotions in politics, if not considered completely irrational, are at most seen as arational (Marcus, 2013). Despite academics' acknowledgment that the binary opposition between emotion and reason is invalid, many still consider it as being accurate enough to use (Lynggaard, 2019). And more than merely being tolerated, this dichotomy widely shapes current Western expectations of democracy (Marcus, 2013). For instance, according to a recent survey, one out of eight Americans considers women too emotional to take part in politics (Carnevale et al., 2019). This implies that emotions are a criterion for (perceived) political exclusion and that women are perceived as more emotional than men, thus less capable of accessing reason, and in turn, power. In this case, the patriarchal character of the dominant rationality uses arguments of subjectivity to deligitimize actors in politics. Under the argument of emotionality and therefore of incapacity to reach the truth promised by reason, the dominant rationality is capable of perpetuating unequal relations of power between men and women.

In brief, reason is a philosophical notion that is based on a foundation of universalism and an accessible truth to the one who knows how to think without emotions. Rationality, which is social, is a relation between thought and action. There are different existing rationalities, but through power relations, one rationality is imposed as dominant. Western rationality, patriarchal, technocratic and capitalist, imposes itself as the most valid and reasoned of all rationalities. Moreover, the dominant version of reason permits this imposition and maintenance of a single rationality that underlines the logic of our governance systems to maintain elite influence.

2.2. Serious Games

To problematize and challenge the imposition of the dominant rationality by allowing people to engage with pluralism, I decided to create a serious game. Serious games are games that integrate learning and entertainment but their main goal is not entertainment (de Suarez et al., 2012). They are useful tools to explore complex topics in safe spaces (Rodela et al., 2019). Serious games have a specific purpose (de Suarez et al., 2012), which is often to address societal challenges (Aubert et al., 2019). They have the potential to create learning spaces in which players can experience, reflect on, and question as well as renegotiate and replay visions or behaviors underlying societal challenges (Tschakert & Dietrich, 2010).

In fact, according to Deleuze and Guattari (1980), games are capable of processes of territorialization and deterritorialization (p.368). Meaning in this case, through play relationships can be renegotiated and reorganized as players find themselves in a new context. Games therefore offer possibilities to explore different worlds, different versions of reason and non-hegemonic rationalities, and how they could potentially coexist in pluralism and shape political possibilities.

A key outcome sought through the use of serious games is social learning (Den Haan & Van der Voort, 2018; Mayer, 2009; Medema et al., 2016; Moreau et al., 2019; Speelman et al., 2018). Social learning processes can be identified as social interaction in a collaborative context to bring about a change in understanding (Reed et al., 2010). In game settings, social learning can encompass cognitive, normative, and relational learning (Den Haan & Van der Voort, 2018). In other words, reframing or

gaining knowledge; changing perceptions or paradigms; and improving collaboration, trust and understanding among players.

Serious games can take different formats such as board games (Tschakert & Dietrich, 2010) or role plays (Moreau et al., 2019). Aside from governance, as mentioned previously, serious games can be used in a wide range of fields, such as resource management and education. They are often characterized in different types according to their purpose. Rodela et al. (2019) make a distinction between research, educational, and intervention games. Research games help academics understand and expand on data. Educational games share knowledge and often address broad issues such as climate change. While intervention games are used to initiate or support change. This thesis will focus primarily on this last category, which is closely related to social learning.

According to Rodela et al. (2019), the development of an intervention serious game covers four steps. First conceptualizing the game, then testing it for improvements, playing it, and finally evaluating its outcomes. As the purpose of this thesis is to develop a non-digital game prototype, the literature review focuses on their conceptualization. Initially, before thinking of the design of the game, it is necessary to thoroughly analyze the topic that it will address (Aubert et al., 2019). Based on the acquired knowledge, identifying the purpose and desired outcomes of the game is then crucial to guide further game choices (Rodela et al., 2019). According to Aubert et al. (2019), the design of a game and its outcome are completely determined by the question of why and for whom it is developed. They recommend answering these questions before making any decisions regarding the game to create an effective, coherent, and appropriate game. Answering the *why* includes, among other things, identifying the issue at stake. The *who* is about the targeted audience and thus deciding who will play the game, how many people, from which sector, with which beliefs and expertise.

Designing a game then involves choosing which game mechanisms will be used and with which variables. Aubert et al. (2019) identified key variables in serious games that can help guide the design process. Variables about the technical aspect of the game include the level of complexity, reflective learning, open-mindedness, and emotional involvement. Other variables, still following Aubert et al., are linked to the purpose, such as the extent to which players share an understanding of facts or values. Medema et al. (2016) also identified characteristics of social learning games for example the level of realism of the game.

Thus, to develop a prototype game, the first step is gathering knowledge of the topic and answering why and for whom the game is being developed. Based on these first two steps, making decisions regarding the game typology. Which involves choosing the format, variables, and rules of the game. Then, implement a testing phase to improve the game and finally evaluate its outcome.

2.3 Alternative Versions of Reason

Alternative versions of reason, more inclined to favor coexistence than the dominant one, are developed in this section. These versions were further used to inform the design of the serious game as they are argued more prone to foster pluralism.

As mentioned previously, although the dominant version of reason greatly shapes politics, it is an ideal. Liberal democracy, the main political system in the West, can be considered deeply rooted in a romanticized conception of unemotional reason (Wahl-Jorgensen, 2019). Yet, neither reason nor rationality is ever fully objective. Further, science is inevitably to some extent subjective and humans are always in part emotional. In support of this, four academic threads are discussed to develop the above critique and highlight alternative versions of reason.

The four critiques were selected through a literature review. They were chosen because they reflect central debates on Western reason and rationality in relation to politics over the last thirty years. Most of the scholars who argue for these critiques, mentioned in the following sections, have made significant contributions to the study of the interactions between reason, rationality and politics. Other scholars, such as Healy (2003), were chosen because their work clearly and explicitly addresses the interaction between reason, rationality and pluralism. In addition, the critiques are drawn from several fields of research because each one addresses a different problematic aspect of the dominant version of reason.

Cultural geography

Cultural geographer Flyvbjerg (1998), argues power solely determines which knowledge and rationality are considered valid. Power is what defines reason, it can be seen as the context of reason. Rather than a universal truth, powerful actors are thus the ones who set the boundaries of what is considered rational. Consequently, reason is mainly a political construction that exists only at a given time in a specific context (Webel, 2013). Moreover, still following Flyvbjerg, the more power is involved, the less reason there is. Indeed, one of the great privileges of those who hold power is to have, through the claim to hold reason, the freedom to define what is considered reality. As power increases, so does this freedom, thereby reducing the need to prove what reality actually is. Consequently, as power increases, the need to understand reality decreases. Yet reason is the supposed access to truth, and therefore to reality. Hence, the more power there is, the less there is reason.

In this sense, Flyvbjerg does not critique reason itself but rather its use under the veil of neutrality, universalism, and devoid of context. Accordingly, reason should not be perceived as merely a quest for objectivity but also a tool for exercising power (Webel, 2013). Reason, perceived in the dominant version as a pillar of democracy because of its neutrality, thus loses this main asset.

As a consequence, for Flyvbjerg (1998), rethinking reason in terms of power becomes a necessity to build more fair political systems. The authors highlight how politics based only on a rationality imposed by powerful actors is not sufficient to solve current complex issues such as environmental ones. Addressing this weakness in modern politics becomes thus crucial. Flyvbjerg adds that political processes that are not strictly rational (in the dominant version of reason) and unemotional have higher democratic values. Hence, the author calls for a reframing of reason in terms of power relationships to build stronger democracies.

Political Psychology

As seen before, the emotion-reason dichotomy plays a central role in shaping Western political systems (Marcus, 2013). Marcus (2013) states "No matter the specifics of different democratic regimes, much rests on the question of who can reason properly, for reason and its product, knowledge, are the sole bases for sovereign decisions." (p.131). In other words, politics strongly relies on the question of who lives in a world of reason and who lives in sheer opinions. Because emotions are considered incapable of accessing knowledge, viewed as truth in political spheres. While reason is assumed to be objective and universal.

However, neurobiological discoveries, notably on primers, prove that the architecture and functioning of the brain cannot support the hypothesis of reason's opposition to emotions (Damasio, 1994). For Marcus, these findings not only strengthen the idea that human beings are always both rational and emotional, but also that emotions are necessary in order to make decisions and judgments, even in politics. This opens up the possibility of redefining emotions as productive in the political sphere.

Other scholars have supported this idea by highlighting that politics is never devoid of emotions (Lynggaard, 2019). Some have even argued that emotions can often be regarded as rational (Pham, 2007; Scherer, 2011). Emotions, framed in a such new way, have the capacity to be recognized as a useful and necessary political resource instead of obstacles to judgment (Lynggaard, 2019).

By rethinking the role of emotions in politics, Marcus and others indirectly critique the dominant version of reason constructed in opposition to emotions. The reason-emotion dichotomy should, according to these scholars, be abolished. Reason and emotion should become a continuum in which there is never one without the other (Lynggaard, 2019). In consequence, reason becomes never fully impartial and objective, and political exclusion under the criterion of emotionality loses, if not entirely, much of its validity.

Science and Technology Studies

Science and technology studies (STS) scholars have paid further attention to the link between knowledge, reason, rationality and politics. They highly critique the imposition of scientific rationality in political spheres which marginalizes all other knowledge, views, and opinions (Healy, 2003). Following the logic of the dominant version of reason, only one type of knowledge and rationality can have access to truth. A hierarchy is thus created among different types of existing knowledge (Pellizzoni, 2001). Similarly as with actors, the concept of universalism can and is used in scientific and political spheres to discriminate and marginalize types of knowledge that differ from the imposed single rationality (Healy, 2003).

There is no inherent problem with knowledge hierarchy and selection; but in this case, two problems arise regarding this process. First, the world of reason has been shown to be linked to social constructs (Healy, 2003). Closely related to the link between reason and power, the realm of reason and values have shown to be tightly interwoven (Pellizzoni, 2001). Reason, far from being neutral, is thus partially shaped by norms and values. Hence, discriminating against knowledge based on the criterion that it is not universal can be regarded as invalid.

Second, it is problematic that knowledge potentially relevant to political issues is excluded due to its non-subjection to the scientific framework and dominant version or reason (Healy, 2003). Especially in spite of the fact that politics would benefit, qualitatively and socially, from combining other types of knowledge with scientific knowledge (Turnhout et al., 2020).

Accordingly, Healy (2003) advocates eliminating the notions of universal knowledge and further the dominant version reason as it has contributed to the hegemony of scientific rationality. Following their approach, encouraging differences in politics implies moving away from a narrow vision of non-contextualized, unemotional, and valueless knowledge and reason to include different rationalities and relevant knowledge. Healy defines this as epistemic pluralism and as a requirement for more inclusive politics.

Feminism

The concept of reason has been extensively criticized by feminist academics and philosophers for being constructed around white elite men, and as opposed to emotions (Fricker, 1991; Plumwood, 1993). According to many feminists, the ideals of reason, however neutral they may seem, are masculine (Lloyd, 2002). This normative construction has resulted in viewing groups assimilated to emotional traits, historically women and other marginalized groups, as less rational (Plumwood, 1993). Reason presented as free of values and universal is a pillar of patriarchy and a strong justification tool for discrimination (Plumwood, 1993; Ramose et al., 2003). This critique is similar to that of STS and power scholars. All stress the link between power and reason. In addition, they all denounce that this concept so construed excludes or delegitimizes the participation in politics of groups regarded as too irrational based on an imposed conception of what reason is. The feminist critique, however, points to patriarchy as the source of values that shape the conceptualization of reason. For feminist scholars, discrimination is not solely done in the name of emotion, such as articulated by Marcus (2013), but rather in deviance from a deeper norm dictated by male elites.

Feminist movements have tackled reason in different ways and sought different outcomes (Plumwood, 1993; Prokhovnik, 1999). Few have called for a total rejection of reason. Most feminists have argued for a reconstruction of the notion of reason to reduce its oppressive character. According to Plumwood (1993), this process should take into account the embeddedness of reason in institutions and types of knowledge.

Two main approaches have been used by feminists to create an alternative version of reason. Some have tried to reframe it in a way that does not rely on dichotomies, whether in opposition to emotion, nature, or femininity (Prokhovnik, 1999). Others have highlighted the existence of different valuable rationalities to abolish the imposition the idea of universal reason accessed only through one rationality (Plumwood, 1993). Yet, as shown in the first part the literature review, dichotomies continue to shape a single conception of reason, making these attempts at reconstruction an unfinished project.

Summary

Critiques of rationality and reason share the common attribute of challenging claims of neutrality. They all highlight the relationship between reason and power. In the analyses, the dominant version of reason is seen partly as a tool that allows the perpetuation of a status quo to the advantage of elites, through the imposition of a single rationality, a knowledge, a norm, or a dichotomy.

Therefore, questioning and problematizing this conceptualization of reason and its associated hierarchization of rationalities is a vital step if we aim to address asymmetrical power relationships in governance and enhance pluralism. Firstly, to support more fair and inclusive politics. Secondly, to encourage political processes that have the potential to challenge the status quo responsible for numerous current societal challenges, and potentially nest more sustainable political outcomes than current ones.

Furthermore, the different critiques highlight ways to conceptualize reason less oppressively. Whether reason should be viewed, as a continuum with emotion, a notion embedded in power relationships, independent from dualistic relations, or as a host of multitude of valuable rationalities, all the alternative versions proposed by the scholars can be seen as stronger, in Despret's view, than the classic dominant one. Stronger because they allow more opportunities for coexistence and inclusion. In my mind, the dominant version of reason is, as said before, a vertical ladder. However, alternative versions could potentially have the capacity to tilt the ladder of reason horizontally, refusing thus to create inevitable, unconditional and non-contextual hierarchies of rationalities. Hence, they served as valuable input for developing a serious game about pluralism.

3 Research design

This research followed an iterative process as depicted in *Figure 1*. At first, the problem statement led me to delve deeper into the link between reason, rationality and politics in the above literature review and to use the concept of pluralism as the theoretical framework and basis for the research question. I then created a serious game aimed at encouraging players to enact pluralism by embodying non-hegemonic rationalities. However the preliminary data analysis of the game sessions showed how players struggled to fully embody a rationality different from their own, which was a prerequisite for them to enact a pluralism of non-hegemonic rationalities.

Consequently, I changed the theoretical framework to fabulation, which is a useful concept to analyze how players were limited in embodying a rationality different from their own. I then adapted my research questions to players' ability to fabulate. The data from the game sessions was thus coded based on the definition of fabulation to answer my research questions. Finally, the discussion and conclusion bring the concepts of fabulation and pluralism back together through the findings of the game.
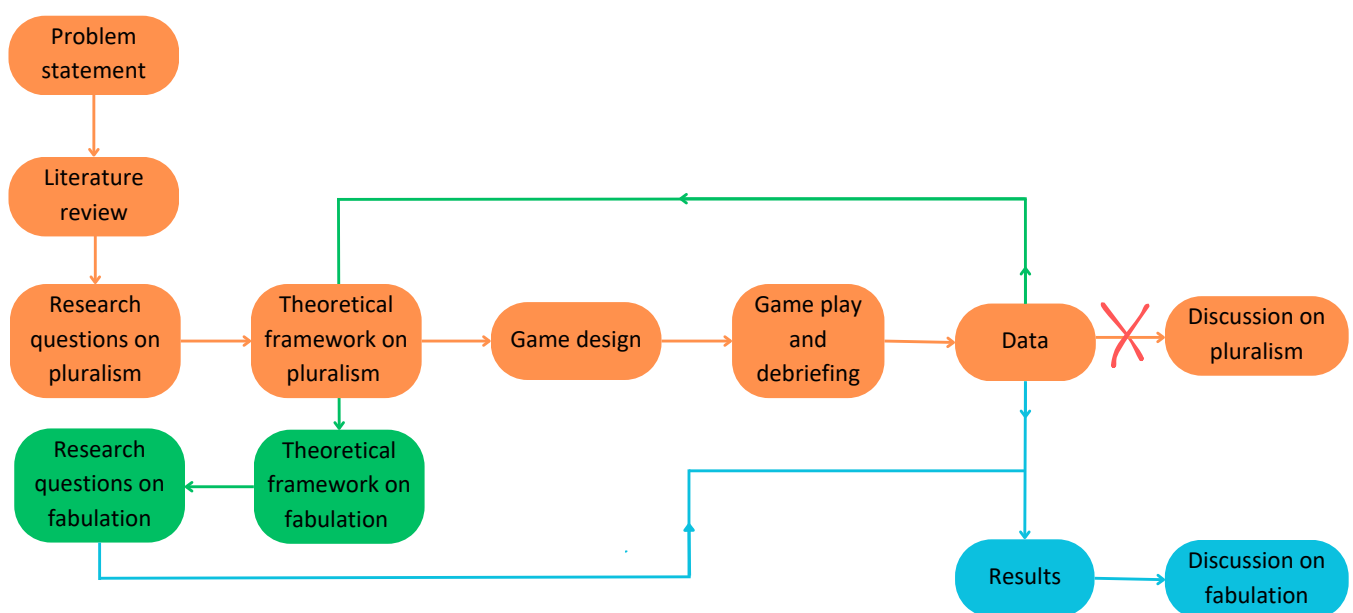
Figure 1 Map of the research design

As per the research design, I begin this chapter by defining the initial research question derived from scholars' calls for pluralism. I then introduce the concept of fabulation and what it means to fabulate about different rationalities. Finally, I present the final research questions that emerged iteratively from the data collected during the game sessions.

3.1 Research question on pluralism

This thesis starts from the need for complex problems to be tackled by diverse perspectives and knowledge lenses. However in practice, a dominant rationality remains hegemonic. This imposed rationality not only creates injustice, but also limits the possibility of exploring sustainable futures in political spheres. Literature addresses this by calling for pluralism, which recognizes and values differences among diverse actors, knowledge and rationalities. But valuing productively these differences is challenging and complex. Even more so in a Western culture deeply rooted in a philosophical tradition of reason conflicting with respecting diverse ways of knowing. Thus, a necessary first step in promoting pluralism is to challenge the imposition of a single rationality in the political sphere.

From here, I aimed to develop a serious game in which players have the possibility to embody non-hegemonic rationalities to enact pluralism. The game's purpose was for players to engage with the challenges but most importantly, the opportunities of pluralism. The main research question developed was:

In what ways can serious games make visible the challenges and opportunities of pluralism?

3.2 Theoretical framework fabulation

The data collected during the game sessions revealed, however, that players had difficulties fabulating about different rationalities. Fabulation in this thesis is defined from the article 'Taking care of trouble: Ontological precarity and fabulation of the Voice of the Dead' written by Lastres and Wiame (2022). In their paper, the authors draw on numerous contemporary thinkers, including Deleuze, Guattari, Stengers, Despret, Harraway and Tsing, to argue the need for fabulation as a tool to face the problems of our epoch.

Fabulation, according to them, is a type of narrative that starts from the necessity to live and act with the ongoing uncertainty that surrounds us. While modern epistemology never ceases to aspire towards predictability and stability, today we find that our futures shaped by the ecological crisis are uncertain and can only be so. These uncertainties subsist and will continue to do so despite the efforts of our leaders to disregard any idea or knowledge that does not align with a rational framework claiming to mitigate uncertainty.

Our ways of living, our ontologies, are therefore also precarious. In the sense that our conditions of life are constantly moving and uncertain, so too are our ontologies. Uncertainty and ontological precariousness can be frightening, but fabulation allows us to engage, live and work with them. Fabulation has at its core the acknowledgement and acceptance of the uncertainty that surrounds us. Thus, doubt and hesitation become necessary conditions to make fabulation the productive and creative process it is capable of being.

Fabulation could be seen as a type of narrative which, far from breaking with reality, is about making oneself more sensitive to what exists but is not perceived, and risks being considered parasitic. Making oneself sensitive means paying attention to something and becoming closer to it, engaging with it, in order to potentially care for it. The aim of fabulation is then to increase the importance of those things that seem to be details and, from them, suggest that another story is possible. It is a way to take care of uncertainty and ask ourselves what our possibilities are. In other words, fabulation asks the question: what is there to do with what is already there?

Faced with gigantic scales of temporality and distance that characterize the Anthropocene and participate to our ontological precariousness, fabulation has the ability to make common ground. Through its narratives filled with 'what ifs', fabulation allows us to create bridges between humans and between humans and non-humans. To fabulate allows us to feel moved and concerned by the story of other humans and non-humans, who are close or far away from us, and invites us to create new attachments with them. However, these bridges and attachments are not embellished, the goal of fabulation is not to make things beautiful. Fabulation is rather an active gesture that aims to open up the possibilities of new relationships and new futures based on what already constitutes our worlds. Fabulation is therefore a process of singularization, of expanding our worlds and of productive creativeness.

To fabulate becomes the means to deal with the uncertainty and the troubles of our time by making other futures still possible. It is thus with a political objective that fabulation arises. To fabulate is a means to resist the modern scalable logic, to take into account the continuous uncertainty that surrounds us, to make stories emerge that are not on the register of the fictive or real but on that of the possible, and to summon science, subjectivities and politics all at once. In short, fabulation is about resisting what presents itself as obvious. Fabulation thus becomes a political means to pluralize the world and to further politicize this plurality.

In the context of this thesis, one can thus say that to fabulate about different rationalities is to be sensitive to and give importance to the existence of other ways of thinking and knowing, to then speculate on which possibilities, which stories, could arise if these rationalities were enhanced and supported. As such, fabulating about different rationalities can be seen as a political act of creating narratives against the current future that follows the dominant rationality.

3.3 Research questions on fabulation

The research question was adapted since the players first had to fabulate about different rationalities in order to enact a pluralism of non-hegemonic rationalities. As mentioned above, to fabulate about different rationalities is to be sensitive to and give importance to the existence of other rationalities to then speculate on which possibilities could arise if thy were enhanced and supported. Derived from this concept, a main question to guide the data analysis was elaborated:

In what ways can serious games make visible people's abilities to fabulate about rationalities divergent from their own?

In view of the definition of fabulation and the aim of analyzing people's ability to fabulate, three sub research questions were developed:

SRQ1: How did the players make themselves sensitive to the rationality they were ascribed to?

SRQ2: What value did the players attribute to the rationality they were ascribed to?

SRQ3: What limits did the players face in their fabulation?

4 Methodology

4.1 Game Design

To answer the research question, I naturally first had to design a serious game. In line with the literature review, the game was developed according to the steps as per Rodela et al. (2019) and Aubert et al. (2019). The methodology I used to develop the game is illustrates in Figure 2 and is further explained in this section. First, I expand on why and how the game was designed by making clear the purpose of the game and the target audience. Next, by explaining which characteristics and mechanics of the game were chosen and why. Then, by discussing the testing phase of the game and the changes that were implemented. Lastly, I present the final version of the game. While the methodology is presented in a linear way for clarity, the actual design process was cyclical and iterative, filled with step backs and even sometimes drastic decision changes.
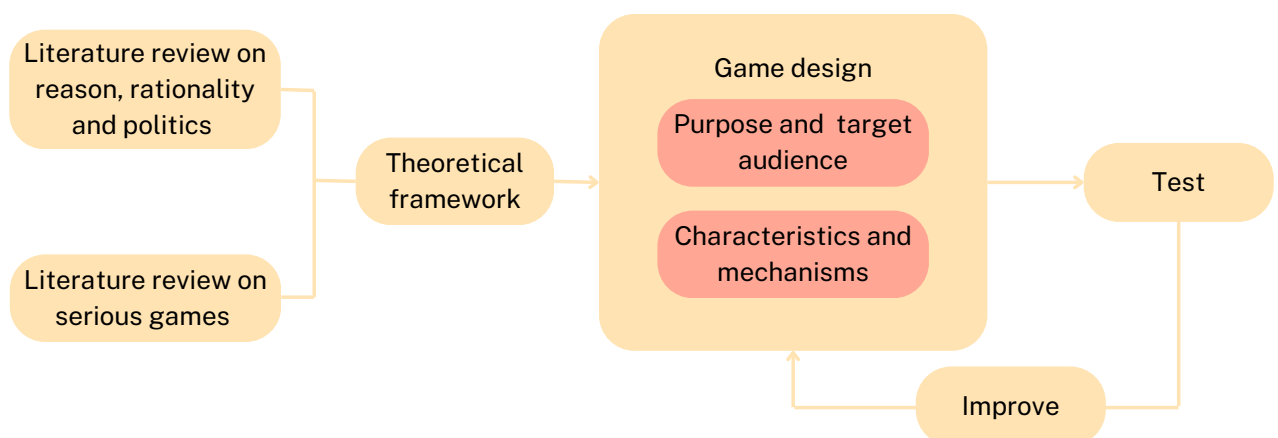
Figure 2 Game design methodology

Purpose

The objective of the game was to encourage players to enact a pluralism of non-hegemonic rationalities. By doing so, player could have the opportunity to explore different political possibilities derived from the collaboration of divergent rationalities. Players would be able to actually engage with pluralism, its challenges and opportunities. In order to enact pluralism, players first had to embody a rationality other than their own, and thus to fabulate about this rationality. Then, they had to engage and interact with other rationalities embodied by the other participants.

Target audience

Students of the Master of Organic Agriculture (MOA) at Wageningen University and Research (WUR) were chosen as the target audience for multiple reasons. First MOA students have a background in both natural and social sciences and are familiar with the complex and interdisciplinary issues of food systems, thus also with food systems governance. Second, because they are likely to be future food systems experts, and encouraging these students to think about rationality and reason seems crucial to create pluralistic food governance process comprising scientist participation. Third, MOA students have a common base of two courses but have considerable freedom in their curriculum, which leads to having a heterogenous cohort of students that are used to discussing and debating with peers who hold divergent aspirations for food systems transformation. Finally, it was easier for me to contact MOA students and encourage them to play the game as I myself study MOA.

Game format

Based on the purpose of the game and the target audience, the format of the game was chosen. Typologies and variables of serious games from Aubert et al. (2019) and Medema et al. (2016) were used to guide this step. Three key decisions were taken early in the game process to build the logic of the game and further direct game design choices.

First, the game was opted to be a collaborative role-playing game as it encourages discussion and cooperation between players and supports worldviews sharing (Aubert et al., 2019; Medema et al., 2016). This choice was in line with the game's aim of exploring different rationalities and encouraging pluralism. A competitive game did not make sense to me as players would have been less prone to explore and value the different rationalities at play. Consequently, it was decided that each player would embody a specific rationality and collaborate to make decisions.

Next, the game format was decided to be narrative, in which participants deliberate over political decisions based on a story. Moreover, players' decisions would have an effect on the story itself. The asset of creating a narrative game is to help players immerse themselves in the game and explore cause-effect relationships (Medema et al., 2016). To create a logical and coherent storyline, a historical case study was chosen as inspiration.

Finally, to increase players' engagement, the game was designed as asymmetric (Medema et al., 2016). In this case asymmetric gameplay implied players collaborating to defeat a more powerful actor. In line with the literature review and introduction, the game itself would represent the powerful hegemonic rationality while the players would embody non-hegemonic rationalities and have to collaborate to make their voices heard. This decision was made also to facilitate pluralism, as no participants embodied the dominant rationality and thus potentially leaving more space to the other rationalities to be legitimized.

Study case

The game's story was based on the events that lead to the Dust Bowl. The Dust Bowl is a series of devastating dust storms in the United States that occurred during the 1930s due to inadequate agricultural practices in semi-arid soils coupled with years of drought and intense rains (Libecap & Hansen, 2002; Popper & Popper, 1987). However, the inadequate agricultural practices were embedded in many political and economic decisions which can also be considered as key factors leading to this man-made disaster (Holleman, 2018).

The Dust Bowl was a relevant case study for this thesis as it revolves around food systems which, as discussed in the introduction, currently call for pluralism to address its challenges (Turnhout et al., 2021; Wiegleb & Bruns, 2018). Furthermore, the Dust Bowl example illustrates how the use of individualistic, economic, and short-term rationality, in other words the hegemonic rationality, can lead to a social and environmental catastrophe (Holleman, 2018; Popper & Popper, 1987). Lastly, the Dust Bowl was chosen based on the assumption that some players would be familiar with it due to its presence in popular media.

Four key factors that lead to the Dust Bowl were chosen as themes to the four rounds which would constitute the game's narrative. Factors were selected because they encompassed moral, environmental, economic and social components of food system politics, thus allowing players to deliberate over a variety of different topics.

The historic knowledge surrounding climate and land use at that time inspired the first round of the game. "Rain follows the plow" was famously quoted during the Dust Bowl era (Libecap & Hansen, 2002). It was believed that if land is cultivated for human needs, it will become more fertile and the climate will adapt by providing rain. Far from being a merely a belief, this theory was supported by many scientists (Libecap & Hansen, 2002). Such misleading knowledge of the environment lead to unsuitable agricultural practices across Western America (Holleman, 2018; Libecap & Hansen, 2002; Popper & Popper, 1987).

The second event used in the game, is the American government's implementation of the Homestead Act from 1862 to encourage settlement in the West. According to Anderson (2011), under this act, any head of household who committed to grow food could acquire 160 acres of land for free or at a very low price. As a result, approximately 10% of America's land, primarily the semi-arid regions of the midwest, was put at the disposal of settlers. Still following Anderson, under the rationale of fighting unemployment and overpopulation in the cities, the act's objective was above all to privatize land.

The third factor drawn upon for the game's story, was the expansion of the modernization ideal during the decades following the Homestead Act. Holleman (2018) discusses how farmers adopted, during that period, intensive techniques to increase their income. Benefiting from monoculture, famers gave up on many less intensive and soil exploiting practices ultimately leading to soil depletion.

These events culminate in the Great Depression which is the theme for the last round of the game. In the 1930's, an economic crisis severely hit the United States resulting in the crash of crop prices (McLeman et al., 2014). To address this crisis, farmers further overproduced to compensate their

economic instability which led to even more soil depletion (Holleman, 2018). Ultimately disturbing the soil to such an extent that when strong winds and drought came to the West, the soil was lifted, creating the infamous Dust Bowl.

In summary, the four rounds of the game were inspired by the topic of knowledge of Western lands, land distribution, technological implementation and finally market crisis. As the game aimed to explore alternatives to the dominant rationality, I was worried that a specific well-known historic case would restrict player's ability to think differently. Thus, the story was translated in a fantasy narrative; the study case was adapted to take place in a faraway magical kingdom with plans to expand westward, leading to a meeting in which actors would discuss this new project. Only at the end of the game would players be informed that the story was based on the Dust Bowl to enrich the discussion during the debriefing after the game session.

Roles

To develop the roles, I used the alternative versions of reason discussed in the literature review as primary inspiration. These four critiques made sense as a foundation for a game that sought to encourage pluralism, as they seek to reframe reason in stronger versions which allow for more coexistence, thus for more plurality in political spaces. So each role represented a rationality based on one or more alternative versions of reason proposed by scholars of power, feminism, political psychology and STS; respectively on reframing reason in terms of power relations (Flyvbjerg, 1998), moving away from dichotomies and a single rationality (Plumwood, 1993; Prokhovnik, 1999), viewing emotions as political resources (Marcus, 2013), and calling for epistemological pluralism (Healy, 2003). These four critiques, consequently, led to the elaboration of four roles. I also wanted to make all the players embody non-hegemonic rationalities to avoid creating an a priori hierarchy of rationalities during the game. Or at least to not create space for a player embodying the hegemonic rationality to enact common mechanisms of knowledge and actor discrimination.

In relation to the game's aim, the format of the roles had to enable participants to enact pluralism. Players had to not only embody a rationality different from their own, but also value the other rationalities and ask themselves which pathways for transformation could they collectively bring about in a specific context. Therefore, I did not want the players to adopt an entrepreneurial approach during the game, where they would impose their own a priori solutions on others and not engage with pluralism. I was worried that using stakeholders as roles for the game such as farmers, governmental representatives or scientists would not offer the space for the collaboration I sought. Hence, a new concept could be introduced: the diplomat. The diplomat is a philosophical figure who contributes to pluralism (Conway, 2020). It was first mentioned by Leibniz, further conceptualized by Stengers (2022) and applied to different domains such as the environment by Morizot (2020).

Morizot's interpretation of diplomacy serves as a main source to introduce this concept, as his article *"Passer de l'autre côté de la nuit: Pour une diplomatie des interdépendances"* clearly and succinctly discusses diplomacy. Stenger's work is then be used to further explain how diplomacy relates to pluralism. Lastly, I shortly explain how the literature review, the notion of pluralism and the concept of the diplomat were translated in practice into different roles.

Real diplomacy, as Morizot (2020) calls it, is a practice of interdependency that seeks relations of coexistence. Its purpose is to find just and viable solutions by continuously prioritizing interdependencies. Unlike in common diplomacy, diplomats do not only defend their own interests but also, and most importantly, relationships. Diplomacy does not ignore existing interests, but rather reveals such a complex web of relationships that it becomes impossible to address issues from a single actor or nation's perspective. Taking the perspective of the web of relations is thus the only way to proceed.

Diplomatic processes seek to politicize each situation by concretely analyzing the interactions that are at stake. This implies no imposition of a pre-existing good or bad solution, nor allies or enemies. In diplomacy, monolithic camps do not exist (Stengers, 2022), and alliances are built only against those who threaten the constitutive interdependencies. Preserving existing relationships and creating new ones is a diplomat's main preoccupation.

Still following Morizot, doubt and betrayal are the key feelings of diplomats. Doubt because as soon as diplomats place themselves in a position of certainty, they are no longer able to leave room for plurality. Betrayal because a diplomat continually assume the position of a translator oscillating between representing a third party and ensuring their reliability to other diplomats.

Diplomats are not wiser than others. They recognize value in every point of view that claims to matter in part because they are aware of their tendancy perceive themselves as extracted from the web interdependencies ; they acknowledge sometimes thinking of themselves as free from relationships that are not obvious to them. Thus, diplomats are open to other ways of seeing, understanding and knowing to put in light dependencies in order to further protect the existing, and create new, ontologies. In other words, diplomacy has at its heart the aim of bringing into existence a way of seeing that was previously possibly invisible and open up new possibilities for coexistence of ontologies (Stengers, 2022).

Far from implying consensus, pacification or valuing all views without distinction, diplomatic processes attempt to bring out necessary antagonisms (Conway, 2020). The group recognizes that not all views or values are worth the same, but decide collectively in a localized and unique context what should matter (Stengers, 2022). In short, diplomacy can be seen as a labour of difference that aims to build coexistence (Conway, 2020).

Diplomats and pluralism

Accord to Stengers (2022), diplomats ask themselves how to take on a situation while forbidding themselves to discriminate to adjucate or to rely on a transcendent authority to arbitrate. They do not seek to convey, or resort to, a pre-established truth. Diplomats partake in local approaches that ask how and in what way what matters to some, can be of importance in the situation that gave rise to diplomacy. Diplomacy's challenge is to exclude any prior agreement distinguishing between what is rational from irrational, and those who are entitled to participate in decision-making from those who

must accept the outcomes. It rejects generalities, and thus in relation to this thesis, the imposition of a single rationality or version of reason.

Furthermore, still following Stengers, diplomatic processes always involve affect. Diplomats care for their ontologies and wish to see them perpetuate and evolve, which they express through affect. Groups that Stengers refers to as purely nomadic, who do not care enough about their own ontology or at least do not fear their disappearance, are those who send experts instead of diplomats. To be clear, being a diplomat is a position, not a role, an expert can also take a diplomatic position. Therefore, unlike in an expert-driven political process, affect and emotions are necessary for a diplomatic process to take place.

Finally, diplomacy seeks to abolish tolerance. For Stengers, tolerance assumes a difference between a 'we' and 'others'. *We* recognize that others different from *us* exist and *we* accept their presence but only in a tone of pride, by feeling superior. The existing differences are translated into *us* taking the freedom of judging the *others*. In this thesis, I would argue that the 'we' of Stenger's tolerance can be seen as the dominant rationality and the 'others' as the alternative rationalities. The dominant rationality tolerates other rationalities, but never honors them. Diplomacy in theory breaks away from the dichotomies us/them and thus potentially has the ability to abolish the distinction dominant rationality/alternative rationalities and consequently to address the uncontextualized imposition of a single rationality in politics.

To summarize, diplomacy as per Stengers is a practice of pluralism that creates settings in which contrasts prevail (Conway, 2020). Diplomats aim to honor divergences that already shape our world's plurality while opposing easy pluralism that takes coexistence for granted. I would argue that diplomats are practical political figures of pluralism as understood by James. Though the literature is not clear on the requirements for creating a diplomatic setting, the diplomat was thus a useful concept to draw on for the game design.

Elaboration of roles

The different roles of the game were thus mainly based one the alternative versions of reason from the literature review and on the concept of diplomacy linked to James' pluralism. In line with scholars who argue against the emotion-reason dichotomy and show how reason is embedded in values (Marcus, 2013; Pellizzoni, 2001), each role represented a diplomat with a specific rationality steeped in values and emotions. Instead of having clear goals and interests, as is often the case in serious role-play games, the participants' roles were thus based on a way of thinking and feeling.

Rather than creating stereotypes, I sought to construct rationalities that were nuanced and abstract enough for players to fabulate on them and engage with pluralism. Likewise, since the game was set in a fantasy setting to encourage creativity , the roles were translated into fantasy figures as well to nurture players' imagination. The game's diplomats were a fairy, a witch, a wizard and a knight.

Additionally, the roles were designed to be contrasting in order to encourage productive disagreement, a key element of pluralism (Flathman, 2005). Inspired by Chambers et al.'s (2020) report on the conflicts between different scientific disciplines when it comes to promoting

transformative change, I therefore assigned tendencies to each diplomat. By tendency, I mean a rationality trait that may make political collaboration difficult, that is likely to create disagreement. For the Fairy and Witch, tendencies were directly derived from academic sources, while for the Knight and Wizard I created them myself based on their rationality and value because I could not find relevant literature. The Fairy's rationality was inspired by the reframing of reason by power scholars, which is why I attributed to it the tendency to overlook biodiversity that is often said about social sciences (Chambers et al., 2020). The Witch is arguably the diplomat most conflicting with western rationality and closest to a pluricentric view of nature, I therefore chose to make it speak as many indigenous languages do, by placing the action's object as the subject of the sentence (Gafner-Rojas, 2020).

Also, in order not to demonize the dominant rationality, some of its traits were added to the diplomats for whom it made sense. As mentioned in the introduction, the goal of this thesis is to challenge the imposition of a single rationality by supporting pluralism, not to blindly reject the dominant version of reason or western rationality.

Finally, to make the roles clearer and to emphasize the game's goal of embodying different rationalities, I described for each diplomat their reasoning for addressing problems, consistent with their rationality, emotions, values and tendencies. Table 1 provides an overview of the discussed characteristics for each diplomat.

Diplomat	Fairy	Witch	Wizard	Knight
Rationality traits inspired by the critiques of reason	Thinks of reason in terms of power (Flyvbjerg, 1998)	Refuses to associate groups of beings with a better capacity to reason (Plumwood, 1993), sees emotions as political resources (Marcus, 2013), and refutes the culture nature dichotomy (Prokhovnik, 1999)	Recognizes the existence and value of multiple ways of knowing (Healy, 2003)	Is strictly opposed to dichotomies and refuses to take a normative approach to reason (Marcus, 2013; Plumwood, 1993)
Emotion	Passion	Empathy	Curiosity	Doubt
Value	Justice	Diversity	Epistemic Pluralism	Complexity
Tendencies	Ignores biodiversity (Chambers et al., 2020)	Speaks by putting the object of the action as the subject of the sentence (Gafner-Rojas, 2020)	Values ideas over people	Mistrusts others that claim truth and thus struggles to create alliances
Dominant rationality trait	Output driven	None	Meliorism	Short-term action
Approach to adress a problem	Fights for what is believed fair	Has a holistic view of problems	Considers problems as puzzles to solve with an optimum solution	Takes problems step by step, and starts by addressing the first step

Table 1 Diplomats' characteristics

Game mechanics and rules

The final steps of the game design was to choose more specific game mechanics and create rules. According Hunicke et al. (2004), game mechanics are "the various actions, behaviors and control mechanisms afforded to the player within a game context" (p.3). At this point, the game was a role play game in which different diplomats would collaborate in a fantasy kingdom to put in light alternative decisions to those which lead to the Dust Bowl during four rounds.
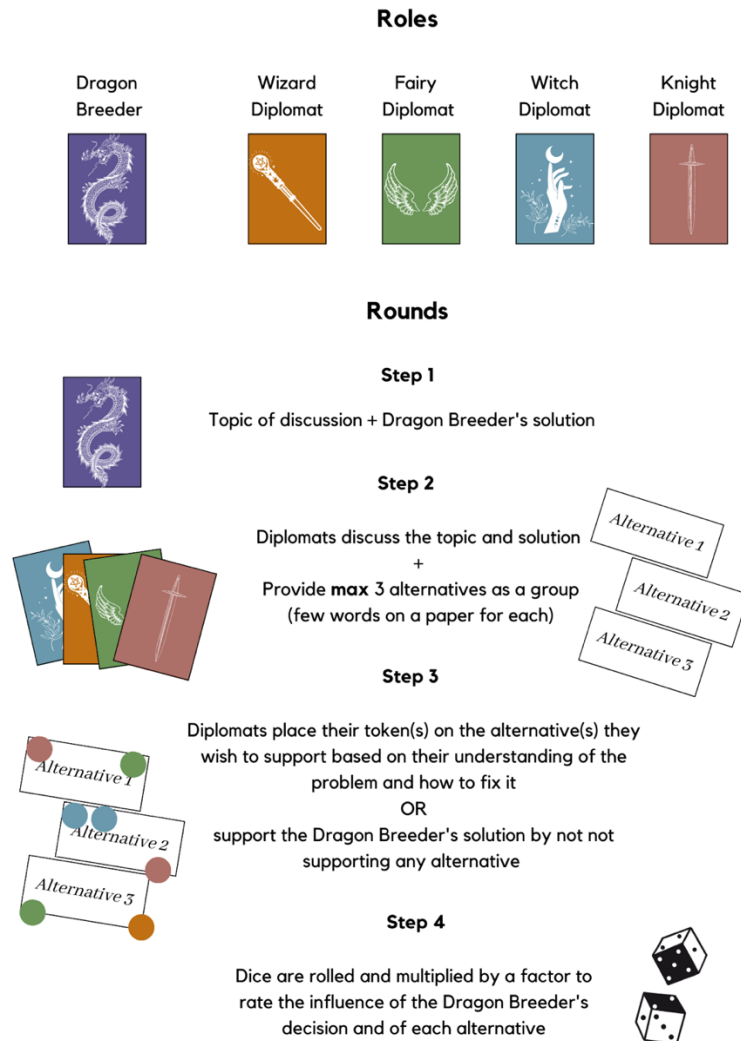
For the Dust Bowl's decision to be presented in the narrative, I relied on a game master.). A GM is a storyteller that, in this case, reflected the Dragon Breeder's opinion but did not actually take part in the game discussions. The Dragon Breeder was an additional character that acts in line with the decisions that lead to the Dust Bowl. This character was fully inspired by the dominant rationality, thus encompassed short-term thinking, cold hearted decision-making, with efficiency, progress and economic development as key features. The Dragon Breeder was not assigned to a player, it was the game itself and as is represented the dominant rationality, it had more power than the other players to impose its decisions. So, the asymmetric play, or power imbalance, during the game was between the Dragon Breeder and the diplomats embodied by the players.

Then, in line with diplomacy, each round of the game was to be seen as new and likely to involve different rationalities and potentially create new alliances (Stengers, 2022) and had to further encourage players to collaborate and put light on diverse political options, solution, choices during the game (Savransky, 2019). So for each of the four rounds, the four players had to come up collectively with one, two or three alternative decisions to that of the Dragon Breeder. However, I wanted players to value each other's collaboration and input, thus I added tokens in the game. Each player was given seven tokens (each player had a token from a different color), and could support one or several alternatives each round. For the rounds not to last too long, a maximum of ten minutes was given for each round.

To evaluate which alternative would be approved or not, I chose to rely on a dice system which depended on the amounts and different colors of token place on an alternative. I did not want an arbitrator to be able to judge the quality of the decisions made, as this was conflicting with diplomacy. But in order to keep the players engaged, it seemed important that for each round, the alternative proposed would be accepted or rejected. The dice system was designed to encourage alliances and collaboration, while consensus was not the best strategy to win the game. Players will be made aware of this latter point by the game master before starting to discuss. But the dice system will not be shared with players, as they might be too willing to win and therefore only concentrate on optimizing chances instead of embodying their roles.

A final overview of the game's rule can be seen in Figure 3, which was used as a support to explain the rules during the game sessions.

Roles

Dragon Breeder	Wizard Diplomat	Fairy Diplomat	Witch Diplomat	Knight Diplomat

Rounds

Step 1

Topic of discussion + Dragon Breeder's solution

Step 2

Diplomats discuss the topic and solution
+
Provide **max** 3 alternatives as a group
(few words on a paper for each)

Alternative 1
Alternative 2
Alternative 3

Step 3

Diplomats place their token(s) on the alternative(s) they wish to support based on their understanding of the problem and how to fix it
OR
support the Dragon Breeder's solution by not not supporting any alternative

Alternative 1
Alternative 2
Alternative 3

Step 4

Dice are rolled and multiplied by a factor to rate the influence of the Dragon Breeder's decision and of each alternative

Figure 3 Rule sheet of the game

In more detail, the four steps of the game were the following:

1) The discussion topic and the proposed solution by the Dragon Breeder are presented on an event card and explained by the GM.

2) The 10-minute timer starts and the diplomats discuss the topic and the solution proposed by the Dragon Breeder. Each discussion is initiated by a different diplomat designated on the event card. Diplomats then come up with a maximum of three alternatives which they summarize in a few words on a card (one alternative per card). Players' aim is to put light on alternative pathways and solutions.

3) After the 10 minutes and when the alternatives have been written down, the diplomats can bet one or more tokens on the alternative(s) they wish to support based on their diplomat's understanding of the problem and how to fix it. Or they can abstain from voting, which means they support the Dragon Breeder's decision. Once used, tokens cannot be claimed back.

4) Dice are rolled to determine which decisions is approved. The first die represents the influence of the Dragon Breeder's decision. The outcome of the die is automatically multiplied by 4. Then the die is rolled again to assess the weight of the alternatives (one die roll per alternative proposal). Based on the GM's dice system as shown in Table 2, the outcome is multiplied by a factor of 0,5 to 5. Any proposal superior to that of the Dragon Breeder's is approved and communicated to the players by the GM using pre-written sentences.

Number of different colors of tokens \ Number of tokens	1	2 to 4	5 to 7	8 and more
1	0,5 (rounded up)	1	2	/
2	/	2	3	4
3	/	3	4	5
4	/	4	5	5

Table 2 Dice system based on the number of tokens and the number of different colors of token to evaluate the multiplying factor of a proposed alternative

Lastly, the outcome of the game was open-ended. Players together reflected on how well the game went regarding how they cooperated and shed light on different alternatives and wrote it down on a paper. I chose an open ending as it left space for players to discuss together what their goals were and accept that there were no pre-determined objectives (Aubert et al., 2019), which was in line with my will of not having a system to evaluate players actions during the game.

Iteration phase

Two phases of iteration were conducted to improve the game by testing it among students and gathering feedback through surveys and discussions. According to Braad et al. (2016), it is essential to involve the target audience early in the design of the game. Therefore, the first prototype was tested early in the process with one group of MOA students.

As it was a first attempt to play the game, the survey questions were broad and helped have a better overview of the components that needed most urgent improvement. They were inspired by the serious game evaluation scale developed by Fokides et al. (2019). Following their findings, special attention was given to the factors of ease of use, goals clarity and enjoyment. The aim of this first play test sessions was to broadly evaluate whether the format of the game fitted the aim and test if the basic game mechanisms were playable.

Detailing and essentializing the characters was the main critique from the players, in hand with clarifying the story. These comments were taken into account first by elaborating on the character's traits and adding two typical prompts for each diplomat. Then, for clarity I developed a longer

introduction story. In addition, a video was made to immerse players in this story (Aubert et al., 2019). The dice system was also adapted in order to reduce the difficulty of the game.

The second iteration phase was conducted two weeks later with two different groups. First with MOA students and then with PhD students interested in using serious games as research tools. Following their feedback, additional typical prompts were added to each diplomat along with a quote from different authors for players to better understand the viewpoint of their diplomat. A warm-up exercise was also introduced to help players embody their character. Additionally, one group found the story fully comprehensible while the other one had difficulties to follow. Therefore, specific parts of the video were slowed down, and important information was written on to the video to facilitate its understanding. Finally, additional cards were added with on them written the theme and main question to address for each round for clarity.

Final game

The final game is shown in this section. First, the final roles are presented with the help of a picture of the character cards (see *Image 1*). Then, the script of the story explained through a video during the game sessions is provided. Finally, the different rounds of the game are explained in the same way as they were narrated during the game.

Roles

Image 1 The final game's character cards, tokens and die

Fairy Diplomat

The Fairy regards justice as the most fundamental and essential societal value. They are always pondering the delicate balance of power in the world and try to be constantly aware of the power dynamics at play.

One of their most valuable skill is to recognize that every way of thinking favors some people over others. In other words, they pay close attention to the kinds of facts that underlie decisions and always ask themselves "Who benefits from this information and decision, and who does not? ".

When they identify an injustice, a sense of revolt often erupts within them. Even if they agree that it is impossible, their goal is always to achieve a harmonious balance of power. This thirst for justice leads them to be output and action driven.

Despite their open-mindedness, the Fairy tends to have an anthropo-like-centric perspective and to privilege human-like beings over nature.

Typical prompts
- "Who is excluded or included from this decision? "
- "How can our actions help the greatest number of people?"
- "The people of/from … should be prioritized because they …"
- "I cannot accept this injustice passively, we should…"

Quote: *Justice and power must be brought together, so that whatever is just may be powerful, and whatever is powerful may be just.*

Witch Diplomat

The Witch is remarkably empathetic towards all beings. They firmly believe in the need for diversity and understand the importance of differences among all beings.

They despise prejudices and biases that people hold against one another. The Witch believes that all voices that are affected by a decision should be acknowledged. Whether it be women or children, animals or plants, the Witch tries to bring to light those who often are forgotten and/or ignored. They have such an intimate relationship with nature that only they have the words to describe it.

Moreover, the Witch speaks in a particular way, which surprises their interlocutors and often leads to slowing down the conversation. In their sentences, the subject is rarely their own self but rather the action or the object of the action.

Typical prompts
- "The sadness may come to the nations if this decision were to be taken because …"
- "Soils are fragile and should be cared for as they … "
- "Nature will suffer if we use it for/as …"

- "How can the voices of those we have not yet mentioned, such as women and children, be heard?"

Quote: *Snowflakes, leaves, humans, plants, raindrops, stars, molecules, microscopic entities all come in communities. The singular cannot in reality exist.*

Wizard Diplomat

The Wizard has a thirst for knowledge. They have an insatiable curiosity and are constantly searching for the most relevant information to solve a problem. The Wizard often draws on a variety of knowledge systems. They love to explore and apply different scientific, local, emotional and traditional knowledge. For them, any problem is a puzzle to be solved in the best possible way.

The Wizard is also an enthusiast of human progress and deeply believes that this progress can contribute to improving the world.

They have such a wide range of ideas, that it is sometimes difficult for them to propose specific solutions. The process of reflection is what matters most to them in a diplomatic deliberation. Therefore, they often ask pertinent questions to guide the discussion and sometimes have a tendency of valuing ideas more than people.

Typical prompts
- "How can we be sure of this information?"
- "Since we know that ..., what would be the best way to use this information?"
- "How can we learn more about ...?"
- "Which of these decisions is most progressive? "

Quote: *Single vision produces worse illusions than double vision or many-headed monsters.*

Knight Diplomat

The Knight fights against binary concepts such as black and white, or good and bad. They are always pursuing nuances, the grey areas that lie between extremes. They do not trust those who claim to have access to the ultimate truth. They are therefore extremely distrustful of the Dragon Breeder.

Because of this approach, they have a hard time finding allies. The Knight never fully agrees with others and always adds complexity to their decisions. It may seem that they are cold and aloof, but it is only because they care deeply about making thoughtful decisions and they are filled with doubts.

They address each problem by methodically breaking it down and taking it step by step. They know that they are unable to fully grasp the complexity of a situation, so they tend to make short-term decisions since the long-term will be unpredictable anyway.

Typical prompts
- "This is not per se good or bad, it depends because…"
- "Maybe we should define the word …, so we can all agree on what we are talking about."
- "As a first step we could … "
- "Slow down, the long-term repercussions of this decision could be devastating, it could cause …"

Quote: *To find your way through uncertainty, you must first lose yourself in complexity.*

Story

The great and powerful kingdom of Balbek is filled with new aspirations. Its inhabitants are known for their innovative and adventurous spirit, always looking for new opportunities to grow and expand their horizons. Currently there is not much space available for living in the East and the population is on the rise. Therefore, the kingdom's latest ambition is to encourage some of its people to move to its Western lands. This is particularly relevant for those who live in precarious conditions and for whom these Western lands could become lands of great opportunity. In line with this, land workers would be the first to be sent there to grow food. So far, little is known about these lands, except that the climate is arid, that endless ochre-coloured fields stretch as far as the eye can see, and that very few people currently live there.

This idea of venturing further West is causing a stir among the people, and different nations within the kingdom are expressing their concerns about the project. The latest revolution is still fresh in everyone's minds and the king fears a new rebellion. He is haunted by the thought of his people rising up against him. His inability to gain trust or loyalty scares him so much that he is becoming completely unstable. After suffering from troubled thoughts for several weeks, the king seeks guidance from his most trusted advisor: the Dragon Breeder. The tall and imposing advisor is known to be a very objective, unemotional, fact-based and efficient decision maker. He implements actions to address the most challenging situations.

In order to appease the king, the advisor proposes to talk to the people himself. He suggests holding a gathering in which diplomats will have the space to represent the perspectives of their various nations. In making the people feel heard, the advisor has the underlying objective of pacifying the situation. The focus of this meeting will be to discuss the conditions under which the project to send people West will be conducted. The king, relieved, considers this an excellent proposal!

Therefore, diplomats from the nations of wizards, magicians, fairies and knights are selected by each of their nations. Their diplomatic approach is based on bringing different perspectives to the table in order to develop equitable solutions that would allow for a healthy coexistence of all beings within

the kingdom. Diplomats are highly esteemed by their respective nations, as they are skilled at bringing different ways of seeing and knowing to the attention of others.

The discussion promises to be intense. The Dragon Breeder is notorious for being stubborn and the diplomats are well aware that he has not only prepared topics of discussion, but also seems to already have the answers. As a result, they know their task will be challenging. In order for their alternative perspectives and decisions to be taken seriously, they will have to collaborate. Additionally, as the Dragon Breeder has a busy schedule, he can only devote 40 minutes of his time to them. There will be four discussion points, each of which should last for a maximum of ten minutes.

Rounds

1) Exploration of the Western lands

The Dragon Breeder confirms that little is known about these arid or semi-arid regions apart from their dry climate and that they are only sparsely inhabited. But this climate does not worry the lords, land workers and wise men (considered the most intelligent people in the kingdom), since they all are familiar with the well-accepted theory that "the rain follows the plow". In other words, they know that if the land is cultivated and used for agriculture, it will become more fertile and the climate will surely adapt. He adds that at the moment, the priority of the kingdom is not to spend resources, whether time or energy, to explore the area beforehand. So, he does not see any particular reason to gather more thorough knowledge of the environment in the west before sending land workers there.

As a reminder, sending people West is non-negotiable, as it is necessary to move people in poverty from the East to lands that could provide them with new opportunities. This matter has already been discussed at a previous meeting. But the conditions under which this will be done are to be deliberated. So, do you agree with DB in saying there is no need to explore the land beforehand as natural conditions will adapt to people's needs, or can you think of other alternatives that you think are more suitable? Witch initiates the discussion

2) Distribution of the land among the future inhabitants

It is imperative for the future population to have a place to live and means to feed themselves. Consequently, the advisor states that the western lands will need to be distributed among the new inhabitants. He thus suggests following the usual procedure of marking out the land on a map. The wise men have decreed that 65ha of land is the perfect size for land workers to support themselves but also potentially grow crops for trade. Just under 65 million hectares are available to be given away for free or at a very low price to anyone in the East who is the head of a household and wishes to own this land to grow food. This includes women, men and even foreigners. This decision is intended to help people in need. Moreover, since everyone has the same amount of land, this can be considered as a fair solution.

Do you agree with the decision of the DB to map the land and distribute 65ha to all heads of household who wish to acquire it? The Fairy initiates the discussion

3) How is the land going to be used by the new inhabitants?

There has never been a time when the internal trade in the eastern lands and the external trade of the Kingdom have been so prosperous. This trend seems set to continue since some wise men have discovered ways to increase food and resource production. These techniques have proven to be very effective in the East: they have worked wonders! If they use these new techniques correctly, land workers living in poverty could not only easily provide for their food needs, but also increase their income by producing and selling more food. Tools have also been adapted to work better with these innovations. The Dragon therefore proposes to encourage the use of these new techniques in the western regions to support progress and reduce poverty.

Given that the future inhabitants will have to produce food and support themselves, do you agree with the decision of the DB? The Knight initiates the discussion.

[After the alternatives are approved or not]
A messenger knocks on the door and rushes down the room to inform the advisor that an emergency has arisen. The advisor apologizes and promises to postpone the last item of discussion to a future date. The diplomats are summoned a year later. They came knowing that only one action item would be addressed, but an important one: market.

4) Market

The advisor gives a short update stating that in the last months, land workers have moved to the West and everything is progressing as planned. However, the market within the kingdom and between the kingdoms is not looking good. He is convinced that the solution to remedy this difficult situation is to increase production in the West. Land workers have the ability to produce more, especially since there are still parts of the land in the West that are not fully used, and abundant rains have resulted in more than satisfactory harvests so far. Not only would this help the workers support themselves, but it would also enrich the kingdom in these scary times and improve its inhabitants' quality of life.

What do you think of DB's idea to increase production in the West to cope with the crisis?The Wizard initiates the discussion.

5) Open-ending

The Dragon Breeder thanks everyone and invites them to leave the room. The diplomats have a short 5 min talk about how the meeting went. What matters most to them is whether all their different perspectives and rationalities have been explored and heard by others. They conclude that *[open-ending : players write a sentence]*.

Diplomats salute each other and go back to report the outcomes of their meeting to their nations.

4.2 Data Collection and analysis

To collect data and answer the research questions, a Google form was sent to all MOA students describing my master's thesis and the serious game, along with a schedule of game sessions. Following this, four playing sessions were conducted with each four MOA students (all from North America or Europe). The methods for collecting data were based on the manual for observing collective serious game sessions of Daré et al. (2020). The sessions were divided into three parts: a briefing, a playing time and a debriefing. They lasted about two hours and were fully recorded via Teams in order to be transcribed. I then checked the validity of the transcripts and cleaned them before analyzing them.

During the briefing, the participants were first made aware of the purpose of the game and the session. They were then asked to choose three words from the following list to describe the rationality of their academic discipline.

Objective	Optimistic	Normative	Localized	Measurable
Subjective	Realistic	Critical	Universal	Observable
Nuanced	Pessimistic	Moral	Long term	Aims to improve
Binary	Experimental	Rigorous	Short term	Aims to optimize

Next, participants had to reflect on whether their discipline's rationality resonated with their own's. The briefing was mainly intended to allow participants to get to know each other and to familiarize themselves with the topic of the game. To further help players embody their role, before starting the game, each player briefly introduced themselves as their ascribed diplomat and took a stance on the topic of GMO's.

During the game session, the story was explained through a video and I took the role of the game master to narrate the different rounds. While participants were playing, observation notes were taken regarding the group dynamics, players' position while playing the game and the main arguments put forward by each participant. In addition, pictures were taken to collect data about the alternatives proposed and supported during the game.

Then, after the session, the debriefing helped uncover how players experienced embodying different rationalities and engaging with pluralism, as it was my initial research question. The format of the debriefing was also derived from the manual of Daré et al. (2020). Five different phases structured the debriefing: emotions (to evacuate any type of frustration), events (players reflect on the event of the game), explanation (participants explain why they made specific decisions), connection to reality (to link the game with the real life), and projection into the future (to envision how the game and its outcome can be applied in the future). A debriefing guide was prepared to guide the discussion and answer the research questions (see Appendix 1).

Finally, to answer the three sub-research questions regarding fabulation, which iteratively arose from the data, the analysis focused primarily on the debriefing, as it is the phase during which the players' reflections and insights are most valuable (Crookall, 2011). I coded the transcription of the debriefing using Atlat.ti and a coding tree (see Appendix 2).

5   Results

In this chapter, based on the coding of the debriefing and on the alternatives proposed during the game sessions, I present the results from the three sub-research questions :

SRQ1: How did the players make themselves sensitive to the rationality they were ascribed to?

SRQ2: What value did the players attribute to the rationality they were ascribed to?

SRQ3: What limits did the players face in their fabulation?

5.1 Ways in which players made themselves sensitive to the rationalities they were ascribed to

At first, players found it difficult to grasp their roles since they were still trying to determine which rationality they represented. For some players, understanding their character was something they spent the entirety of the game navigating. Mostly because the role description was abstract and therefore left considerable space for interpretation and imagination. It was however the conflict in their role descriptions that caused the most difficulty in understanding their characters for a few players.

In fact, these participants perceived contradictions within their diplomat role which made it difficult for them to imagine it as a potentially real person. This challenge was especially visible for the Knight's character, who acknowledges complexity to such an extent that they only decide on short-term decisions. One of the players clearly voices this difficulty during the debrief:

> *« I was really strongly aware of the conflict in the Knight's character description, which is on the one hand that we can't know truth ever and we should take care to deliberate, to make a good decision and really, you know, get into the complexities and really try to do the very best. But at the same time the Knight supported short term decisions, like does this solve the immediate problem. And so kind of balancing the Knight's personality in that regard I found quite challenging. It should be interesting if you really were a person. I felt that way. How would you live? »*

As a result, the players' experience of embodying a rationality different from theirs started off as disorienting. They needed time to become familiar with their roles and break the ice. But as the game went on all, they felt more at ease with their diplomat's rationality.

However, some players had the impression of being stuck in their role. Having to stick to an imposed perspective was experienced as limiting or blocking for decision making. But most players felt as if they overcame this during the game and fully embodied their character at the end, such as one player who said :

« The last round was just already, we were embracing our kind of subject [role]. And we're like, OK, we're sticking with this. »

Overcoming this feeling of being lost and stuck allowed payers to truly start representing their role as best as they could, which was far from being an easy task. They all acknowledged vacillating between their role and themselves during the game. To varying degrees, participants found it challenging to maintain their diplomat's perspective during the game and not deviate from it. The main factor expressed by players as influencing their experience of the game was to which extent they related to the rationality they were ascribed to. Only two players fully identified with their diplomat, which was the wizard in both cases. All the other players positioned themselves in between: they at the same time resonated and conflicted with their role.

Participants felt a tension while playing and found it particularly challenging to act upon situations in a way that was far away from themselves. Such tension was explained clearly by one player talking about their stance as a Fairy during the round on technologies:

« I was really at odds with myself with everything I said basically during this whole thing. »

Participants experienced throughout the entirety of the game a conflict within them when they had to voice ideas that were divergent from theirs. They felt even more distressed when other players put forward opinions similar to their own and yet they had to disagree with them. Such feelings of tension lead some players to being stressed while others enjoyed experiencing this state of conflict. Nevertheless, everyone said they overall enjoyed playing the game.

Additionally, participants who played the same diplomat in different sessions often experienced similar tensions between themselves and the role. As a result, trends can be expressed regarding each diplomat.

Players found the Knight difficult to engage with because of, as mentioned above, its contradictions within the description and also because of the Knight's unwillingness to make alliances. Yet, they often identified with it because of its determination to untangle complexity.

The Fairy was often hard to relate to because of its inclination to be output driven and to disregard nature. But its justice side was always easy to identify with as players all said they valued justice. However, one player had originally understood the Fairy's quest for justice as a seek for equality close to their own's value of equality. Yet, later in the game this player reread the role description and concluded that the Fairy prioritized decisions that benefited the greatest number of people rather than all people. With this new interpretation, the player found differences between their own way of perceiving justice and the Fairy's.

The Wizard was the easiest to understand and to relate to. Especially to its willingness of wanting to know more. The only struggle players face was the difficulty to think about all the different options that could come out of this role.

Lastly, the Witch was continuously difficult to embody as the players felt like everything in the setting of the game was something this diplomat would be against. It was sometimes perceived more as an outsider of the meeting, just as a little voice in the back. Although, all players did feel close to the 'agroecological' or 'socio-ecological' aspect of the character.

A final aspect of how players engaged with and made themselves sensitive to their role is when they imagined more about the role than what was on their diplomat's description card. Some players, only a few, expanded on their role. For example, some players identified with the position they envisioned their diplomat to carry. Such as one player who related to the Fairy because they pictured it as being a good mediator. Two players also expressed doing something in the game because they felt like their character would have done it, even though it was not mentioned on the description sheet. Such as:

> «I tried to be more like, even interrupt because I think she would, like the fairy would interrupt. »

In summary, players made themselves sensitive to the rationality they were ascribed to by understanding, imagining, relating to, and expanding it. Some players multiplied they ways of making themselves sensitive while others only used one.

5.2 Value players attributed to their role's rationality and its application

The players had different opinions about the stance they adopted along the game. The participants that most identified with their role valued the point of view of their diplomat and considered its decisions as good, or at least close to something they would have done or decided themselves in similar conditions. Three participants expressed that they would have come up with the same alternatives and voted for the same decisions as their role.

However, most players judged the rationality they were embodying and some decisions they took as inadequate or even sometimes wrong. The trends in players' perceptions of the value and relevance of their diplomat were similar to the ones expressed above on the tensions between players' and roles' rationalities. Over different sessions, each diplomat was judged similarly by its players.

The Witch was perceived mainly as too slow, not proactive enough and sometimes too idealistic and protective of nature. For this latter point for instance, one player stated they would not have chosen the Witch's approach in real life for strategic reasons. In other words, they felt that if the Witch's point of view were to be represented in real political settings, other actors would not take them seriously. Thus, even though they agreed with what the Witch was advocating for, some players would opt for a more 'in the middle' approach, less radical, to be treated seriously.

From the same strategic perspective, players who interpreted the Knight often felt like their trait of not making allies was an inadequate way to tackle political issues. Almost all players considered that political meetings should be about concessions and consensus, so embodying a player that was struggling to find allies felt out of place. One player also specifically thought that the Knight was taking wrong decisions because of its way of addressing issues by breaking down problems to address them step by step:

« I'm super aware of this, if you break something down too much into smaller steps you end up doing the really, the wrong thing. If you don't look at the big picture at the same time. »
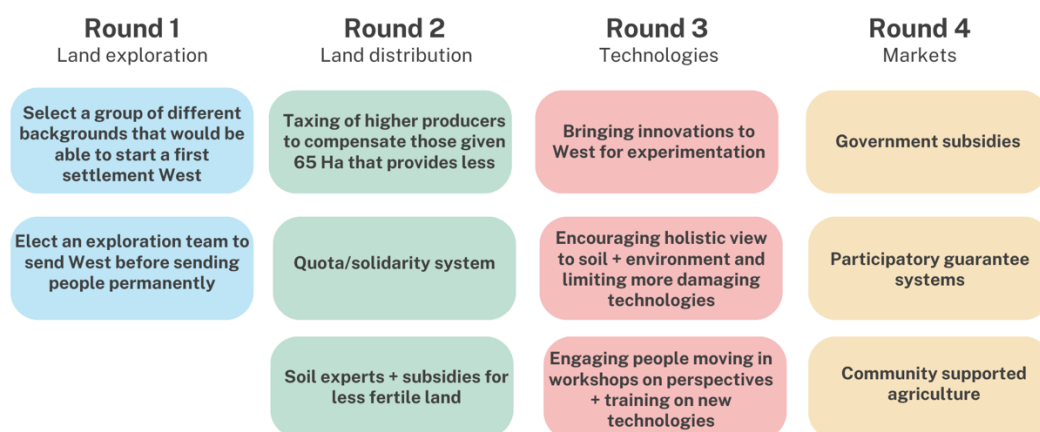
But the willingness of understanding and grasping the situation's complexity of this diplomat was always deemed good and valuable.

For the Wizard, the only critique expressed was its lack of action. But overall, players appreciated its input and decisions most compared to the other diplomats.

Finally, all players appreciated the Fairy's quest for justice. However, most of the participants who played the Fairy considered the character to be too "pushy" and sometimes blindly pursuing justice. As a result, this rationality was often perceived as leading to poor decisions. Participants particularly disliked the Fairy's character traits of favoring the justice of people over nature, and being output oriented. Players indicated that in contrast to this role, they themselves would have taken nature more into account as well as more time to make decisions.

Link to the alternatives proposed

In order to further analyze the players' judgment about their role's rationality, it is also relevant in this result section to present and compare the alternatives proposed by each group during the game. As the alternatives were discussed by players during the debriefing and help better understand which rationalities were valued. Figure 4 shows the alternatives proposed during the third session. Each alternative is a direct transcription of the alternatives written by the group 3. The third session has been chosen as an example because it is the one in which the most alternatives were proposed. A table containing the entirety of the alternatives proposed during the four sessions can be found in Appendix 3.

Round 1 Land exploration	Round 2 Land distribution	Round 3 Technologies	Round 4 Markets
Select a group of different backgrounds that would be able to start a first settlement West	Taxing of higher producers to compensate those given 65 Ha that provides less	Bringing innovations to West for experimentation	Government subsidies
Elect an exploration team to send West before sending people permanently	Quota/solidarity system	Encouraging holistic view to soil + environment and limiting more damaging technologies	Participatory guarantee systems
	Soil experts + subsidies for less fertile land	Engaging people moving in workshops on perspectives + training on new technologies	Community supported agriculture

Figure 4 Alternatives proposed by group 3 for each round

The alternatives that emerged from the different sessions can be grouped into three main categories. First, in alternatives which consist of gathering information from experts in order to make more informed decisions. This includes both sampling and experimentation. Examples of such alternatives include using soil experts, conducting in-depth surveys of all the effects of implementing a decision, and using a research team to analyze markets.

Secondly, in alternatives which involve trade-offs, in-betweens, concessions or unclear political accountability. Such as merging or blending technologies, not yet putting boarders to a territory, doing nothing, or using committees to decide who will explore the western lands (without defining who will constitute the group).

Finally, in political alternatives which address power dynamics and often involved the state. A few examples are the implementation of a quota system or public subsidies, distribution of 65 parcels of one million hectares for communal life, and the taxation of rich producers.

During the debriefing, some players said they would have acted differently if they had to make decisions from their own perspective for these political decisions. If it were them, they would have proposed taking more into account the indigenous people, using more specific frameworks to evaluate the outcomes of a situation, experimenting effects with trials, taking time to assess the problems and situations, and evaluating the effects of decisions through track records.

An example of one of the actions a player would have taken that contrasted most with that of their diplomat, was regarding land distribution and came from a participant who interpreted the Witch. During the game this player warned other diplomats about the intensive use of the soil, and advised limiting land use. However during the debriefing they said:

> *« I would say OK, you know which entrepreneurs or which people have ambitions and skills and capabilities to work with that land and deliver on a certain need. Rather than… Because giving land away for land ownership sounds nice and it sounds like Robin Hood, but then again, you're not sure if they're gonna capitalize on that, and if they're gonna get the results that you want them to. »*

5.3 Limits of fabulation participants faced while playing

Participants acknowledged playing as themselves more than as their characters in some parts of the game. Time limitation due to the game design, lack of understanding of the role and shyness of players were seen as different explanations. But there is a part of this 'out of character' effect that was identified by participants as solely their inability to embody their role.

More specifically, a common insight from all the different sessions was the players' incapacity to come up with alternatives. One person expressed this when they said:

> *"We can raise objections and question and develop. But then translating that into a suggestion and to really frame that, that can be quite a challenge."*

Their statement resonated with everyone, even those who felt like they embodied well their character. In all sessions and rounds, creating, expressing, and clearly formulating alternatives was a difficult task.

One player attributed this limitation to their inability to think as critically as their diplomat. Another person stated they were incapable of identifying unfairness and advocating for fair solutions in some situations, because it was not something they were accustomed to. But most players could not identify the cause of their struggle to propose alternatives.

Participants also sometimes experienced the feeling of being fully lost and having to navigate this uncertainty without having any sense of direction. As they indicated, they did not always know how to act, not because they did not understand their role, but because they were uncertain about how to carry it out. Such a feeling was sometimes applied to specific points, such as a participant not knowing whether to agree or disagree about a certain issue. While for other players, this uncertainty was about the overall embodying of their role, as one person explained when she said:

> *" I kind of didn't know how specifically to play a good fairy […]."*

However, some players expressed that sometimes they felt compelled or driven to act in a certain way but could not clearly identify what and why. In the sense that they could not formulate an alternative nor an opinion, but they still had a feeling of a direction or a position they should take while playing. Such as one participant when they expressed feeling they had to oppose to something in a round but could not identify what it was. This overall feeling of having to act in some way or think of something but not being able to formulate a thought on it, was repeated throughout the different sessions.

A final way in which players felt they failed or were limited to embody their diplomat's rationality was by acting in disconnection with their role. Whether regarding something they did not do, or not enough, or something they did that was incoherent with their role. Most participants acknowledged having such moments during the game. For example, several players explained how they had made concessions during the game despite feeling, a posteriori, as if their diplomat would not have done so.

6 Discussion

This discussion is centered around the results of the serious game designed to facilitate the enactment of pluralism. By having multiple players embodying different rationalities, the game aimed to represent a plurality of non-hegemonic rationalities. Furthermore, the game mechanics were designed to give players the freedom to value these pluralities and to collaboratively explore multiple political pathways to address each round's issues, thereby supporting the implementation of pluralism.

However, during the debriefing, the players expressed difficulties in effectively embodying a rationality divergent from their own, and thus in fabulating. The alternatives proposed attest to this limitation, since they can be argued to be influenced by the dominant rationality despite the absence of any diplomat fully representing that rationality.

Given these observations, the purpose of the discussion is twofold. Firstly, it aims to highlight the challenges faced by players in fabulating about the rationalities they were ascribed to and how this hindered the enactment of pluralism during the game. To address this, I analyze the results from the previous chapter to answer the main question "In what ways can serious games make visible people's abilities to fabulate about rationalities divergent from their own?". Secondly, drawing on the research findings, this discussion aims to connect the concept of fabulation to the challenges of pluralism.

Finally, a short section on the limitations of this research is presented at the end of this chapter.

6.1 Fabulation

Based on the definition of fabulation, the answer of the main research questions is divided into two sections. The first section is about if and how participants made themselves sensitive and gave importance to their diplomat's rationality. The second section is about participants' ability to speculate on the possibilities that would arise if rationalities different from their own were supported.

Making oneself sensitive and giving value to rationalities divergent from one's own

Overall, this research demonstrates that people face difficulties in making themselves sensitive (paying attention and engaging with) and giving importance to rationalities other than their own. This is first illustrated by players' struggles in paying attention to their diplomat's rationality. Evidently, all players tried to understand their diplomat and construct a mental representation of it. While some succeeded to a certain extent, the results reveal that some players had a tendency to equate their own rationality with that of their diplomat without identifying potential differences. This convergence trend was most noticeable regarding notions that seem self-evident and commonly supported, such as the complexity valued by the Knight, the respect for nature supported by the Witch, or the quest for justice advocated by the Fairy. Only few players realized during the game that they too quickly established similarities between themselves and their diplomat.

Such pattern was most evident among players who were assigned to embody the Fairy. The conceptualization of the Fairy's role was based on the recognition that power relations shape reason (Flyvbjerg, 1998). Key aspects of the Fairy's quest for justice were the understanding of how knowledge is intertwined with power dynamics, and the delicate balance, depending on the context, of prioritizing the protection of some groups over others and favoring the needs of the majority. When players encountered the word justice written on the Fairy's character sheet, they undoubtedly identified with it as they too valued justice. However, justice is a multifaceted and broad concept that can assume diverse forms. Players rarely paid attention to which specific justice the fairy pursued, thereby overlooking potential disparities between their own understand of this values and concerns regarding power dynamics, and those of the fairy. Perhaps the specific justice quest supported by the fairy seemed like a detail to the players, given that they perceived justice as a value common to all. However, fabulation requires paying attention to what could be considered details (Lastres & Wiame, 2022). To fabulate is to seek nuances and challenge what presents itself as evident, such as the presumption that we all share a common understanding and sense of justice. As a result, this research illustrates the difficulty that people have in identifying differences between their own rationality and other rationalities, especially when the divergent rationalities encompass broad values that are presumed to be shared by all, such as justice.

Furthermore, this research indicates that some participants actively created similarities between themselves and their diplomat's rationality. In fact, rather than paying attention to their assigned rationality, some participants sometimes resorted to interpreting it through the lens of their own rationality. For example, several participants expressed relating to the Witch's "agro-ecological" side or embracing its "social-ecological" aspect, despite these words not being written on the character sheet. The Witch's "intimate relationship with nature that only she can describe" was consequently translated by the players into the Witch is "agroecological.". Instead of venturing towards their diplomat's rationality, the players in this case conformed it to their own rationality. Thus, instead of engaging with it by going towards this divergent rationality, they pulled it towards them. Yet, paying attention to differences, as advocated in the context of fabulation, involves engaging with pluralities. By creating similarities where potentially there are none, players may have failed to notice existing disparities between them and their assigned character, thereby overlooking existing pluralities. This tendency of players to create similarities where there are potentially none can thus be regarded as antithetical to fabulation.

Another observation of this research is how when players perceived contradictions within their diplomat's description, they encountered notable challenges in the process of constructing a mental representation of its rationality. For instance, all players embodying the character of the Knight viewed this diplomat's simultaneous recognition of complexity and inclination to make short-term decisions as incompatible traits within a single person. Consequently, players assigned to the Knight viewed their role's rationality as irrational or unrealistic and thus struggled to represent it in their minds.

This reaction to the Knight's rationality actually contradicts the condition of embracing uncertainty for fabulation to be creative and productive. In fact, participants equated the Knight's quest to unravel complexity with certainty and thus a better ability to make long-term decisions. Associating understanding with certainty is deeply embedded in Western epistemology, and aligns with the dominant version of reason. Players in this case seemed resistant to accept the perpetual existence of

uncertainty. As a result, the dual trait of the Knight's rationality was not deemed viable nor valuable by the players.

In line with this last point, this research reveals how participants struggled to give value and importance to a rationality divergent from their own. Players generally had difficulty giving importance to, or valuing, rationality traits that were divergent from their own, which is a key step of fabulating about other rationalities. Hence, participants valued only aspects of their diplomat's rationality that resembled their own.

Interestingly, certain diplomats, or more precisely specific components of the diplomats' rationalities, were more relatable than others and therefore more appreciated. In relation to what was said above, participants appreciated the Knight's recognition of complexity, the Wizard's understanding of different reservoirs of knowledge, the Witch's holistic view of life, and the Fairy's pursuit of fairness, as they recognized themselves in these traits.

Conversely, elements that differed from participants' own rationality were often perceived as leading to flawed or inadequate decisions. For instance, players did not identify with the Knight's resistance to compromise, which they further deemed problematic in political settings. Also, although players sometimes recognized the inherent values in some rationality traits that diverged from their own, they viewed them as non-strategic to use in political contexts, such as the Witch's holistic view of nature and love for it.

In fact, the Witch's rationality was the most aligned with indigenous knowledges. Although players valued some of its traits, they deemed it unsuitable for political decision-making during the game due to its perceived too radical and complex point of view. This research stresses the extent to which players' expectations of political decision-making processes are shaped by the dominant rationality. The Witch's was not considered valuable because its rationality clearly deviated from the framework of the hegemonic rationality, which prioritizes fast decision-making, maintains a strong delineation between nature and humans, and adopts a utilitarian view of nature. However, players would have perhaps reacted differently if this character had been explicitly presented as linked to indigenous knowledges. It is uncertain whether they would have made greater efforts to give it importance or, on the contrary, subjected it to stereotyping and deemed it even less suitable in the game.

Nevertheless, though it was difficult for players to be sensitive to a rationality different from their own, they were not wholly unsuccessful. Participants did take time to read their character sheet and often looked back at it, many used their character's prompts to help them embody their role and they also often doubted and hesitated when talking which further shows how they did in some ways engage with it. The results further highlight how whether participants felt lost, in tension, or close to their diplomat's rationality, they all allowed themselves to be touched, moved, troubled, or at least emotionally affected by their assigned rationality.

This study suggests that feelings served as a bridge through which people made themselves sensitives to their ascribed rationality. The term 'feeling' is used in contrast with emotions as it emerged from players' use of statements incorporating 'I felt'. But feelings and emotions are closely linked, as emotions can be understood as perceptions that, when one becomes conscious of them, can be considered feelings (Prinz, 2005). Consequently, same as emotions, feelings are viewed as opposite to

reason according to the dominant version of reason (Despret, 1999). However, this research posits that emotions were key components in making players engage with a rationality that differed from their own. In line with the work of Marcus (2013), rather than being antagonistic to reason, feelings seem to have guided players' decisions and even to have emerged as valuable political resources.

For example, during the game feelings seem to have often been the first means through which players engaged with their diplomat's rationality. Before they identified the differences between their role and their rationality, or even when they failed to do so, participants felt an affront to their own rationality. Feelings seem to have acted as an indicator that something was in dissonance even though players were unable to identify what exactly it was.

Another interesting way in which feelings were means to make oneself sensitive, is when they prompted a few players to speculate about their ascribed rationality. In a few instances, participants acted in ways that they felt their diplomat would have, even if such actions were not described on their character sheet. Such players said feeling compelled them to act in a certain way rather. An important observation was how players, in those specific moments, started to think *with* their role instead of thinking *as if* they were their role. They understood their rationality in the way that Wittgenstein (2010) defines understanding as knowing how to go on. In other words, this research found that a few participants, driven by feelings, added a sequel to their role, they thickened their diplomats, they speculated on it.

This study thus suggests that feelings were means for players to think other rationalities. It appears that feelings served as important political resources by fostering interactions between divergent rationalities that might not have happened otherwise. This research therefore underscores the need for emotions and feelings, thereby challenging the dominant version of reason, to support productive fabulation about divergent rationalities (further argued as necessary to pluralism).

Creating and imagining possibilities

While being sensitive to a rationality different from their own was challenging, the process of imagining what would happen if such a rationality was put to work, which constitutes the second aspect of fabulation, proved to be even more complicated for all participants. The results indicate that while people were able to apply a rationality divergent from their own as lens of critique, it was challenging, if not impossible, for them to use or apply this rationalitiy as a creative and productive resource. In other words, participants were limited in their capacity to use an alternative rationality to create possibilities. Which could have been expected but creates important implications for how pluralism can be enacted if we accept that pluralism has at its core empathy towards diverse rationalities.

A clear illustration of this challenge can be observed in the alternatives proposed by the participants during the game. These alternatives highlight how players were constantly drawn to their own way of thinking, which I would argue, were for all players grounded in the dominant rationality. As the dominant rationality, despite none of the players embodying it, seemed to have shaped the alternatives proposed during the games by serving as a reference or norm for decision-making and establishing boundaries to the realm of political possibilities.

The first category of alternatives proposed by players involved experts collecting additional data to better inform decisions. This reflects players' technocratic approach to decision-making. In the sense that players wished to gather more knowledge from expertsto base their decisions on objective and measurable information. Aligned with the insights from Turnhout et al. (2020) and Marcus (2013), players complied with an economic and scientific framework and adopted a scientific approach to political decision-making. Scarcely any alternatives reflected the use of pools of knowledge different from scientific, which would have been advocated by the Wizard diplomat. Furthermore, players never questioned the power dynamics involved in their scientific approaches or implementations, which the the Fairy would have warned of.

The second category of alternatives, centered around trade-offs and concessions, further highlights how the dominant rationality served as a norm for decision making. Players sought consensus mostly through concessions and rejected radical decisions. They very much valued compromised solutions, perceived as 'in the middle', neutral, and especially fair. However, upon closer examination, these alternatives were far from being neutral. For instance, the decision proposed by two different groups to merge the technologies from the East and the West was firmly based on the idea that techniques could and should lead to progress and partake in economic growth. Both groups even agreed that, in the interest of everyone, if the combination of techniques was successful, all technologies should also be made available to the native population of the lands seized by the kingdom. Such alternative did not question any type of unfair power dynamics at play nor challenge the underlying concept of technology and its imposition, which arguably the Fairy, Witch and Wizard could have done. Nonetheless, that act of merging technologies is rooted in a dominant rationality of progress, modernization, and ownership, and thus risks perpetuating an existing status quo. The same holds for other alternative perceived by players as valuable concessions. In short, even when perceived by players as neutral, alternatives were grounded in the dominant rationality and did not challenge it. This finding echoes critiques of rationality that show how, while perceived as neutral, dominant rationality is embedded in unfair power dynamics that maintain the status quo (Farrall, 2019; Flyvbjerg, 1998).

One possible reason why players primarily proposed alternatives aligned with dominant rationality is because they considered them more legitimate and valuable than those which could have been derived from the rationality of their diplomat. This assumption is made because the third category of alternatives which were political ones, arguably the closest to fabulation, were the only ones on which players said they would have a posteriori acted differently. Some of these political alternatives encompassed representing the indigenous people, as advocated by the Witch, defining the issue at hand, as emphasized by the Knight, or establishing systems of protection for those most affected and impacted by a situation, as the Fairy sought. However, participants during the debriefing deemed some of these decisions as unrealistic or inefficient and proposed to improve them mostly by using technocratic approaches. For instance, by using specific frameworks to evaluate the outcomes of a scenario. Thus, it may be that the decisions taken by players were in line with the dominant rationality not only because they were incapable of creating alternatives through the lens of their ascribed rationality but also because they did not value what would arise from non-hegemonic rationalities. Which is understandable as MOA studies potentially prepare students to become experts in the field of food systems and to take an expert stance when tackling food governance issues.

Moreover, when participants state that they struggled to come up with alternatives by using the rationality they were ascribed to, it may also indicate that they were unable to come up with a solution that was realistic to them. In other words, players may have imposed on themselves a realm of realistic solutions. This hypothesis arises because none of the proposed alternatives during the game, except for the alternative of allocating 65 parcels of one million hectares for communal life proposed during the fourth and last session, were beyond what could be considered realistic as per the dominant rationality. In the sense that the alternatives encompassed economic growth, did not question property nor a utilitarian vision of nature and often embraced a technocratic perspective, in short they limited themselves to the realm of dominant rationality. This finding is especially intriguing considering that the game had no way to evaluate the quality of the proposed ideas. Players had the space to propose anything, no exterior means to evaluate their proposals were present. Solely the dice and the tokens influenced whether the alternatives were approved or not. It is therefore plausible that players restrained themselves from proposing alternatives that they considered unrealistic but which, however, would have been consistent with their diplomat's rationality.

This observation highlights how the dominant rationality may have put a limit on the realm of political possibilities created during the game, which echoes how the concepts of reason and reality are highly political (Escobar, 2020). Despite the deliberate exclusion of the dominant rationality and the encouragement for players to explore diverse political possibilities through the use of an imaginary world during the game, the hegemonic rationality's influence was still present and constrained the scope of political decisions. This finding illustrates just how anchored people are in the dominant rationality, and how difficult it is to fabulate beyond it. It further highlights how easily the dominant rationality can intervene and monopolize the space, thus making other rationalities impossible to fabulate about. Hence, the presence of the dominant rationality during the game was a barrier for players to fabulate about alternative rationalities.

However, it is unclear to me whether it is the dominant rationality that pulled back players or whether the players actively returned to it. The distinction between consequence and cause, or active and passive tense, is blurry. As players' rationality, arguably closely linked to the hegemonic one, does not have the power alone to perpetuate its imposition. But it also appears that the players were not entirely free, or rather did not always have the tools to free themselves, or pretend to free themselves, from their own rationality. I do not think participants purposefully went back to their own way of thinking. Hence, it could perhaps be argued that the players' own rationality, rooted in the dominant rationality, summoned them throughout the game, and it was difficult for them not to accept this invitation. Framed this way, a key insight of this research is people's limited ability to fabulate about other rationalities due to their lack of tools or means to refuse the summons of their own rationality embedded in the dominant one.

Summary

In summary, the game helps to make visible how people encounter difficulties in fabulating about different rationalities. Players first were challenged in paying attention and giving importance to rationalities other than their own. They quickly identified similarities where they were potentially none, translated non-hegemonic rationalites in their own framework, did not imagine as viable what

they could not find logic to and mostly only gave importance to similarities. However, participants did exhibit making themselves sensitive to their assigned rationality, especially through feelings.

Additionally, this research shows how creating alternative stories than the one in line with the dominant rationality was even more difficult. Players faced limitations in imagining what would happen, which stories or narratives would arise, if a rationality different from their own were to be enhanced, supported and applied. While fabulation resides in the realm of possibilities and does not comply with categories such as realism or fiction, players restricted themselves to the realm of possibilities bounded by the dominant rationality, and therefore did not manage to challenge it. This limitation can potentially be explained because players mostly valued alternatives in line with the dominant rationality, because they were uncapable of not slipping back in it. However, such limitation to fabulate was striking to me given that participants were Masters students who focus on food systems transformations, and who, in principle, advocate for a creative, holistic and inclusive approach to designing resilient food systems.

Consequently, during the game a pluralism of non-hegemonic rationalities could not take place as these different rationalities were not embodied in the first place. Players potentially did enact a pluralism based on different perspectives and values but within a framework of the dominant rationality. As mentioned before, this finding clarifies why in this thesis the theoretical framework was changed to fabulation instead of pluralism and thus why the research questions were adapted.

6.2 Fabulation and pluralism

Fabulating about rationalities other than one's own was a precondition for a pluralism of non-hegemonic rationalities to be enacted during the game, however I argue that it may also be a precondition for political pluralism in general. To support this idea, I discuss in this section how the concept of fabulation and pluralism are closely related and how findings on the difficulty of players to fabulate can feed a discussion on the challenges pluralism currently faces.

Fabulating on different rationalities, derived from the definition of fabulation of Lastres and Wiame (2022), is to be sensitive to and give importance to the existence of other rationalities, to then speculate on which possibilities could arise if they were enhanced and supported. Pluralism on the other hand, can be seen as the valorization, legitimation and enhancement of differences between different actors and knowledge (Savransky, 2019). The two concepts are thus closely related. Both aim to give value to pluralities and to pluralize the world (Khalsi, 2022; Savransky, 2019). Furthermore, both aim to highlight different possible futures by enhancing and supporting differences, whether of actors or knowledge in the case of pluralism, or of stories in the case of fabulation.

Based on these definitions, I argue that during the game, players' fabulation about their assigned rationality was a first step required in achieving pluralism in relation to their diplomat. This statement is based on the fact that during the game, players had to actively assert, emphasize and promote the rationality of their diplomat to represent it to the other players. To establish the legitimacy of their diplomat's rationality during the game, players first had to imagine the value of this divergent rationality. In other words, players had to themselves find value in their diplomat's rationality filled with alterity.

Finding value in what is different is the core concept of pluralism (Escobar, 2017; Flathman, 2005). Thus, embodying a rationality other than one's own to give it a voice is embedded in pluralism. Players in a way had to achieve pluralism towards their diplomat's rationality, in the sense of valuing differences, to be able to make its voice heard by other players. However, even prior to finding value in their diplomat's rationality to the others, players had to pay attention to this divergent rationality, give it importance and imagine how it could be a source of possibilities. Hence, for players to value their diplomat's rationality, which arguably is a condition to pluralism, they first had to be able to fabulate about it.

The findings from the game support this proposition. Fabulating encompasses paying attention to things that may seem details, and consequently also to differences. This research demonstrates that people have the tendency to identify and create similarities between themselves and alternative rationalities. Such findings resonate with Jame's warning of easy pluralism, which quickly celebrates similarities instead of seeking to value differences (Escobar, 2017). Hence a first step required to avoid falling into easy pluralism seems to be shedding light on these differences and enhancing them, thus fabulating about them.

Another illustration of how fabulation can be seen as a precondition to pluralism is how during the game, players struggled to give importance to their assigned rationality and ask themselves what possibilities could arise if these rationalities were enhanced. However, as mentioned before, pluralism has at its core valuing difference (Escobar, 2017; Flathman, 2005), in the way of honoring them. Yet how can oneself value divergences if they cannot see them, give any importance to them, nor imagine which possibilities could emerge from them? Thus, fabulating is here also a precondition to be able to value divergences instead of solely tolerating them, in the sense that Stengers (2022) defines toleration.

Consequently, this research argues that fabulating about rationalities, thus making oneself sensitive to a rationality divergent than one's own and speculating about what stories might arise from it, seems to be a required step for pluralism. It seems to be a precondition to pluralism. More broadly, this research suggests that if we aim to pursue pluralism, encompassing not only the representation but also legitimization of different actors and ways of knowing in political spheres, it is necessary for actors partaking in these processes to first be able to fabulate about the existing divergences.

6.3 Limitations

This research contains several limitations. The most significant one is the design of the serious game. A team comprising game designers is most often necessary to create a serious game. Such a process also usually entails multiple iteration cycles over the span of several months. For this thesis, I created my first serious game in only a few months which greatly influences the quality of the game. Yet the results of this thesis strongly depend on the game's quality. The results are tied to multiple game factors such as the game format and its mechanisms, the time the players had to deliberate and the clarity of the character sheets. Consequently, the results of this research may not be as accurate or precise as if the game had been developed by game designers over a longer period of time. Moreover, to enrich the results, Daré et al. (2020) recommend following up with participants after a few weeks. However, due to time constraints, this last step was not implemented in this thesis. Lastly, the study sample consisted of only 16 participants. Therefore, the findings do not fully represent MOA students, who number nearly 200.

7 Conclusion

The scale and complexity of the social and environmental crises we face call for pluralism, notably regarding food systems. However, in practice, the hegemonic rationality, characterized as capitalist, technocratic and patriarchal, persists to delegitimize potentially valuable actors and knowledge, and limits the choices of possibilities for sustainable transitions, even in attempts for inclusive governance processes. Under the guise of the dominant version of reason, rooted in Plato's conceptualization of reason, the hegemonic rationality perpetuates a status quo for the benefit of elites. Consequently, pluralism becomes necessary both to address the hegemonic rationality and the dominant version of reason and to create more sustainable futures.

To address this issue, a game was developed to encourage players to enact pluralism, by embodying non-hegemonic rationalities other than their own, to explore different political possibilities. However, the analysis of the data from the game sessions illustrated how players struggled to embody a rationality different from their own due to their limited ability to fabulate about them. In other words, participants found it difficult to make themselves sensitive to an alternative rationality and speculate on possibilities which could arise if these divergent rationalities were enhanced and applied.

Based on these findings, this thesis suggests that fabulation is a precondition to pluralism. To support true pluralism, rather than easy pluralism in which differences are represented but solely tolerated, fabulation seems a necessary initial step. As such, honoring productive and political divergences that already shape the plurality of our worlds first requires making oneself sensitive to them and speculating about which stories, futures, could emerge from them.

In response to calls for pluralism and its operationalization, this thesis thus argues that these approaches may be overseeing a step. Learning how to fabulate about divergences seems to be a requirement to enact pluralism.

Furthermore, this study sheds light on fabulation's challenges. Findings suggest that people struggle to pay attention to differences, to speculate about political futures in the realm of possibilities instead of complying with what is realistic according to the dominant rationality, and to resist summons of the dominant rationality. On the other hand, feelings, far from being parasites in political spheres as per the dominant rationality, appear to be useful political resources to create bridges between divergences to further engage with them and potentially support pluralism.

Accordingly, this research suggests that future research could enhance our understanding of how fabulation is linked with pluralism. Additionally, if fabulation is in fact a condition to operationalize pluralism, more attention should be given on how to learn and practice fabulation. Particularly in fields in which the hegemonic rationality is predominantly present and who aspire to take part in future pluralistic processes to address current complex problems, such as academia.

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9 Appendix

Appendix 1 : Guide for debriefing

Phases	Definition from Daré et al. (2020).	Question
Emotions	Sharing the emotions felt by each participant. And let go from any frustration	**How did you feel while playing the game?**
Events	Sharing of the progress of the entire session among all the *players*	**Which events do you remember?**
Explanation	Puting several explanations of facts into perspective through the *players'* behaviours and the individual and collective strategies	**How did you identify with your diplomat?** **Were there times when it was difficult to act on your diplomat's way of thinking?**
Link to reality	Going back over the links between the game and the real situation at the origin of the organisation of the session	**Topics of discussion :** **How players would have responded as themselves** **Co-evaluation of the alternatives proposed**
Projection into the future	How (the results of) the game will be used in the future.	**What would be the benefits and/or risks of using different ways of thinking in politics?** **What are the risks and values of this kind of game being used in education/science?**

Appendix 2 : Coding tree

Code	Description	Example quote(s)
Experience of embodying role		
Overall feeling of embodying the role	Experience of embodying a character	I really find it maybe like challenging to stick to the character.
Tensions or similarities	Identified tensions or similarities by players between their self and their role regarding traits and rationalities	I did not resonate with my character. I can relate to this complexity because my character is really about knowing more, that you always need to know more kind of. Sometimes, like it's very difficult to match like your ideas with also like your role and you're feeling like a contrast inside you.
Understanding	Navigating the understanding of the role	I think the first round was a bit weird because I still had to understand, like, what was the main points from the fairy like from my character, but then it was quite fun.
Expanding on the role	Adding traits to the role and feeling of having to act in a way that was not written on the character sheet	I felt like with this character I had to play against that decision because it's such a drastic decision, you know, decision in terms of how you're gonna use lands.
Value of the role		
Normativity	Opinion about the role, its arguments and decisions	I'm super aware of this, if you break it, if you break something down too much into smaller steps, you end up doing the really the wrong thing if you don't look at the big picture at the same time. And you're like: OK I totally disagree but you still need to play a sort of neutral or neutrality in general.
Difference	Difference between the player and role's decisions (*When looking back after the game)*	For me, I think sometimes it was too much action and maybe I would have like to actually know more. I had to make the short-term decision, so it was, yeah, we'll just take them over, we'll wholesale import them and

		pushing them. For me personally, that would have actually not been the thing to do.
Limits to own fabulation of the role		
Would've/could've/should've	What the role would've done but the player was not able to do or general feeling of not doing enough	But I found that I should have more ideas to put on the table.
Out of character	Something the player did (or didn't) do, that the character wouldn't have done (or would've) *(During the game)*	I think that that's when I was more myself because I thought, OK, we do it like that. But I don't think the fairy would have done it like that. I think a couple of times I've been maybe too proactive in talking and proposing stuff. And there was maybe more me than the knight.
Uncertainty	Did not know how to act	I didn't really know whether I should agree on that.

Appendix 3 : Alternatives proposed during the game

		Round 1: Expidition	
	Alternative 1	Alternative 2	Alternative 3
Group 1	[send] 1 Representative of each nation + indigenous people + multi stakeholder + report and comments		
Group 2	Committees to decide who will go explore	Use a diverse panel of explorers to survey the area & talk to any locals about what it means to live and how to proceed occupying the space with little conflict	
Group 3	Select a group of different backgrounds that would be able to start a first settlement West	Elect an exploration team to send West before sending people permanently	
Group 4	Send fairies and witches to explore nature-human, human-human	Expert teams witches, fairies and knights Minus human at beginning 1 year + logistics	
		Round 2: Land Distribution	
Group 1	Democratic board people create proposals	No borders yet + people in need + limit on land needed	
Group 2	Scale down in a trial with collective vs individual farming	[explore] All the other injustices - What is already occupied - Water sources - Create a fairer soil questions	
Group 3	Taxing of higher producers to compensate those given 65 Ha that provides less	Quota/solidarity system	Soil experts + subsidies for less fertile land
Group 4	65 plots of 1million Ha for communal share + protect		

Round 3: Technologies			
Group 1	Merge indigenous techniques + eastern techniques	Test technologies within the first delegations in western	
Group 2	Not apply Eastern practices wholesale without a thorough investigation has revealed all consequences	Explore opportunities to blend agricultural practices from East and West. More research on Eastern methods, long term impacts	
Group 3	Bringing innovations to West for experimentation	Encouraging holistic view to soil + environment and limiting more damaging technologies	Engaging people moving in workshops on perspectives + training on new technologies
Group 4	Food supplies paid with trade from East + Tools only in a second moment + Check with locals techniques and needs + 10 years + Repair the relationship [with locals]		
Round 4: Market			
Group 1	Stabilize prices + research team on the market (inclusive and fair) + impact assessment + intermediate meeting + distribute evenly the products based on needs (max prices, sustain prices)		
Group 2	Define the problem leading to the crisis	Improving the infrastructure to increase access	Do nothing
Group 3	Government subsidies	Participatory guarantee systems	Community supported agriculture
Group 4	No increase in production Regulate Food Market	No increase in production Regulate Food Market + Continue knowing/meeting/exploring	