Article

Food as Commons or Commodity? Exploring the Links between Normative Valuations and Agency in Food Transition

José Luis Vivero Pol [1,2]

[1] Biodiversity Governance Research Unit (BIOGOV), Center for the Philosophy of Law (CPDR), Universite catholique of Louvain, 1348 Louvain-la-Neuve, Belgium; jose-luis.viveropol@uclouvain.be

[2] Earth and Life Institute, Faculty of Biological, Agricultural and Environmental Engineering, Universite catholique of Louvain, 1348 Louvain-la-Neuve, Belgium

Abstract: The food system, the most important driver of planetary transformation, is in a deep crisis. Therefore, seeking a sustainable and socially-fair transition pathway becomes an issue of utmost priority for our own survival. The consideration of food as a commodity, a social construct that played a central role in driving this crisis, remains the uncontested narrative to lead the different transition pathways what seems rather contradictory. By exploring the normative values in the transition landscape, this paper seeks to understand how relevant is the hegemonic narrative of "food as commodity" and its alternative of "food as commons" to determine transition trajectories and food policy beliefs. Applying the Multi-level Perspective framework and developing the ill-studied "agency in transition", this research enquired food-related professionals that belong to an online community of practice (N=95) on valuation of food dimensions and agency in food transitions to check whether the valuation of food is relevant to explain personal stances in transition. Results suggest the socially-constructed view of food as commodity is positively correlated to the gradual reforming attitude, whereas food as commons is positively correlated to the counter-hegemonic transformers regardless the self-defined position in the transition landscape (regime or niches). At personal level, there are multiple loci of resistance with counter-hegemonic attitudes in varied institutions of the regime and the innovative niches, many of them holding this discourse of food as commons. Conversely, alter-hegemonic attitudes are not positively correlated to this alternative discourse and they may inadvertently or purportedly reinforce the ''neoliberal narrative''. Food as commons, a different narrative whose rationale is explained in the paper, seems to be a relevant framework that could enrich the multiple transformative constituencies that challenge the industrial food system and therefore facilitate the convergence of movements that reject the commodification of food.

Keywords: food valuation; food as commons; food as commodity; transition theory; narratives of transition; agency in transition; transformative agency; counter-hegemonic attitudes; gradual reformers

1.- INTRODUCTION

"Food is not a commodity". This statement seems to be increasingly concealing agreement from very different constituencies and political leaders, starting from Pope Francisco's headlines-catching encyclical text "Laudato si" [1] with noteworthy thoughts delivered in recent speeches at FAO[1] and WFP[2], followed by Via

[1] Opening speech at II International Conference on Nutrition, 20 November 2014. FAO, Rome. It can be accessed here:http://w2.vatican.va/content/francesco/es/speeches/2014/november/documents/papa-francesco_20141120_visita-fao.html

[2] Speech delivered on 13 June 2016. WFP, Rome. It can be accessed here: http://www.catholicherald.co.uk/news/2016/06/13/full-text-pope-francis-at-world-food-programme/

Campesina's representatives in hundreds of public acts, conferences and demonstrations [2-3], the US President Clinton's statement delivered in 2008[3] -quoted by McMichael [4]- and ending with numerous researchers from different disciplines, including engaged scholars [5-6] as well as those who work perfectly within the accepted mainstream knowledge boundaries [7-8]. Pope Francis, voicing a renewed Catholic Social Teaching[4], said during his Rome speeches that "it is painful to see that the struggle against hunger and malnutrition is hindered by the primacy of profit, which have reduced foodstuffs to a commodity like any other, subject to speculation, also of a financial nature" and that "we have made the fruits of the Earth – a gift to humanity – commodities for a few, thus engendering exclusion" whereas "we are no longer able to see the just value of food, which goes far beyond mere economic parameters". Finally, as an aspirational policy statement, Pope Francisco proposed that "no system of discrimination, de facto or de jure, linked to the capacity of access to the market of foodstuffs, must be taken as a model for international efforts that aim to eliminate hunger". Intellectual Property rights, private proprietary schemes, physical barriers, pricing, public policies, financial incentives and legal frameworks are all enclosing mechanisms that can be used to prevent individuals to get access to food, the so-called "fruits of Earth" [12-15].

Nowadays, however, the industrial food system continues treating food as a commodity and no as a sustainer of life [16] (p. 11), being its value no longer based on its many dimensions that bring us security and health, but on the tradable features that can be valued and priced in the market [17]. Value and price are thus mixed up, superseding non-economic dimensions such as its essential nature as fuel for human body, the role played as a relevant cultural foundation for individuals and societies, the human rights considerations of the right to food or the fact that food is often a natural resource produced by no one. Accepting the dominant industrial food system is in a deep crisis [18-22], recognizing that multiple stakeholders are looking for different transition pathways out of this crisis [23] and based on the idea that the commodification of food is the major structural cause of this crisis [24-26], this paper explores the different dimensions of food relevant to humans, how food-related professionals value these dimensions and what valuations are more often found in different loci of the transitional food system -comparing regime vs niches and reforming vs transforming attitudes- thus contributing to the understanding the role of agency in steering transition pathways in the global food system.

The industrial food system is in a deep crisis with internal and external tensions that trigger instability and colliding narratives of transition. Actually, the global food system is in a difficult transition from the dominant socio-technical regime connected with modernisation, industrialisation and market-based development to a putative "different" regime [27-28]. Although the need for a drastic shift has become commonly accepted by many scholars from different disciplines [20, 29-30], the transition pathway to follow is still subject to dispute [31]. Additionally, due to its high relevance to every human and deep cultural embedding in every society, the food system is definitely a good example where "agency in transition" plays a pivotal role in shaping transition pathways, either in form of the powerful agency of regime actors trying to protect their status or as the transformative agency of food sovereignty, transition, agro-ecology, commons or de-growth constituencies that are building alternatives, struggling against the regime and creating innovative niches of theory and praxis.

In this paper, the contemporary industrial food system is identified as the dominant regime, its primary narrative of "food as a commodity" being the hegemonic discourse regarding the valuation of food - after Gramsci's concept of hegemony of ideas and manufacture of consent [32] - and the gradual reforming emerges as the preferred political stance by the actors that conform the regime [33-34]. Transformative innovations from the niches, in contrast, imply a rupture with the widely shared and self-evident ideas and narratives of the

[3] US President Bill Clinton said "Food is not a commodity like others...it is crazy of us to think we can develop a lot of these countries by treating food like it was a colour television set"

[4] According to some authors [9], former Catholic doctrine of property was influenced by the classical liberal tradition founded by John Locke [10], by which private property rights to natural resources can be legitimised on the basis of their having been appropriated through land grabbing (physical and legal enclosures) and enhancement by human labour (a normative social construct). However, the revision of this doctrine states the principle of the universal destination of the world's goods has precedence over the right to private property (Laudato Si, para 93), being this the first principle of the whole ethical and social order [11].

regime, therefore we assume alternative narratives to be the most prevalent within those respondents working in niches [35-36]. Along those lines, the papers aims to explore whether the alternative narrative of "food as a commons" is more often found in the niches than in the regime, and in transformative attitudes more than in reforming ones.

The paper is organized as follows: section II explains symptoms of the deep crisis that affects the dominant regime of the global food system, here termed as the industrial food system, but also commonly known as the corporate food regime [37-38]. Those symptoms are then linked in section III to the absolute commodification of food, a social construct identified as the underlying cause that fuels this crisis. Section IV provides an introduction to the multi-level perspective of socio-technical transitions and explains the meanings of agency in transition and agency in food systems. Section V moves beyond the theoretical approaches to agency to explain in detail the foundations of the three proxy indicators used to understand agency in this paper, namely the transition locus, the political attitudes and the valuation of food, and the different typologies created. Section VI describes the methodology, justifies the appropriateness of the global sample (understood as a community of practice with web-based connections) and describes the interviewees. Results are presented in detail in section VII, firstly with descriptive results of the agency variables and then detailing the correlation and regression analyses. Section VIII incorporates the discussion of main results and the implications of the different valuations of food dimensions and regime-niches dialectical relationships. The paper concludes in section IX with the recognition that the normative way we value food, either as a commons or a commodity, shapes our attitude in the transition scenario. Finally, there is a call to food-related scholars from different disciplines to critically engage with the unfolding of the alternative narrative of "food as a commons" where the multiple-dimensions of food, other than the economic ones, are equally and properly valued.

2.- THE FOOD SYSTEM IS BROKEN

The global food system is in crisis[5] and therefore multiple tensions are pushing for exit alternatives to this crisis stage (called transition pathways in this research). The current economic model of endless growth is pushing us inexorably towards the limits of natural resources and planetary life support systems [39], limits that we have already surpassed for four out of nine global thresholds [40]. Human beings are becoming the main cause of planetary transformation, leading us to a new era that has been termed as the Anthropocene by geologists [41] or Capitalocene by sociologists [42]. Within the human-made set of activities that are drastically transforming Earth, food-production leads the way [43]. Agriculture, the economic activity forty percent of the world's population relies on for their livelihood [44], is the main driver of Earth's destruction.

Globally speaking, we have a troublesome relationship with food, as more than half the world eats in ways that damage their health [45]. Eating is not a source of pleasure for billions but a compulsory habit and certainly a cause of concern. Obesity and undernutrition affect an estimated 2.3 billion people globally [46], and food and nutrition security is at the forefront of contemporary political debates [47]. Despite years of international anti-hunger efforts, rising gross national incomes and per capita food availability, we have still 795 million undernourished people in the world [48].

The ironic paradoxes of the globalised industrial food system are that 70% of hungry people are themselves food producers [49], food kills people [50-51], food is increasingly not for humans -a great share is diverted to biofuel production and livestock feeding [52] and one third of global food production ends up in the garbage every year, enough to feed 600 million hungry people [51]. The side-effects of the industrial food system can be summarised in high water waste[6] and poorly use of that scarce public good; the impoverishment of the nutritious properties of some foods, by storing in cold rooms, peeling, boiling and the transformation processes [53]; an overemphasis on production of empty and cheap calories that increase obesity; high inefficiency in energy use as we need 10 kcal to produce 1 kcal of food [54]; soil degradation and biodiversity loss amongst others. With the current levels of food production and consumption, if we all were a standard US citizen, we

[5] When referring to the global, the author is mostly referring to the industrial food system that conforms the dominant regime.

[6] 70% of world non-marine water is used for food production [52].

would need 5.2 planets to cover our needs [55]. And nevertheless the 1.2 billion poorest people account for only 1 per cent of world consumption while the billion richest consume 72% [58].

Moreover, the industrial food system is not even more efficient or cost-benefit than the more sustainable food systems (either modern organic or customary agroecology) as it is heavily subsidized and amply favoured by tax exemptions[7]. The great bulk of national agricultural subsidies in OECD countries are mostly geared towards supporting this large-scale industrial agriculture[8] that makes intensive use of chemical inputs and energy [61], and that helps corporations lower the price of processed food compared to fresh fruits and vegetables. The alternative organic systems are more productive [62], both agronomically and economically, more energy efficient, they have a lower year-to-year variability [63] and they depend less on government payments for their profitability [64]. Anyhow, it is not about "organic" vs. "industrial" agriculture, it is about valuing the multiple dimensions of food to human beings other than its artificially-low price in the market.

As the global food system is in crisis there are multiple voices that call for a paradigm shift, although the values, narratives, economic and moral foundations and the derived practical proposals of that new aspirational paradigm are not yet elucidated. Actually, although there seems to be a certain consensus on the need of a drastic change on the current transition pathway, it is also evident there are several narratives of transition on where do we want to go and how are we going there. Perhaps the global food system in its complexity [68] requires a wide range of paradigm shifts [69] or several non-dominant pathways of transition. Finally, it is worth mentioning that, despite this call for "a paradigm shift", major analyses on flaws in the global food system and the very existence of hunger do not question the very nature of food as a private good [45, 67, 70-71]. Despite previous efforts within the UN system [74], neither food and nutrition security is considered a global public good nor food a commons. However, there is a growing consensus in certain areas of academic research as well as within the transformational social movements that consider the absolute commodification of food as one of the faulty rationales that are leading us to this crisis. This commodification obscures other non-economic dimensions that are quite important for individuals and society as a whole. Because this view of food as a commodity prompts and justify specific policies to foster its production, transformation and consumption based exclusively on market rules of demand and supply, we will explore more on this commodification of food in the following section.

3.- COMMODIFICATION AS A MAJOR CAUSE OF THIS CRISIS

The conversion of goods and activities into commodities has been a dominant force transforming all societies since at least the mid-nineteenth century [75-77], a process that has led to today's dominant industrial system that fully controls international food trade [49] and is increasingly exerting a monopoly over agricultural inputs such as seeds [78], land [80], agro-chemicals or machinery [29], while failing to feed the world's population in a sustainable manner. What makes any good, action or activity a commodity is the possibility of trading it for profit. Capitalism can be characterized by the production of commodities by means of commodities, as all means of production can also be traded (raw materials, labour, money, knowledge) [81]. Essentially, food has evolved into a private, transnational, mono-dimensional commodity in a global market of mass consumption [82], and profit-seeking explains than one third of total food produced is wasted [53] and almost half of the remaining food used is actually not meant to feed people but livestock, cars or industrial factories [52]. The industrial food system treats food as a disposable commodity and food-producing natural resources as natural soul-less engines [18].

The mechanisms of enclosure, or restriction and privatisation of common resources through legislation, excessive pricing and patents, have obviously played a major role in limiting access, while the social construct of food as a commodity denies its non-economic attributes in favour of its tradable features, namely durability,

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[7] The Global Subsidies Initiative http://www.iisd.org/gsi/ [Accessed July 1 2016].

[8] The average support to agricultural farmers in OECD countries in 2005 reached 30% of total agricultural production, equalling to 1 billion $ per day [49]. In OECD countries, agricultural subsidies amount $400 billion per year. Moreover, the world is spending half a trillion dollars on fossil fuel subsidies every year. In 2011 the US government gave $1billion in fuel tax exemptions to farmers. The overall estimate for EU biofuels subsidies in 2011 was €5.5–€6.8 billion [59-60].

external beauty and the standardisation of naturally-diverse food products, leading to a neglect of nutrition-related properties of food, alongside with an emphasis on cheap calories.[9] These cheap calories not only come at great cost to the environment (the sustainability issue), but also human health (the obesity issue) and social relations (eating alone). The lowering prices for producers are promoting cheap rural labour and impoverishment, forcing small-scale farmers to flee to urban areas [30, 84-85] and thereby turning rural areas into depopulated zones of production. The "low cost" industrial food system that delivers cheap food[10] to a large proportion of the world's population is based on capitalism's greatest strength, namely its capacity to create and appropriate cheap natures, being labour, food, energy or raw materials [87].

Under capitalism, the value in use (feeding people) is highly dissociated from its value in exchange (price in the market) [88], giving primacy to the latter over the former [89]. Food as a pure commodity can be speculated in by investors[11], modified genetically and patented by corporations, or diverted from human consumption just to maximise profit, the latest twist on this being the substitutionism of food commodities [90], whereby tropical products (sugar cane, palm oil, etc.) are replaced by agro-industrial and pharmaceutical by-products (for high fructose corn syrup, margarine, etc.).[12] Ultimately, the industrial food system alienates food consumers from food producers in socially disembedded and physically-distant food relations [92], and in so doing they damage societal well-being - disconnecting us from nature and deeply undermining a holistic sense of life. In the dominant narrative of the industrial food system, food is valued as a commodity and a tool of power, while humans are merely seen as consumers whose only way of asserting their autonomy is via the ultimately pointless choice between food brands [93]. Food agency is restricted to the "sovereign act of consuming". This leads to a loss of agency to govern a vital resource and multi-dimensional good so important for personhood.

This reduction of the food dimensions to one of a commodity explains the roots of the failure of the global food system [84, 94-97]. Moreover, market rules not only put prices to goods but, in doing so, markets corrupt their original nature [98]. The commodification of food crowds out non-market values and the idea of food as something worth caring about, such as recipes associated to some types of food, the conviviality of cooking or eating together, the local names of forgotten varieties and dishes or the traditional moral economy of food production and distribution, materialised in the ancient and now proscribed practices of gleaning and famine thefts. Those food-related qualities can neither be valued nor regulated by the market, which is why the treatment of food as simple commodity results in social upheaval [34].

It is becoming obvious to many that the reliance on massively distorted market forces, industry self-regulation and public-private partnerships to improve public health and nutrition does not result in substantial evidence to support any major claim for their effectiveness in preventing hunger and obesity, let alone in reducing environmental threats [99-100]. On the contrary, transnational corporations are major drivers of the latter two of these, in the case of obesity epidemics, for example, by maximising profit from increased consumption of ultra-processed food and drink [101-102]. The conventional industrialised food system, dominated by mega corporations, is basically operating to accumulate and under-price calorie-based food resources and maximise the profit of food enterprises instead of maximising the nutrition and health benefits of food to all [103-106].

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[9] Cheap calories: low-cost sources of dietary energy such as refined grains, added sugars and fats, which, inexpensive and tasty, together with salt form the basis of ultra-processed industrial food; the more nutrient-dense lean meats, fish, fresh vegetables and fruit are generally more costly because they are not so highly subsidised [83].

[10] Food is cheap in just one specific sense: more calories produced with less average labour-time in the globalised commodity chain system [86].

[11] Speculation on food commodity futures represents the most extreme effect of the commodification of food [20] with no recognition of its dimension as essential element of life.

[12] Abstracting food from its physical form into highly complex agricultural commodity derivatives for fuel, animal feed and ultra-processed food components is a sophisticated version of Marx's metabolic rift, the absolute separation of social production from its natural biological base [91]. This metabolic rift (also called food alienation) between consumers and the distant food producing areas implies that socio-economic implications of the consumption act are lost.

4.- THEORETICAL PREMISES OF "AGENCY IN FOOD TRANSITIONS"

In this section, the theoretical underpinnings of individual agency in the different transition pathways of the food system will be presented, linking the importance of people's valuation of food with policy beliefs, aspirations and driving narratives present in the food system landscape at global level.

4.a.- Transition theory

The Multi-Level Perspective (MLP) on Sustainable Transitions [107-112] is a theoretical framework that explains the transition pathways towards an enhanced sustainability between different stages of socio-economic systems. As the global food system is transiting from a multiple crises stage towards an aspirational sustainable one, this theoretical framework is judged as appropriate. Key elements in this theory are the innovative niches, the dominant regime and the broader landscape, as well as the interactions between these three elements [113-114]. The achievability of the aspirational sustainable goals is theorized as a progression from interstitial or marginal innovations to the reconfiguration of the entire system in the direction of sustainability [115]. Disruptive ideas and alternative solutions are crafted in innovative niches, spaces protected from market competition where processes are set in motion and new forms of economic and social organization are experimented with. Niche-innovations may gradually develop through learning processes, the expansion of social networks and supporting constituencies, and the articulation of appealing visions and expectations [116-117]. Additionally, exogenous changes at the landscape level create pressures on the regime and destabilization of the regime (by sudden unforeseen shocks or political breakthroughs) creates windows of opportunity for wider diffusion of niche-innovations.

Socio-technical transitions may take different pathways and they involve contested processes in numerous loci, multiple social groups, diverging narratives of transition, clashing ideologies and vested interests, many of which are outside the immediate control of policymakers. Therefore, transitions cannot be steered completely or governed in the classical sense [115, 118]. Additionally, socio-technical systems are hard to change because existing configurations are characterized by internal coherence (alignment of elements), path dependence and 'lock-in' mechanisms (e.g. taken-for-granted rules and institutions, distorted subsidies, policies that create a non-level playing field), and active resistance by incumbent actors using power and politics to stabilize existing systems [119-120].

And yet, regimes do actually change. Innovative niches, once they grow and become successful enough to confront the regime, often follow two type of pathways: either be scaled up to system-wide proportions, therefore becoming a challenger for the dominant regime, or they may be co-opted/adopted by the dominant regime to provide a basis for a new socio-technical re-configuration of the modified regime. Niche innovations reach different results as to the degree of system transformation depending on pressures coming from the landscape variables and the capacity of the new social-technical solutions to resolve the economic and social contradictions of the dominant regime [121].

However, the transition theory, as originally formulated, seems to be insufficient to explain the forces that enable the fittest niches to become relevant competitors of the mainstream regime, and how some of those niches may co-exist, confront or replace the mainstream all along the transition pathway. A fine-tuned analysis of driving agents in the socio-technical regimes has to be conducted so as to understand the main role of agency, exemplified here as actual people in existing institutions, power balance, shared values or hegemonic paradigms.

4.b.- Agency in transition

Human agency in transition theory drinks obviously from the theory of agency in development and the theoretical approaches to multi-dimensional poverty undertaken by Amartya Sen, who defined agency as "an assessment of what a person can do in line with his or her conception of the good" [122]. Agency is exercised with respect to goals the person values and has reason to value and it includes effective power as well as direct control, freedom to act, autonomy, empowerment and self-determination [123-124]. People who enjoy high levels of agency are engaged in actions that are congruent with their values [125] or their own interests [126] (p.

15). For some authors, human agency, either individual or collective, is fundamentally cultural and the role of narratives is central in its underpinning [127].

The conceptualization and applicability of agency in the transition theory framework has not been properly addressed, being a recurrent subject of critique by authors that analysed the politics of transitions [111, 128-129] and how the balance of power between groups plays a role in steering transitions [130]. Agency in transition is structured by routines, rules, habits, conventions and can be understood as motivations, beliefs and values of individual agents steering or influencing the transition pathways [112, 131].

Describing a former transition pathway and how it evolved over time gives us a good overview of how things have changed, but tells us little about the agency involved in producing such changes [132]. It is the agency of actors however which drives transitions and should be foregrounded in the analysis [133]. Actually, agency-sensitive analysis of sustainable transitions has been very rare in the first period of the transition academic research. As a sort of defense, Geels responded that transition trajectories and alignments were always enacted by social groups (or in our particular research, a community of practice) [108].

4.c.- Agency in food systems

Food production and consumption practices are essentially social, cultural as well as biological [93], and thus understanding "agency" beyond the socio-technical innovations, enabling legal frameworks and policies that frame transitions is pivotal to interpret the dynamics of change and the struggle between transition trajectories. Food is one of the structures of society [134] (p. 53), the desire for food is the most powerful driver of human agency [135] and food has been associated to agency [136], power [137] and a means to contest the system [138]. Therefore, conflict and contestation are inherent to food systems because they involve the production, distribution and access of a vital resource for humans that greatly structures our societies and largely shapes our cultivated planet. So, understanding transitions in the global food system cannot be fully undertaken without addressing "individual agency of food system actors", either in form of the powerful agency of regime actors trying to protect their status and only accepting gradual reforming proposals or as transformational agency aimed to revolutionise the system, a position that can be materialised as counter-hegemonic constituencies (i.e. food sovereignty, agro-ecology) or alter-hegemonic ones (i.e. transition, de-growth, commons).

The MLP theory was initially applied to explain socio-technical transitions in domains that were not so deeply rooted in people's vital needs and culture, such as energy [139], transport or natural resources [140-141], so agency in transition could be downplayed as an explanatory driver of transition pathways. However, in the last years (and especially since the 2008 food crisis), the MLP framework has increasingly been used to understand transitions in the agricultural and food systems [27-28, 142-144], transitions spurred by the generalised feeling that the 2008 crisis of international food prices was just a symptom of a broader and structural problem in the globalised industrial food system. And, in doing so, the importance of agency in determining transition pathways, goals, underpinning values and social conventions has therefore been brought to the front.

5.- AGENCY VARIABLES EXPLAINED

We aim to elucidate "individual agency in food systems in transition" that advocate different scales and depths of change, have different views on production and consumption, take inspiration from different academic disciplines, represent different views on policy, and embody different epistemological and normative assumptions. It is important to stress that we are analysing human agency (people's values and narratives and political attitudes) and not institutional agency or mandates. To explore agency, this research will use three proxy variables based on where interviewees position themselves in the transition landscape, what political attitude they adopt and how they value food. The variables are thus described as follows:

a) the self-consideration of the position of the respondent's food-related activity in the food system transition landscape being either regime or niche, after the MLP theory;
b) the political stance of the food-related activity he/she is involved with vis a vis the (existing) food system, defined here as reformer or transformer;

c) the valuation of different food dimensions, primarily comparing economic and non-economic dimensions.

5.a.- Self-placement in the transition landscape: regime or niches

As we have seen, the MLP theory is articulated around three elements or loci of action: the landscape, the regime and the niches. Both regime and niches are places where agents of transition act and interact, whereas the socio-technical landscape is the context where transitions occur, constituted by the "cultural and normative values, broad political coalitions, long-term economic developments and accumulating environmental problems that broadly shape industrial and technological development trajectories" [119] (p. 34). Rules, norms, values, beliefs and narratives dictate the collective shared understanding that sustains a particular landscape where regime and niches are embedded. Changes at the landscape level, for instance, may put pressure on the regime, and create openings for new technologies.

Regimes are constituted by the institutions, conventions, rules, and norms that guide the uses of particular technologies and the everyday practices of the producers, workers, consumers, state agencies, public authorities, civil society organizations, private and business actors and scientists who participate in the regime. These rules and practices exist within the minds of regime actors. Regime rules, relationships, and practices are interrelated with niches and the third level, the landscape. The regime shares organisational and cognitive routines [107] that may be more or less codified, stable and universally agreed upon by stake-holders [119]. The stability of the regime is a dynamic one, meaning that innovation still occurs but is of an incremental nature (gradual reforming as it is referred to in this paper) and locked into a particular socio- technical trajectory [107, 142]. So, we will assume *a priori* the dominant political attitude vis a vis the existing food system in those who position themselves as agents working in the regime is gradual reforming. If, however, intra-regime or external factors create misalignments or tensions among the actor-groups involved, the system can destabilize and open up to new kinds of technological innovations that may be developed within niches [145].

Niches are loci where innovation and learning occur and social networks are built. Agents working in niches aim to advance more sustainable alternatives to those present in the existing socio-technical regime [130]. Niches are also locus of contestation of regime values, practices and transition orientations [31] and therefore the most likely expected political position in niches would be that of a transformational nature. However, actors working in innovative and transforming niches may also unintentionally reinforce or legitimise the regime structures they are trying to change [146], what is termed as the "paradox of embedded agency" [147]. By understanding the alignment and diversity of political stances of actors working in niches we can shed light on niche convergence, competition or embedding in the regime dominant pathway.

5.b.- Typologies of political attitudes vis a vis the food system

The political stances adopted by an individual or institution with regard to the dominant food system that conforms the regime, using the MLP terminology, could be enrolled into the following two broad stances: reformist or transformative. This dichotomy is somehow contested because it reduces a complex debate to two extreme positions, which both have serious shortcomings. Along those lines, several authors have proposed different typologies for political stances, either focused specifically on the food system [33], framed in the MLP transition theory [115], dealing with social movements at large [35] or transformational civic initiatives in particular [34, 36]. In this paper, both the reformist and the transformative stances are subject of a nuanced approach and thus different sub-stances (herewith called "streams") can be identified.

The gradual reformers

The reformist stance envisages some incremental changes in the organization of production, institutional arrangements, daily life practices, technology and purchase behaviour, but maintains core features of the status quo. Underlying values of the reformist approach are, among others, a belief in progress through patented knowledge and markets being the primary allocation mechanism between producers and consumers. This stance represents the political and academic orthodoxy inspired by neoclassical economics and includes

sustainable intensification [148], campaigns to educate consumers and change eating behaviour or labelling GMO products.

Following [33], we can distinguish two streams in this stance: the neoliberal (also called corporative) and the gradual reformist. The former seeks to reproduce the corporate regime[13] that emerged in the 1980s with the current neoliberal phase of capitalism [75], and it is characterized by the monopolistic agri-food corporations, globalized food chains, rising demand of animal protein, links between food and fuel, ultra-processed food, liberalized global food trade, foreign land grabbing schemes and depletion of food-producing natural resources (water, phosphates, arable land, soil biodiversity, genetic resources) [52, 89]. The latter, recognizing the faultlines that triggered two recent food price crises, aims to mitigate the social and environmental externalities of the industrial food regime. It calls for mild and gradual reforms to the regime (i.e. safety-nets, corporate social responsibility, reducing food waste, certification for niche markets), seeks to mainstream less socially and environmentally damaging alternatives and invents different narratives, apparently new and transformative, but actually compatible with neoliberal values and the capitalistic logic of the food system [150-153]. Many international NGOs and so-called alternative movements fall in this category.

In the current global food system, neoliberal and reformist trends reflect the two directions of capitalism's double-movement[14] and they are integral part of the dominant regime with their tensions resulting in a fine-tuning of the neoliberal project rather than a substantive change in direction [34]. The Polanyi's double-movement is consistent with Gramsci's power struggle between the ruling class and civil society, whereby the former seeks hegemonic power over the latter by imposing cultural and ideological narratives.

The transformers

Contrarily to the reformist stance, the transformative discourse and praxis is profoundly emancipatory, and thus necessarily pluralistic [121, 154] and reflexive [155]. And yet, although transformative practices in the agri-food system are more radical than the gradual reformist positions, for some authors they do not necessarily presume the abandonment of capitalism or economic growth as underlying paradigms [115]. The priorities for radical change and the alternative pathways are rather diverse, falling in this stance advocates of "new economics" [156], "de-growth" [157], "sharing economy" [158] or "transition towns" [159]. Some typical actions in these groups are self-provisioning, collaborative consumption, local currencies, time banks, peer-to-peer production or Do-it-Yourself economy [160].

In this article, the author will use two different typologies to analyse the transformative attitudes of food professionals vis a vis the dominant food system: the counter-hegemonic and the alter-hegemonic streams. These typologies are based on Williams 's work on social movements [35] and Wright's analysis of civic initiatives according to their relationship to State institutions [36]. What Williams described as ''alternative'' and ''oppositional'' were defined by Wright as "interstitial" and "ruptural" respectively. And in this article will be treated as "alter-hegemonic" and "counter-hegemonic". We have preferred to use those labels because they fit well with the proxy preferences posed in the questionnaire[15].

Alter-hegemonic institutions or individuals work towards an incremental erosion of the political-economic structures and they arise within the interstices and edges of the food system [35], trying to subvert it with a vision of food justice and civic responsibility [34]. Good examples could be initiatives that provide food where

[13] The basic definition of a food regime is a "rule-governed structure of production and consumption of food on a world scale" [149].

[14] Karl Polanyi argued that alternating periods of unregulated markets followed by state intervention to regulate them, based on welfare concerns, were a cyclical part of capitalism and ensured the existence of the liberal state itself [76].

[15] The gradual reformers are those who responded their current food-related activity "improves the existing food system", the alter-hegemonic are those who "build a different food system" and the counter-hegemonic are those who "struggle against the existing food system".

markets have failed [16] or those using vacant lots in urban areas to cultivate edible plants [17]. Interstitial transformations (or "ignore the State strategy") build alternative institutions and deliberately foster new forms of social and emancipatory relations [36]. As also theorized in the MLP, interstitial transformations operate in innovative and protected niches at the margins of the hegemonic regime (the industrial food system in our case). They are action-based initiatives with more praxis than normative work and they are often not perceived as a threat to the elites ruling the dominant regime. At least, not initially. And yet, cumulatively and perhaps unintentionally, such initiatives create alternative transition pathways and narratives for non-commodified economic and social relations [163].

Counter-hegemonic institutions or individuals seek to create a new structural configuration (institutions, rules and moral ground) through a complete up-root of the deep structures that preserve the status quo [164]. They are grounded on the idea that confrontation and political struggle will create a radical disjuncture that would trigger a rapid change rather than an incremental change over an extended period of time [35] and they contest the hegemony of neoliberal globalization through a radical transformation of society [165]. Epistemologically, this stream is nurtured by critical theories aimed at debunking the mainstream position and giving voice to neglected actors, arguing for a major overhaul of core societal features (neoliberalism, consumerism, primacy or growth and private property, individualism, competition), and shifting to a new value-system. Wright describes this stream as "ruptural" [36], McClintock as "subversive" [34], Geels et al. as "revolutionary" [115], and Holt-Gimenez and Shattuck as "radical" [33]. Counter-hegemonic approaches are extremely political [154] and thus they can be politically unpalatable for many constituencies and policy makers [115]. This stream has been critised for being elitist [166], being distanced from concrete experiences of real-world producers and consumers [167] or offering little in terms of practical transition pathways as there are difficulties in diffusing and up-scaling radical local initiatives [168].

5.C.- Valuation of food dimensions

We will explore here the conceptual framework of the multiple dimensions of food important for humans (see fig. 1), a framework that has been presented by the author in previous papers [169-170], and how the valuation of these dimensions corresponds to a perception of "food as a commodity", when the economic tradeable dimension prevails over the non-economic; or "food as a commons", when the different dimensions are equally and properly valued, and the tradeable dimensions does not obscures the non-economic ones.

[16] Like the City Slicker Farms in Oakland (California) [161]. They are a food justice-oriented initiative that provides free and low cost food to local residents in low-income neighbourhoods.

[17] Like the Incredible Edible movement (http://incredibleediblenetwork.org.uk/) [162].

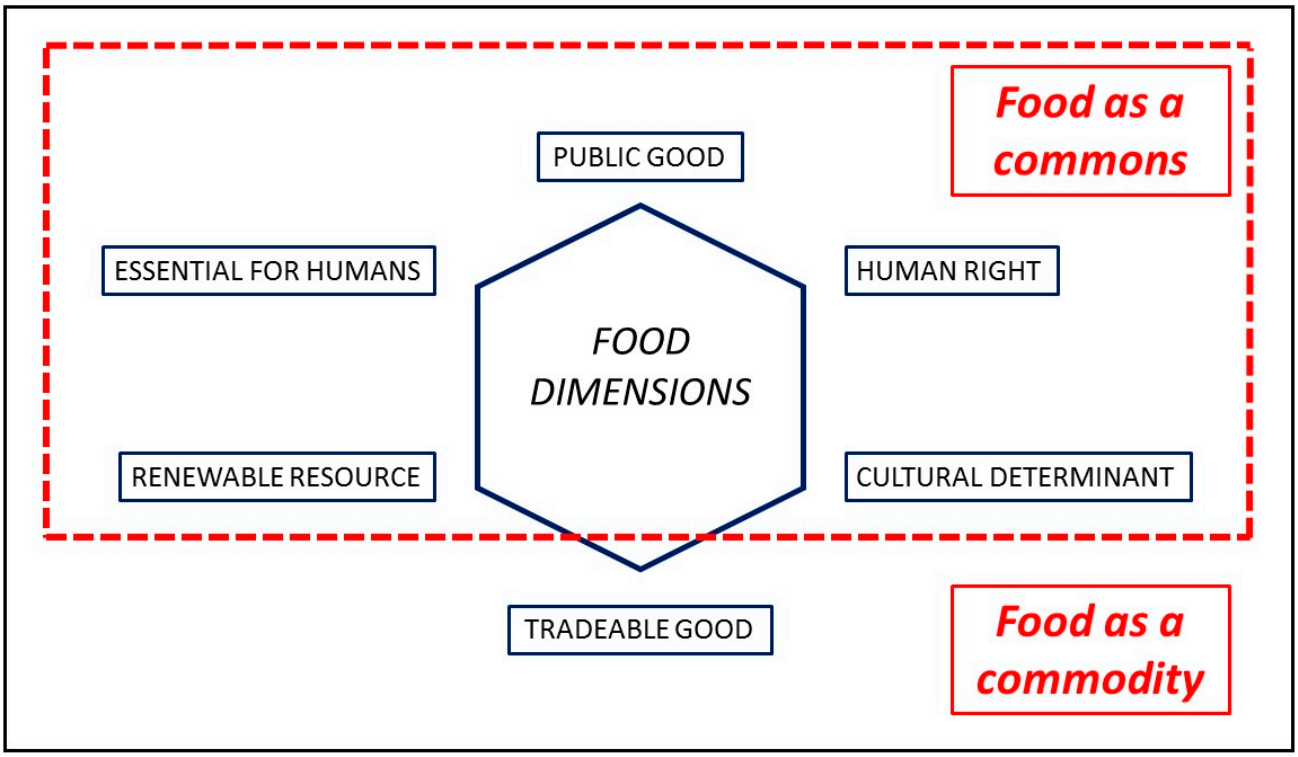

Figure 1: The six dimensions of food relevant to humans and explored in this research

An essential resource for humans

Food is one of the three essential resources humans require to keep the vital functions, with water and air. Food is, first and foremost, a satisfier of the human need of subsistence [171] that impacts strongly in our capabilities and agency [123]. Being that vital need absolute (determined by our physiological needs) and the same in all cultures and in all historical periods [172], access to adequate food has been re-constructed as a human right (a social construct that is context-specific) in the second half of the XX century. It is worth mentioning that during the same period, a parallel social construction was also built up by the economists around the public and private nature of goods, a classification based on just two features (excludability and rivalry) that posited that food was a private good and thus an appropriate candidate to be better allocated by market forces instead of public institutions [173-172]. However, those two features are nothing but another social construct and society can modify the (non)-rivalry and (non)-excludability of goods that often become private or public as a result of deliberate policy choices [176]. In the case of food, the excludability of a good that is so essential to human beings shall be tempered by the compulsory fulfillment of a basic right to life if the specific moral grounds of any given society in any given point of time so consider.

Along those lines, previous influential scholars adopted a normative point of view (based on values) and considered the existence of "primary goods" from which the other goods are derived (Rawls's "merit goods" [177] or Polanyi's "livelihood of man" [178]) and those primary goods deserve a special treatment in our society. A just society requires that all humans have the capability to live the lives they have reason to value [123, 179] and in order to do so it is intolerable (and unacceptable) on normative grounds that every human cannot satisfy his food needs when we already grow enough food to feed adequately the current and the expected population in 2050 [52, 71] and food scarcity has been artificially created through human-made enclosing mechanisms and political and institutional choices [180].

An individual and societal cultural determinant

None can deny the importance of food as a foundational pillar of culture and civilizations. For centuries food was cultivated in common and considered a mythological or sacred item. Different types of food have often been endowed with sacred beliefs (fish and bread in Christian beliefs, people is made of corn among the

Mayan peoples, quinoa is sacred for the Peruvian Incas, cows are sacred and uneatable in India) and their production and distribution has been (and still is) thus governed by non-market rules, being in many cases produce, distribute and eat in commons [181-182].

Everything having to do with food such as its collection, capture, cultivation, preparation and consumption represents a cultural act [183]. In many countries, social life is pivoting around meals and there are shared values about what is good food [184]. At not just society-wise, food is also central to our identity as individuals and as members of a society [185] and that is because it plays an essential role in sentiments of belonging and exclusion [186], and therefore it helps us shaping the meanings of home, understood as both a material (our family household) and an imagined place where you feel comfortable and safe [187]. Food also plays a key role in creating social bonds with relatives, friends and colleagues since humans tend to eat together (commensality), thus reflecting the social relationships of individuals [82, 188]. And for all those deeply rooted reasons, eating habits are so extremely difficult to change [189].

A basic human right

In modern times, most human needs have been framed as legitimate rights to which citizens can aspire, and which society at large has an obligation to respect and provide for (i.e. water, education, health, housing, etc), being the rights-based approach a legitimate and legal framework for political and social action in modern nation-states [190]. In that sense, food is formally considered a binding human right recognized under international law. The right to food protects the right of all human beings to feed themselves in dignity, either by producing their own food, by purchasing it or by receiving it from welfare systems[18], as enshrined in Article 25 of the Universal Declaration of Human Rights [192] and the Article 11 of the International Covenant on Economic, Social and Cultural Rights [193]. Moreover, the right to food defined as freedom from hunger falls under the category of "basic rights"[19], since it is necessary to have some basic needs met (socio-economic rights) before being able to enjoy a wider set of liberties and moral rights (civil and political rights). In plain terms, no one would be able to fully enjoy the right to private property or the right to free speech if he or she lacks the essentials for a reasonably healthy and active life, namely water, food, air, health or a house. Designating a good as a human right means under no jurisdiction and no circumstances may that good be denied to anybody [195] (p. 120). That explains why the right to food has long been claimed by the transnational agrarian movement (La Via Campesina) that crafted the counter-hegemonic narrative of Food Sovereignty [196].

A natural and renewable resource (that can be also produced by humans)

Although today most foods are derived from cultivated plants and domesticated animals, a substantial part of the global human diet still comes from wild plants and animals. Natural ecosystems are an almost unlimited source of edible plants and animals, ranging from game and bush meat, fish and fowl, to vegetables, fungi or fruits [197-198] and wild food is already fully considered as an ecosystem service [199], although still receiving little attention due to perceived low importance and lack of data [200]. In highly urbanized Europe, with a deep penetration of industrial modes of food production, wild food is still consumed by more than 100 million people and provided by more than 150 species [200]. Actually, wild foods are quite *a la mode* in this 21st century, having entered into the domain of haute-cuisine and healthy foods and remedies [201]. The marine species represent another interesting case to portray. Fish stocks, especially those in international waters, are generally accepted as common goods [202-203]. Although there are complicating factors depending on national sovereignty and international proprietary rights schemes, the same assumption remains in place for fish stocks in coastal areas as well [204].

With regard to ownership of nature's resources, the controversy on who owns, governs or has entitlements over natural food resources has a long history, being a debate originally held by philosophers and rulers (i.e.

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[18] An official comment on the right to adequate food states explicitly that this right shall "not be interpreted in a narrow or restrictive sense which equates it with a minimum package of calories, proteins and other specific nutrients" [191].

[19] Shue claimed that basic rights "are everyone's minimum reasonable demands upon the rest of humanity." [194]

Aristotle, Roman Emperors or feudal lords, see [182, 205-207]) but since Locke being largely dominated by economists [208-209]. The classical liberal tradition founded by John Locke posited that private property rights to natural resources could be legitimised on the basis of their having been appropriated through land grabbing and enhancement by human labour. Land, water, mineral resources and wild foods then belonged to those who were the first to cultivate, use, enclose or fence them. And yet Locke stated an important condition, often neglected or dismissed, for this resource acquisition: the appropriation could be legitimated and socially accepted only if enough resources of equal quality were available to use for others (known as the "Lockean proviso"). Thus, even the liberal concept of private ownership does not allow for an unconditional right of appropriation of humanity's natural resources.

More recently, two representatives of the philosophical and legal schools of thought have addressed the public/private nature of essential natural resources from different angles, being perfectly applicable to food. By using the argument of "normative public goods" developed by philosopher John O'Neill [2010], the case against the consideration of food as a private good is not that food is not rival or excludable (under the reductionist economic approach) as cultivated food can easily be excluded from consumption (natural food is no so evident though) and it is indeed rival in that consumption. It is rather a case that it ought not to be excluded (a normative rationale) due to its essential nature as a vital resource for the human body. The philosopher's point of departure was that the economic (theoretical) and political (normative) approaches to essential goods are logically distinct. A good from which individuals can be excluded is not necessarily one from which they ought to be excluded. Public goods in the economic sense are goods from which individuals cannot be excluded whereas in the political sense are those from which individuals ought not to be excluded from its use.

On the other side, Olivier De Schutter and Katherine Pistor [180] depart from the characteristics of different natural resources and the nature of its essentiality to human beings. Although some authors defend the idea that essentiality is determined by shared norms about what resources a just society should make available to all irrespective of purchasing power [211-212], what brings us to the idea of "social construct", those two legal scholars posited that some natural resources are essential because they are neither context specific (applicable to all cultures and settings) nor relative (as caloric needs are determined by our physiological needs, that may vary from one human body to another but they all fall within a range of 2100-2300 kcal per person per day). Essential resources are those absolutely necessary for the survival of every human being, including drinking water, basic food and shelter, and thus ought to have a special legal and political consideration. Again, normative considerations and moral grounds are nurturing the rationale of food not being treated as a commodity. The shift of focus from private/public goods in general to essential resources in particular brings to the fore normative aspects of resource maintenance and allocation and calls for a critical reassessment of existing governance regimes and their distributional effects [180]. Additionally, the authors defend that the scarcity of those essential resources has been artificially created by human institutions and norms and the market mechanisms will not be able to achieve a fair distribution of food for all since the vital food needs cannot be reflected in market demands unless that you have enough purchasing power.

As a corollary of both approaches, if a society or community so considers, food can be regarded as a commons and to be governed as a public good as part of a different social contract grounded in its essentiality and the multiple dimensions important to humans.

A tradeable good

But food dimensions do not stop here, as food is also a tradeable good since the origin of settled agricultural societies and it has recently become a commodity. Considering food as a commodity refers to unbranded or undifferentiated items from multiple producers, such as staple grain, beef meat or fresh vegetables that are largely valued by its price in the market (value-in-exchange dominates over value-in-use). In this paper, commoditised food refers to the natural resources essential for human survival that are dispossessed of any kind of attribute but the marketable features (safety, durability, standardization, brightness, beauty). After [2013], food as a commodity can thus be equaled to a consideration of food whereby only this tradeable (economic) dimension is valued or it prevails over the others. The commodification of food is just another facet of the neoliberal worldview that prescribes appropriation, privatization and commodification of any world's resource [214] and it has created an industry of selling food just for profit, rather than viewing food as a human right which all populations should be granted equal access.

Food as a commodity is the backbone of the food industry, one of the biggest areas of economic activity worldwide, representing around 10% of the global gross domestic product [2015]. As a commodity, international food trade, that only accounts for 23% of global food production [2016], is regulated by the WTO framework, an international institution not bound by the UN Charter, and dominated by few transnational companies [104, 106]: only three companies account for 40% of beverage market [217], six companies controlled more than 90% of agrochemical sales worldwide [218] and the top three seed firms currently control 70% of transgenic plant patents [219].

And yet, as a social construction, the commodification process can be reversed [220] and a re-commonification valuation can be sought after by society [221], since food has become a commodity only for the industrial food system, a very particular stream of the westernized neoliberal economy that pervades so deeply the dominant regime. So, there are hopes to re-construct food as a commons, a different worldview that may bring different food policies, duties and entitlements.

A public good

Food has also a public dimension that has not been so far properly valued, a dimension that jointly with the others renders food as a multi-dimensional commons and invalidates its treatment as a mono-dimensional commodity. We subscribe the consideration of any given good as private or public is a result of "deliberate policy choices" made by society [74] according to what is perceived as a public need, rather than containing certain inherent characteristics of non-excludability and non-rivalry [222]. Public goods are much more than the highly-reductionist orthodox economic formulation (non-excludable, non-rival), as the public consideration of a good is nothing but a social construct of any given society at any given period in history based on moral grounds, perceived needs, dominant paradigms, shared values and socially- and politically-derived agreements. Actually, public goods can be generated through collective choices (i.e. voting in a referendum to declare water, education or health a public good to be enshrined in the Constitution), be funded by collective payments (i.e. taxes or public budgets) and be owned through private, public and collective proprietary regimes [223] with different proprietary rights [209]. Public goods, in the political sense, can be produced by governments because the market does not or because a society decides that all citizens should have access to them because their social or economic benefits are important or essential, regardless of the ability to pay. Food evidently qualifies as such.

A regime that considers food as a public good would be governed in a polycentric manner by food citizens [224] that develop food democracies [18, 225] which value adequately the different dimensions of food. Actually, the development of "food citizenship", in opposition to "food consumers", requires moving beyond food as a commodity [226.

Multidimensional food as a commons

The consideration of food as commons[20] rests upon revalorising the different food dimensions that are relevant to human beings (value-in use) thereby reducing the importance of the tradable dimension (value-in exchange) that has rendered it a mere commodity. It is therefore the multi-dimensionality of food and its importance for every human being what endows this resource with the commons category. In other words, food as a commons values the multidimensionality of food, not assigning a special primacy to the economic dimension, as the current industrial food system does. Food as a commons is compounded by a resource (any living material, either produced naturally or cultivated, that may be eaten by humans) and a governing community, that can be local (food buying groups), national (collecting licenses for wild mushrooms or game hunting) or international (i.e. the International Convention for the Conservation of Atlantic Tunas), and whose

[20] There are multiple definitions of commons, being as diverse as the schools of thought that posit them. Economic, political, legal and historical scholars have all produced definitions on the commons. For the sake of this paper, commons are compounded by a resource and a governing community. The resources -tangible and intangible - can be accessed and used by the community that governs its management and steward its survival. The concept is applicable at the local level but also in global terms, if the community notion is extended to the population of the planet.

proprietary regimes may be private, public or collective, being the primary goal to secure that all members participate in the governance and the benefits of that resource. Every eater should have a saying in how the food resources are managed (an idea that has been termed as food democracy) and every eater should be guaranteed a fair and sufficient access to that resource, regardless his/her purchasing power.

The end-goal of a food commons system should not be profit maximization but increase food access, build community and shorten distance from field to table [154]. It represents a worldview different from the dominant paradigm of the industrial food system and it is based on shared customary and contemporary models of social organization for food production and consumption, non-monetized allocation rules and sharing practices, principles of peer production based on commons (resources, knowledge, values), social economy and the importance of the commonwealth, happiness and well-being of our communities. The commons dimension of food is about caring, collectiveness, equity, responsibility and stewardship [227]. Embeddedness and direct democracy from local to global are also relevant features, linking the food commons with agro-ecology and alternative food systems. The consideration of the food commons invokes a radical paradigm shift from individual competitiveness and endless growth as the engines of progress towards collective cooperation and de-growth/frugality as the drivers of happiness and the common good. This normative valuation may certainly sustain a transition pathway that first, provides for sustainable nutrition for all and second, provides meaning and not just utility, to food production, trading and consumption [228] (Anderson, 2004). The food commons encompasses ancient and recent history (customary valuations of food in different civilizations as well as modern and urban civic collective actions for food), a thriving alternative present (the myriad of alternative food networks that share, barter and exchange food by means of non-monetized mechanisms) and an innovative, utopian and just vision for the future [229].

Regarding the valuation of the six food dimensions, the assumption of this research is as follows:

a) The recognition of these food dimensions is universal, whatever age, gender and culture (although food as a human right is contested in some countries), but individuals differ in the weight and priority assigned to each dimension.
b) Food dimensions matter to humans as they shape our relationship to food and food-producing systems.
c) The valuation of food dimensions triggers human agency and the political stance vis a vis the food system, being an important factor in separating a food consumer from a food citizen.
d) Societies value food dimensions differently in specific historical and geographical contexts
e) Food dimensions connect multiple elements and drivers that interplay in the food systems, as well as other issues such as biodiversity, climate change, gender and poverty.

As a methodological rule in this paper, the consideration and proper valuation of the multiple dimensions of food (economic and non-economic or value-in-use and value-in-exchange) will be considered in this paper as valuing "food as a commons". Otherwise, when the economic tradeable dimension is preferred and valued above all the other non-economic dimensions, the respondents will be assigned as valuing "food as a commodity", where mono-dimensionality prevails.

6.- MATERIALS AND METHODOLOGY

Describing the sample: Food system professionals with social network profiles as agents of change

The research hypothesis is that the way people value food is correlated to the political stance vis a vis the existing food system adopted by the individual. In order to test that hypothesis, we decided to ask food-related professionals working in different institutions, countries and socio-economic circumstances so as to pulse the dominant narratives of transition that can be found in the landscape (using a terminology borrowed from the transition theory). This case study gathers different actors having in common a strong interest in food and food security issues and being active in social networks (they all have a Twitter™ profile where they tweet on food-related issues). The interviewees are thus considered as agents of change and members of a community of practice. A community of practice, after Lave and Wenger [230], is a group of people who share a craft or a profession (food issues here) and they share experiences over time, common sense making and self-regarding, either physically or

virtually [231, 232]. Although the food professionals live in different countries and work in different domains of the food system, they are all connected via their Twitter account, where they regularly post messages on food-related issues. It is through the process of sharing information and experiences that the members of this community learn from each other and develop common discourses and shared values. Therefore, the food-related professionals active in web-based social networks are part of a broad constituency that are trying to change the global food system from within. They all have agency to steer the transition of the global food system (as highlighted by the numerous cases studies analysed in [133] and they choose food as a means of forging social and economic justice [233]. For the interviewees, food is a critical nodal point through which their subjectivities are materialized and around which activist practices are mobilized.

This sample is compounded by social entrepreneurs and food activists working or volunteering in social innovations geared towards improving the sustainability and fairness of food production and consumption, paid professionals and civil servants working in institutions that exert a leverage on the global governance of the food system (UN, EU, Ministries, international and national NGOs), academics (senior and PhD students) focused on analysing the nuances of the food system, and innovative civic collective actions for food, either legally formed or self-regulated, that are building alternative niches to the dominant industrial food system regime. The activists are mostly working in countries were hunger is not a serious problem (chronic malnutrition or undernourishment below 10%) and they are mostly senior professionals with more than 3 years of food-related experience (one fourth has actually an extensive experience on food issues). Country wise, there are respondents from 21 countries in all regions, being US (14), UK (11) and Belgium (8) the best represented and having only one respondent from Africa (Kenya) and Asia (Indonesia). Respondents from international institutions (working at global level) amount 17, with two working at the EU and five in UN agencies. Appendix 1 presents the respondent's position, institution and country.

Within the self-described sectors of food activity, the not-for-profit sector prevails, with almost half of the respondents, the public sector represents one third and the for-profit sector is the least represented (17.9%). It is worth mentioning this sample does not include people working for agri-food companies, either big transnational corporations or small-medium enterprises, what actually represents a limitation to interpret the results of this analysis. The different agri-food corporations and private initiatives contacted (nearly 70) did not reply the questionnaire. This bias towards not-for-profit and public institutions (either state or civic) will be considered in the analysis. In that sense, due to the methodological bias, the global sample cannot pretend to depict the variety of food values and food policy beliefs that are present in the global landscape (as food valuations by important players in the industrial food system are almost absent) but to represent the dominant food policy beliefs in the two major types of alternatives to the dominant industrial food discourse: the reformers and the transformers. Likewise, the reforming stance cannot be split into two streams to fine-tune the analysis (i.e. neoliberal and gradual reformist) because the neoliberal stream would surely be under-represented.

Regarding food activism, most of them (91.6%) are aware consumers either choosing often local and organic food or recycling and reducing waste. More than two thirds are also committed food activists that are either members of a public awareness group on food issues, or supporting financially food- or hunger-related activities and/or sensitizing people in their circles to change food habits. Finally, almost 60% of them produce themselves food at home or in landplots.

Methodology

A self-administered online questionnaire with 21 questions (cf appendix 2) was placed in SurveyMonkey™ and distributed via Twitter™ to the lead researcher's network of contacts. Three rounds of direct tweets were sent between July and November 2014 and responses were collected until January 2015. Therefore, all the participants have a Twitter™ profile that it is used to communicate, among other things, on food-related issues. Over 725 questionnaires were launched and 104 responses were collected. After cleaning those with incomplete responses, no food-related experience or not tweeting on food issues, a final sample of 95 was ready for analysis. Correlation and regression analysis were done using STATA software 14.0. The list of independent variables (simple and composite) and the three agency variables to be analysed are presented below (cf table 1).

Table 1 Simple and composite variables

Variable	%	Description	# questionnaire
INDEPENDENT VARIABLES			
Country			
Hunger-stricken country	14.7%	Country where the initiative is largely carried out or headquartered has chronic malnutrition or undernourishment rates above 10% in latest figures	Country where the respondent is based (or the institution is headquartered when not known)
Non-hunger stricken country	85.3%	Country has chronic malnutrition or undernourishment rates below 10%	
Age slot			
Below 30 years	28.4%		4a
Between 31-50 years	52.6%		4b, 4c
Above 50 years	19%		4d, 4e
Gender			
Male	51.6%		4f
Female	48.4%		4g
Food-related experience			
Never	0%		5a
Less 3 years	35.8%		5b+5c
Between 3 and 10 years	39%		5d+5e
More than 10 years	25.2%		5f
Self-described sector for food-related activities			
Private sector	6.3%	For-profit sector accounts for 17.9%	3a
Public-Private Partnerships	11.6%		3c
Public Sector	33.7%		3b
NGO/Civil Society Sector (legal entity)	30.5%	Third sector (not-for-profit) represents 48.4%	3d
Self-regulated Collective action (informal arrangement)	17.9%		3e
Personal involvement in actions for food transition			
Committed Production	57.9%	Producing food themselves	8a
Committed Consumption	89.4%	Choose locally produced food products	8b
Committed Consumption	88.4%	Eat organic/ecological foodstuff (88.4%)	8c
Committed Consumption	73.7%	Recycling food in different ways to minimise food waste at home	8d
Committed Food Activism	59%	Sending e-mails about food-related issues to my friends	8e
Committed Food Activism	81%	Being part of a group whose purpose is to increase public awareness on the food system/hunger	8f
Committed Food Activism	64.2%	Sensitizing close relatives or colleagues in order that they change their food habits	8g
Committed Food Activism	43.2%	Financially supporting an organization that works for a more secure food system/anti-hunger actions	8h
AGENCY VARIABLES			
Self-placement in the transition landscape			
Regime	35.8%	Those who responded “mainstream” (25.3%) or “conventional” (10.5%)	7d, 7e, 7f, 7g, 7h, 7i
Niches	64.2%	Those who responded “small niche” (22.1%), “alternative” (23.1%) or “revolutionary” (19%)	7a, 7b, 7c, 7j, 7k, 7l, 7m, 7n, 7o
Political stance vis a vis the food system			
Gradual Reformers	26.3%	Those who responded activity that “improves the existing food system”	7a, 7d, 7g, 7j, 7m

Transformers	73.7%	Those who responded activity that "struggles against the existing food system" (33.7%) or "builds a different food system" (40%)	7b, 7c, 7e, 7f, 7h, 7i, 7k, 7l, 7n, 7o
Counter-hegemonic	33.7%	Those who "struggles against the existing food system"	7b, 7e, 7h, 7k, 7n
Alter-hegemonic	40%	Those who "builds a different food system"	7c, 7f, 7i, 7l, 7o
Valuation of food dimensions (clustering method explained below)			
Strongly Mono-dimensional	18.9%	At least 2 out of 4 economic dimensions are preferred (see below for further explanations on how this variable was constructed)	14a, 17a, 18a, 19a
Mildly mono-dimensional	18.9%	Only one out of 4 economic dimensions is preferred	14a, 17a, 18a, 19a
Multi-dimensional	62.1%	None out of four economic dimensions is preferred	14b, 17b, 18b, 19b

Note: own data collected via online self-administered questionnaire. Data in parenthesis are percentage of affirmative responses for each question.

Position in the transitional landscape and political attitude

The self-placement in the transitional landscape and the political stance vis a vis the food system were measured in the same question 7 by presenting different statements to describe the food-related activity the respondent was involved in, consisting on a combination of five transition loci ("mainstream", "conventional", "small-niche", "alternative" and "revolutionary") and three political stances ("improves the existing food system", "struggles against the existing food system" and "builds a different food system").

Those who responded "mainstream" or "conventional" have been placed at the regime, whereas those who opted for "small-niche", "alternative" or "revolutionary" have been considered as niches. Respondents describing the food-related activity they are involved in as "improving the existing food system" will be clustered as reformers. The transformers may adopt two attitudinal stances: a) Counter-hegemonic if they selected "struggling against the existing food system" and b) Alter-hegemonic if "building a different food system" was selected. Due to low numbers of responses from enterprises and corporations, the reformist stance will not be split into sub-groups.

Valuation of food

Contrasting economic and non-economic food dimensions

This construct is meant to measure the respondent's valuation of the mono and multi-dimensionality of food. It has been elaborated based on four pairwise questions (see appendix 2, questions 14, 17, 18 and 19). Question 15 will not be considered for this analysis[21]. In those questions, the interviewee had to choose between two sentences, either normative (14, 19) or descriptive (17, 18), that present a clear contrast between the economic dimension of food (as a commodity) and other non-economic dimensions such as food as a human right, a natural resource or a commons.

In table 2, the four pairwise questions are presented. The economic dimensions are phrased in a radical way that clearly emphasizes the commodity nature of food to avoid nuances. They contrast food access as

[21] Although question 15 also confronts economic and non-economic food dimensions, option b ("Food is a natural resource that it is better exploited by the state") carries two different and probably conflictual elements (natural resource and state) and hence we cannot be sure whether people reject option b for the fact that food is a natural resource or because they refuse governmental control. Actually, this mistrust for state-led food production is shared by two opposing constituencies, the gradual reformers that prefer mono-dimensional food and the alternative counter-hegemonic that value food by its multiple dimensions, and therefore the question will not be considered for the analysis.

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exclusively determined by money-mediated means of exchange or by other means. A respondent is assigned to the mono-dimensional cluster if at least in one out of the four questions the economic dimension is preferred over the non-economic (questions 14a, 17a, 18a, 19a). When the economic dimension is preferred in at least two out of four questions, the respondent will be assigned to the sub-cluster Strongly Mono-dimensional, otherwise it remains in the Mildly Mono-dimensional sub-cluster. In case none of the economic dimensions are preferred in the four questions, the interviewee will be considered as part of the multi-dimensional cluster.

Table 2 Composite variable to analyse mono- and multi-dimensionality of food valuation

	#	Economic Dimension	% (N=95)	Non-economic dimension	% (N=95)
Strongly mono-dimensional *At least 2 out of 4 economic dimensions are preferred* **Mildly mono-dimensional** *Only one out of 4 economic dimensions is preferred* **Multi-dimensional** *None of the four economic dimensions is preferred*	14	14a. Food, as a scarce resource, has to be distributed according to market rules	11.6%	14b. The State has the obligation to guarantee the right to food to every citizen	88.4%
	17	17a. Food is a natural resource that it is better exploited by the private sector	12.6%	17b. Food is a natural resource that it is better exploited by citizens	87.4%
	18	18a. Food is a commodity whose access is exclusively determined by the purchasing power of any given customer	28.4%	18b. Free food for all is good	71.6%
	19	19a. The best use of any food commodity is where it can get the best price, either fuel, feeding livestock or exporting market	16.8%	19b. A bread loaf (or a culturally-appropriated equivalent) should be guaranteed to every citizen every day	83.2%

For the purpose of this research, the mono-dimensional cluster includes respondents that opted for market-minded or for-profit sentences when forced to choose and therefore we assume economic dimensions of food are dominant over non-economic. In economic terms, the value-in-exchange prevails over value-in-use of food, and food is largely valued as a private good after the economic school of thought (excludable and rival after Samuelson [173]. Conversely, the multi-dimensional cluster is compounded by those who preferred public-minded or not-for-profit sentences and hence we assume that non-economic dimensions of food are also highly valued, perhaps even overweighting the importance of economic dimensions. In any case, we consider in this cluster the economic dimension, however important it may be, is not dominant over the non-economic and food is valued as a multi-dimensional good where the value in use prevails over value in exchange.

Understanding food policy beliefs

Additionally, in order to understand which food policy beliefs are more characteristic of the most relevant agency variables an analysis of relative and absolute preferences of food policy beliefs has been carried out based on questions 9 and 20 in the questionnaire (cf Appendix 2). The first set (beliefs 1-6 in table 4) encompasses relative preferences simply describing agreement-disagreement with policy beliefs that are clearly multi-dimensional and commons-oriented. This set of policy beliefs includes some yet aspirational policies discussed in academic circles and current claims by the most transformative food agents such as the food sovereignty movement. As it may be unlikely to oppose to the rather aspirational policies, this set is hence prone to socially desirable responses[22] and main purpose of this set is hence to determine the food policy beliefs that draw the stronger opposition rather than analysing the preferences. In a Likert scale of 5 items, the two higher levels (strongly agree and agree) were coded as "preferred". The second set (beliefs 7-12) aims to understand the absolute preference within a group of contrasting and often confronting

[22] Socially desirable responding (SDR) refers to the tendency of respondents to give answers that make them look good and that conform to what they think is expected from them or is the right thing to say. People are especially motivated to engage in SDR where societal norms or the norms of referent groups might deviate from their own opinions [234, 235].

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food policy beliefs, a set that includes extremely neoliberal, moderate conventional, state-driven and transformational food policies. Three beliefs ought to be ranked and those ranked with highest priority (either 1st or 2nd) were considered as "preferred".

7.- RESULTS

Descriptive results of the agency variables

Position in the transition landscape and political attitude

Data show (cf table 3) that 35.8% (N=34) of respondents are acting in the dominant socio-technical regime (either termed as "conventional" or "mainstream") whereas 64.2% (N=61) are in innovative niches (considered as "small" N=21, "alternative" N=22 or "revolutionary" niches N=18). The political attitude the respondents adopt vis and vis the existing food environment where they carry out their activities can be described as "improving the existing food system" (N=25, 26.3%, Gradual Reformers) or transforming the food system (N=70, 73.7%, Transformers). Then transformers can be split up into those who "struggle against the existing food system" (N=32, 33.7%, counter-hegemonic transformers) and those who "build a different food system" (N=38, 40%, alter-hegemonic transformers).

Table 3a Features of individual agency in food system transitions

Self-placement in the transition landscape	Political stance vis a vis the food system (self-placement)		N	Mono-dimensional N=36 (37.9%)		Multi-dimensional N=59 (62.1%)
				Strongly N=18 (18.9%)	Mildly N=18 (18.9%)	
Regime N=34 (35.8%)	Gradual Reformers		12	4	2	6
	Transformers	Counter-hegemonic	11	0	2	9
		Alter-hegemonic	11	2	4	5
Niches N=61 (64.2%)	Gradual Reformers		13	6	3	4
	Transformers	Counter-hegemonic	21	2	3	16
		Alter-hegemonic	27	4	4	19

Table 3b Features of individual agency in food system transitions

Political stance vis a vis the food system		Self-placement in the transition landscape	N	Mono-dimensional N=36 (37.9%)		Multi-dimensional N=59 (62.1%)
				Strongly N=18 (18.9%)	Mildly N=18 (18.9%)	
Gradual Reformers N=25 (26.3%)		Regime	12	4	2	6
		Niches	13	6	3	4
Transformers N=70 (73.7%)	Counter-hegemonic	Regime	11	0	2	9
		Niches	21	2	3	16
	Alter-hegemonic	Regime	11	2	4	5
		Niches	27	4	4	19

Table 3c Features of individual agency in food system transitions

	Reformers N=25 (26.3%)		**Counter-hegemonic** N=32 (33.7%)		**Alter-hegemonic** N=38 (40%)	
	Mono-dimensional	**Multi-dimensional**	**Mono-dimensional**	**Multi-dimensional**	**Mono-dimensional**	**Multi-dimensional**
Regime	12		11		11	

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N=34 (35.8%)	6	6	2	9	6	5
Niches N=61 (64.2%)	13		21		27	
	9	4	5	16	8	19
Total	15	10	7	25	14	24

After analysing the self-placement in the transition landscape and the mandates and political attitudes of the institutions where the respondent is working, no clear pattern emerged and nonsensical affiliations, not corresponding to the theoretical position of the institutions according to literature, were rather common (i.e. a FAO staff working in a regional initiative positioned himself as counter-hegemonic transformer, a Dutch diplomat in the Ministry of Foreign Affairs claimed to be an alter-hegemonic transformer and a co-worker in a local cooperative to collect and recycle household food waste considered his activity as reforming gradually the food system). In table 4, two counter-intuitive examples are presented for each diverging cluster. Two niche not-for-profit civic actions are presented with gradual reforming attitude and a strongly mono-dimensional valuation of food. On the other side, respondents from two UN institutions working in the regime adopt a counter-hegemonic transformative attitude valuing food as a multi-dimensional good. With such diversity, responses will be solely analysed at individual level and not at institutional level, and institutional affiliations will only be used in the discussion and not for analysis. Only the self-described sector of food activity will be used for the regression analysis, as the correspondence between the self-description and the reality was double-checked by the author.

Table 4 Several examples of counter-intuitive agency in food system transition

N	Name of Institution	Description	Position	Country	Self-placement in the transition landscape	Political stance in the food system	Valuation of food dimensions
A.- Gradual Reformers + Strongly Mono-dimensional							
2	Citizens' Initiative "Despertemos Guatemala"	Advocacy and activist collective initiative to raise awareness about the most pressing problems affecting the country and what citizenship and civil society can do to address them. Chronic malnutrition, affecting nearly 50% of under-five children, is a priority issue. The Initiative "I have something to give" (Tengo Algo que Dar) was launched in 2012 to mobilise young urban people to get acquainted to malnutrition problems in the rural areas. http://despertemosguatemala.org/web/	Member of the Steering Committee	Guatemala	NI-AL	GR	MO-ST
33	Rust Belt Riders Composting	Service-fee organic waste removal initiative available to Cleveland residents (US). It is organised as a co-operative run and owned by the workers. We divert compostable organics from entering landfills by working with community gardens to cultivate high quality compost www.rustbeltriderscomposting.com	Employee and co-owner of the cooperative	USA	NI-AL	GR	MO-ST
B.- Counter-hegemonic Transformers + multi-dimensional							
76	UN Standing Committee on Nutrition	Policy advocacy and knowledge-sharing. The mandate of the UNSCN is to promote cooperation among UN agencies and partner organizations in support of community, national, regional, and international efforts to end malnutrition http://www.unscn.org/	Technical officer	International (Italy)	RE	TR-CO	MD
95	FAO	The Hunger Free Latin America and the Caribbean Initiative is a commitment by the region to eradicate hunger within the term of a generation (2025). It was launched in 2005, the secretariat is provided by FAO and get funds from Spain, Brazil and Mexico. It works in public policies, budget allocations, legal frameworks, strategic thinking, capacity building and communication and awareness. http://www.ialcsh.org/es	Staff at Secretariat Regional Hunger-Free Latin America Initiative	International (Italy)	RE	TR-CO	MD

Note: NI-AL: Niche-Alternative, RE: Regime, GR: gradual Reformer, TR-CO: Transformative Counterhegemonic, MO-ST: Strongly Monodimensional, MD: Multi-dimensional

Contrarily to expectations, within the regime one can find similar numbers of gradual reformers (N=12), counter-hegemonic transformers (N=11) and alter-hegemonic transformers (N=11), being transformative attitudes twice as frequent as reforming ones. So, gradual reformers are not dominant in the regime. Besides, gradual reformers are equally split between the regime and niches (N=13 and N=12 respectively). Finally, the valuation of food is not so evidently biased towards mono-dimensionality (41.2%), as it could be expected, with multi-dimensionality still prevailing (58.8%). In this case, the absence of respondents for for-profit institutions and agri-food corporations has certainly influenced the lower presence of mono-dimensional views. So, the regime of not-for profit institutions encompasses a great diversity of political attitudes and food valuations. On the other side, the niches are supposed to be loci of contestation what is confirmed in this research, with 78.7% of respondents adopting a transformative stance (34.4% counter-hegemonic and 44.3% as alter-hegemonic) and the valuation of food as a multi-dimensional resource (64%) almost doubling the mono-dimensional valuation (36%) although figures are not significant.

In the regime, whereas gradual reformers and alter-hegemonic transformers are equally split between mono-dimensional and multi-dimensional, the counter-hegemonic are predominantly multi-dimensional (9 out of 11). In niches, however, although counter-hegemonic ones remain largely multi-dimensional (16 out of 21), gradual reformers are mostly mono-dimensional (9 out of 13) and alter-hegemonic are largely multi-dimensional (19 out of 27). So, three different patterns can be drafted by these results: gradual reformers vary between equally split or largely mono-dimensional, alter-hegemonic are split or largely multi-dimensional and counter-hegemonic are always largely multi-dimensional. The gradual reforming and alter-hegemonic political stance may be inclined to be mono or multi-dimensional depending on the transition locus where it stands (regime or niches). However, the counter-hegemonic attitude is consistently more prone towards multi-dimensionality regardless the loci of transition.

Valuation of food

The third agency variable will be analysed by contrasting economic and non-economic food dimensions. Two groups are identified: a group compounded by those who largely regard food as mono-dimensional resource (N=36, 37.9%) and another with those who consider it as a multidimensional resource (N=59, 62.1%) (cf table 3a, 3b). In the former group, the strongly mono-dimensional equals the mildly mono-dimensional (N=18, 18.9%). As mentioned earlier, respondents working in institutions that could epitomise the core narrative of the dominant regime, such big agri-food transnationals or governmental officers are either absent (the former) or not sufficiently represented (the latter), so these results will have to consider that absence.

Food Policy Beliefs

In table 5, total figures for preferred policy beliefs are presented. In the first set (relative preferences), as expected, all food policy beliefs but one ("*The legal minimum wage should be always equal to the price of the food basket in every country*") are preferred by more than 70% of respondents, with one belief ("*Every citizen should be entitled to get a minimum amount of food (or its money equivalent) to eat every day*") almost reaching complete unanimity (90%). The second set yields a rather unexpected food policy belief, namely "*Food and Nutrition Security is a global public good*", with 69.4% of respondents placing it as an absolute preferred belief, being the only one that gets a simple majority. The second most preferred is "*if food is distributed according to the market rules, we will never achieve food security for all*" (47.3%) and the least preferred is also related to the previous one as "*Current market rules with less state intervention will enable us to reach a food secure world*" (5.2%). These food policy beliefs will be subject of a detailed analysis in a subsequent paper the author is preparing.

Table 5 Preferred Food Policy Beliefs and political stance clusters

Preferred Food Policy Beliefs	Total sample	P value	Gradual Reformers N=25	Counter-hegemomic Transformers N=32	Alter-hegemonic Transformers N=38	#
Relative preference: Simply describing agreement-disagreement, not confronting different beliefs						
1.- Food is a common good that shall be governed by citizens and being beneficial for all members of society	81 (85.3)	1	19 (76)	27 (84.4)	35 (92.1)	9a
2.- Every citizen should be entitled to get a minimum amount of food (or its money equivalent) to eat every day	90 (94.7)	0.953	22 (88)	30 (93.8)	38 (100.0)	9b
3.- The legal minimum wage should be always equal to the price of the Food Basket in every country	55 (57.9)	1	11 (44)	20 (62.5)	24 (63.2)	9c
4.- The financial speculation of food products should be banned by law	73 (76.8)	1	18 (72)	26 (81.3)	29 (76.3)	9d
5.- Free food programmes should be part of Universal Food Coverage to those that cannot afford it	73 (76.8)	1	16 (64)	25 (78.1)	32 (84.2)	9e
6.- Living organisms, such as seeds, animal breeds or genes shall not be patented by individuals or corporations	77 (81)	0.066	16^{a} (64)	31^{b} (96.9)	30^{a} (78.9)	9f
Absolute preference: selecting and ranking different and contrasting beliefs						
7.- Food can be at the same time a private good and an essential resource for our survival and identity	26 (27.3)	1	11 (44)	6 (18.8)	9 (23.7)	20a
8.- Current market rules with less State intervention will enable us to reach a food secure world	5 (5.2)	1	1 (4)	0 (0.0)	4 (10.5)	20b
9.- The current food system is capable of producing food in a sustainable way	14 (14.7)	0.711	7^{a} (28)	5^{ab} (15.6)	2^{b} (5.3)	20d
10.- The state has an important role in producing, distributing and guaranteeing food for all the citizens	34 (35.7)	1	9 (36)	11 (34.4)	14 (36.8)	20e
11.- If food is distributed according to the market rules, we will never achieve food security for all	45 (47.3)	0.981	7 (28)	18 (56.3)	20 (52.6)	20g
12.- Food and nutrition security is a global public good	66 (69.4)	1	15 (60)	24 (75.0)	27 (71.1)	20h

Note: N=95. Differences have been measured using Fisher's exact test and p-values are corrected by Holm's correction. Percentages of preferred policy beliefs are not comparable between sets of questions. Percentages are in parenthesis.

The absolute and relative preferences of food policy beliefs and food dimensions in the three groups of gradual reformers, counter-hegemonic and alter-hegemonic transformers are rather homogeneous (cf table 5). Differences in beliefs are minimal as only one food policy belief ("*Living organisms, such as seeds, animal breeds or genes shall not be patented by individuals or corporations*") is significantly different between gradual reformers (64%) and counter-hegemonic transformers (96.9%). Additionally, there are differences, although not statistically significant, between gradual reformers and alter-hegemonic transformers: "*the current food system is capable of producing food in a sustainable way*" (28% and 5.3% respectively). But in general terms, there are no significant differences in preferred food policy beliefs among the three groups that have different political stances vis a vis the food system. That may be attributed to the reduced sample size and lack of significance of differences; the delivery of socially desirable responses (mostly in the subset 1 of relative preferences) and the marked diversity of professional backgrounds, life-stories, institutional affiliation, food-related experience, country of origin, personal involvement in actions for food transition, values and knowledge of the respondents. Further research will be done by the author with more geographically-restricted and homogeneous groups.

When the clusters formed by the valuation of food dimensions are considered, only two food policy beliefs are significantly different between those who value food as a mono-dimensional good and those who value food as a multi-dimensional one: "*Living organisms, such as seeds, animal breeds or genes shall not be patented by individuals or corporations*" (55.6% of strongly mono-dimensional and 89.8% of multi-dimensional) and "*If food*

is distributed according to the market rules, we will never achieve food security for all" (22.2% of strongly mono-dimensionals and 57.6% of multi-dimensionals) (cf table 6). Both preferences are rather coherent with expected beliefs. Additionally, there is another belief that present differences although not significantly "*If food is distributed according to the market rules, we will never achieve food security for all*" with a low support by strongly mono-dimensionals (22.2%) and more than double in multi-dimensionals (57.6%). In all the three policy beliefs, the group that values food as a mildly mono-dimensional good stands between the strongly mono-dimensionals and the multi-dimensionals. This situation is also repeated for most of the 12 beliefs analysed what confirms this group encompasses an intermediate set of mildly mono-dimensional or mildly multi-dimensional that share values and policy beliefs with both extremes. In any case, as seen in the previous table 5, the differences in preferred food policy beliefs among the groups that value food dimensions differently are not so remarkable, with just two out of 12 beliefs having significant differences. This absence of marked differences can be attributed to the unintended bias in the sample (with no agri-business corporations and just a few private sector representatives), to the type of questions (phrasing, socially desirable responses, pairwise choices) or to real convergence of food policy beliefs in this global sample. More research will have to be done to ascertain this issue.

Table 6 Preferred Food Policy Beliefs and valuation of food dimensions

Preferred Food Policy Beliefs	Total sample	P value	Strongly Mono-dimensional N=18	Mildly mono-dimensional N=18	Multi-dimensional N=59	#
Relative preference: Simply describing agreement-disagreement, not confronting different beliefs						
1.- Food is a common good that shall be governed by citizens and being beneficial for all members of society	81 (85.3)	0,734	12 (66.7)	16 (88.9)	53 (89.8)	9a
2.- Every citizen should be entitled to get a minimum amount of food (or its money equivalent) to eat every day	90 (94.7)	0,554	15 (83.3)	17 (94.4)	58 (98.3)	9b
3.- The legal minimum wage should be always equal to the price of the Food Basket in every country	55 (57.9)	1	9 (50)	10 (55.6)	36 (61)	9c
4.- The financial speculation of food products should be banned by law	73 (76.8)	1	11 (61.1)	13 (72.2)	49 (83.1)	9d
5.- Free food programmes should be part of Universal Food Coverage to those that cannot afford it	73 (76.8)	1	11 (61.1)	14 (77.8)	48 (81.4)	9e
6.- Living organisms, such as seeds, animal breeds or genes shall not be patented by individuals or corporations	77 (81)	0,082	10[a] (55.6)	14[ab] (77.8)	53[b] (89.8)	9f
Absolute preference: selecting and ranking different and contrasting beliefs						
7.- Food can be at the same time a private good and an essential resource for our survival and identity	26 (27.3)	0,011	11[a] (61.1)	6[ab] (33.3)	9[b] (15.3)	20a
8.- Current market rules with less State intervention will enable us to reach a food secure world	5 (5.2)	1	3 (16.7)	0 (0)	2 (3.4)	20b
9.- The current food system is capable of producing food in a sustainable way	14 (14.7)	0,651	1 (5.6)	6 (33.3)	7 (11.9)	20d
10.- The state has an important role in producing, distributing and guaranteeing food for all the citizens	34 (35.7)	1	4 (22.2)	8 (44.4)	22 (37.3)	20e
11.- If food is distributed according to the market rules, we will never achieve food security for all	45 (47.3)	0,325	4[a] (22.2)	7[ab] (38.9)	34[b] (57.6)	20g
12.- Food and nutrition security is a global public good	66 (69.4)	1	13 (72.2)	10 (55.6)	43 (72.9)	20h

Note: N=95. Differences have been measured using Fisher's exact test and p-values are corrected by Holm's correction. Percentages of preferred policy beliefs are not comparable between sets of questions. Percentages are in parenthesis.

Correlation Analysis

In order to understand the relationships between the three agency variables, univariate correlations were done between the variables at first level. The self-placement in the transition landscape (regime/niches) is not significantly correlated either to the political stance of the food-related activity or to the valuation of different food dimensions (cf table 7). The respondents working in the regime (N=34) are equally likely to be gradual reformers (N=12), counter-hegemonic transformers (N=11) or alter-hegemonic transformers (N=11). However, the respondents from the niches (N=61) are three times more likely to be transformers (N=48) than to be gradual reformers (N=13). And yet, this correlation is not significant at 95% level. Regarding the valuation of food, those working in the regime are more likely to be multi-dimensional (N=20) than mono-dimensional (N=14), a situation that is mirrored in the niches where multi-dimensionals (N=39) almost double mono-dimensionals (N=22). From the transitional perspective, the self-described position of any given food activist in the food system landscape cannot be significantly correlated to his/her political attitude vis a vis the existing (or desirable) food system nor to his/her valuation of different food dimensions.

Table 7 Correlations amongst the agency variables

	MO	**MT**	**RE**	**NI**	**GR**	**TR**
Mono-dimensional cluster (MO)	1					
Multi-dimensional Cluster (MT)		1				
Regime (RE)	0.050	-0.050	1			
Niches (NI)	-0.050	0.050		1		
Gradual Reformer (GR)	0.272*	-0.272*	0.152	-0.152	1	
Transformer (TR)	-0.272*	0.272*	-0.152	0.152		1

* Correlations significant at 95% level

On the contrary, the valuation of food (economic VS non-economic dimensions) is significantly correlated with the political stance vis a vis the food system (cf table 7). Those who consider themselves as gradual reformers (N=25) are positively correlated to the mono-dimensional valuation of food (N=15) whereas the transformers (N=70) are significantly correlated to the multi-dimensional valuation of food (N=49).

To fine tune this analysis, the initial agency variables where broken down into second level variables (cf. table 8). In this view, the self-placement in the transition landscape shows significant and positive correlations with the political stance in two cases: the alter-hegemonic attitude is correlated to revolutionary niches and counter-hegemonic actions to small-niches. It is worth mentioning that those who describe their food-related activity as "a revolutionary niche" (N=18) are more prone to "build a different food system" (N=12) than to "struggle against the existing one" (N=3). Conversely, those who "struggle against the system" in niches (N=21) are more likely to consider themselves more humbly as "small niches" (N=11) and not as "revolutionary" (N=3) (cf table 9).

Table 8 Correlations amongst the split agency variables

	SMD	MMD	MTD	RE	SNI	ANI	RNI	GR	AHT	CHT
Strongly mono-dimensional (SMD)	1									
Mildly mono-dimensional (MMD)		1								
Multi-dimensional (MTD)			1							
Regime (RE)	-0.024	0.087	-0.050	1						
Small Niche (SNI)	0.001	-0.128	0.102		1					
Alternative Niche (ANI)	-0.010	0.116	-0.085			1				
Revolutionary Niche (RNI)	0.040	-0.096	0.045				1			
Gradual Reformer (GR)	0.321*	0.016	-0.272*	0.152	-0.145	0.068	-0.105	1		
Alter-hegemonic (AHT)	-0.065	0.043	0.017	-0.116	-0.072	-0.040	0.263*		1	
Counter-hegemonic (CHT)	-0.230*	-0.060	0.235*	-0.021	0.210*	-0.021	-0.174			1

* Correlations significant at 95% level

With regard to the food dimensions, those who value food as a strongly mono-dimensional good (N=18) are significantly correlated to the political stance vis a vis the food system, positively in the case of being gradual reformer (N=10) and negatively in the case of counter-hegemonic transformers (N=2). Conversely, the multi-dimensional valuation of food (N=59) is positively correlated to counter-hegemonic transformers (N=25) and negatively to gradual reformers (N=10). In this case, the alter-hegemonic political stance (N=38) is not significantly correlated to any particular valuation of the food dimension. Those who seek to "build a different food system" can be strongly mono-dimensional (N=6), mildly mono-dimensional (N=8) or multi-dimensional (N=24). More specifically, the alter-hegemonic transformers working in revolutionary niches (N=12) are split into mono-dimensional (N=3) and multi-dimensional (N=9). Finally, the intermediary group of those who value food as mildly mono-dimensional (N=18) is not significantly correlated to any political stance or placement in the transition landscape.

Table 9 Political stance and food valuation in niches

			Mono-dimensional N=22	Multi-dimensional N=39
Self-placement in the transition landscape	Political stance vis a vis the food system (self-placement)	N		
Small-niche N=21	Gradual Reformer	3	2	1
	Counter-hegemonic	11	2	9
	Alter-hegemonic	7	2	5
Alternative N=22	Gradual Reformers	7	5	2
	Counter-hegemonic	7	5	2
	Alter-hegemonic	8	5	3
Revolutionary N=18	Gradual Reformer	3	2	1
	Counter-hegemonic	3	1	2
	Alter-hegemonic	12	3	9

Regression Analysis

Finally, a regression analysis was carried out (cf. table 10) between the only agency variable (valuation of food) that is significantly correlated with political attitude, the preferred food policy beliefs that are significantly different and the other independent variables (country, age, gender, food-related experience, self-described sector of food activities and personal involvement in food activities). Additionally, two questions from the pairwise list were also included, as they proved to be relevant. Multiple regressions have been run by using different combinations of variables and table 10 presents the combinations that better represent the outcome variable. Although the regression does not explain causal relationships, the gradual reforming attitude is positively and strongly correlated to a strongly mono-dimensional valuation of food as a commodity and a

middle age public sector employee that defends two dominant mantras so characteristic of the industrial agriculture paradigm, namely "the current food system is capable of producing sustainable food" and "food has to be beautiful and cheap", chiefly to facilitate food access (lowering the price) to urban consumers, disregarding rural producers. As those respondents are arguably concerned with the sustainability of the current food system, they work to improve the situation by supporting gradual reforms that merely adjust the system flaws and reverse the side-effects since the system is capable to produce better food without the need of a drastic change. It is worth mentioning that members of this group are negatively correlated with "being part of a group to increase public awareness" what may suggest that they are not particularly active food activists.

On the other side, the counter-hegemonic transformative attitude is strongly correlated to the multi-dimensional valuation of food as a commons and a job in a self-regulated collective action with informal arrangements in a hunger-stricken country (i.e. civil society in the Global South). Two human-rights and commons-based policy beliefs are strongly preferred by this group, namely the opposition against patents on living organisms and the preference of freedom from hunger as a human right. In this second regression, age, gender, food-related experience or personal involvement in food activities (either as self-producer, committed consumer or food activist) do not seem to have explanatory power to determine the political attitude vis a vis the existing food system and the valuation of food dimensions.

Table 10 Regression analysis with food valuation and other independent variables

Dependent variable: Political stance via a vis the food system						
	Gradual Reformers N=25 (against 70)			**Counter-hegemonic transformers** N=32 (against 63)		
		Signif	Coef.		Signif.	Coef.
Independent agency variables						
Valuation of food (confronting economic & non-economic dimensions)	Strongly Mono-dimensional	(+)***	1.8822	Multi-dimensional	(+)**	0.8109
Food Policy Beliefs	Current food system capable of producing sustainable food	(+)***	1.5076	Living organisms (seeds or genes) shall not be patented by individuals or corporations	(+)***	1.4797
	Food has to be beautiful and cheap	(+)***	1.2485	Freedom from hunger is a human right as important as the right not to be tortured	(+)**	0.8400
Control variables						
Country	Hunger stricken country	(+)	0.5344	Hunger stricken country	(+)***	1.4226
Age	Age between 31-50	(+)**	1.0998	Age above 50	(-)	0.3354
Gender	Male	(+)	0.5327	Male	(+)	0.1632
Food related experience	Between 3-10 yrs experience	(-)**	0.7608	More than 10 yrs	(+)	0.0171
Self-described sector of food activities	Public sector	(+)**	0.8536	Self-regulated collective action Informal arrangement)	(+)***	1.1255
Personal involvement in food activities	Being part of a group to increase public awareness	(-)**	0.8363	Sensitizing close relatives	(+)	0.3762
	Prob > F = 0.0007 Obs N=95			Prob > F = 0.0008 Obs N=95		

Note: Maximum likelihood estimates of the probit models: *** = statistically significant at the 1%, ** =statistically significant at the 5% level. The numbers in the table are the coefficients of the regression equation. Note that the table shows associations, not necessarily causal relationships.

8.- DISCUSSION

This research examines the links between the valuation of food, the transformative attitudes, the self-positioning in the transitional landscape and the preferred food policy beliefs of a community of practice formed by food-related professionals active in social networks. The estimated total size of this community is counted in millions and therefore the sample is far from being representative. Moreover, it is rather diverse, coming

from 21 countries and more than 85 different institutions, although most of them are aware food consumers and two thirds are committed food activists. Gender- and experience-wise, the sample is well balanced and the main weaknesses lays in the low representation of professionals working in the for-profit sector (only 17.9%) whereas one third is working in the public sector (33.7%) and almost half of the respondents are situated in the not-for profit third sector (48.4%). That unequal distribution in the respondent's institution profit-orientation seems to be correlated to the lower figures of mono-dimensional respondents. However, this correlation has not been further explored in this paper. And yet, this diverse list of respondents may be considered a good representation of individuals working in the global food system therefore sampling the values and shared beliefs on food found at landscape level. This research shall thus be seen as a first case-study with direct interviews on how people value food (either as a commons or a commodity) and how and if this valuation shapes food policy options and political attitudes.

Great diversity in the regime and niches are not always transformational

Common sense states that people working in the regime would trend to maintain the status quo, mostly supporting reforms that do not address the foundational pillars or transformative ideas that fall in any case within the realm of Polanyi's double-movement or Wright's permitted dissent. Contrarily to expectations grounded on transition literature [107, 130], our research shows the respondents working in the regime (mostly in not-for profit institutions) can adopt diverse attitudes to change the food system (reformist, counter-hegemonic or alter-hegemonic), being none more likely than the others. So, gradual reformers are not dominant in the regime. Besides, gradual reformers are equally split between the regime and niches. Finally, the valuation of food is not so evidently biased towards mono-dimensionality (41.2%), as it could be expected, with multi-dimensionality still prevailing (58.8%). So, the regime encompasses a great diversity of political attitudes and food valuations. Platitudes, generalities and stereotypes mask a more complex relationship between individual attitudes, institutional mandates and self-regarding.

On the other side, the niches are supposed to be loci of contestation [31] what is confirmed in this research as the respondents from the niches are three times more likely to be transformers than to be gradual reformers, as expected by literature[23]. And yet, 21.3% of niche respondents only aim to reform the regime. The valuation of food as a multi-dimensional resource almost doubling the mono-dimensional valuation although figures are not statistically significant.

Working in regime institutions or so-called alternative niches is not significantly correlated to any specific political stance or food valuations. Not all confrontational or revolutionary food activists are working in the fringes nor all regime civil servants see food as a commodity and just want to maintain the status quo by promoting minimal reforms. It is important to notice that reformers and transformers can be found either in the dominant regime or in the innovative niches as the self-perception of anyone's position in the food system transition and the political stance vis a vis the dominant narratives are personal attitudes and they do not necessarily correspond to the institutional mandate or the real political decisions. Actually, the dominant regime accepts a certain amount of deviations from the hegemonic narrative and plurality of actions within the main transition pathway (i.e. organic niches, waste reduction) whereas the innovative niches (by default, aimed at changing or modifying the regime performance) presents different degrees of confrontation with the regime, from gradual reforming to radical reversing, from working in fringes to embedding [34, 145].

From the institutional point of view, while some organisations can be clearly labelled as neoliberal, reformist or transformative, many others are much harder to categorize because they adopt political distinct positions on different issues in the food system. Within the same organisation multiple individual attitudes vis a vis the transition in the food system may be harboured, what applies equally to reformist or transformative. In that sense, transformative collective actions for food do not escape from having internal contradictions with regard to political attitudes [34] as we have seen in this study with members of civic collective actions having a

[23] However, the correlation is not significant what may be due to the sample diversity, the low representation of the private sector, the low sample size or any other statistical artefacts.

mono-dimensional view of food as a commodity (i.e. Citizen Initiative "Despertemos Guatemala" or Disco Soup Paris and Lille).

Valuation of food is correlated to political attitudes in food transitions

However diverse the sample may be, the results respond the first question of this research and show the way each food professional values food, either as a commons or as a commodity, is significantly correlated to the political attitude adopted vis a vis the food system, regardless the self-assigned position of the respondent's institution in the transition landscape. Those who consider themselves as gradual reformers, either working in the regime or in niches, are positively correlated to the mono-dimensional valuation of food whereas the transformers, either alter or counter-hegemonic, are significantly correlated to the multi-dimensional valuation of food as a commons. Due to the sample size and statistical limitations, causal analysis cannot be inferred[24], but the relationships are relevant. An important cautionary reminder: this relationship apply to members of not-for-profit institutions and public workers, and it cannot be extrapolated to private sector professionals. Further research is needed to further understand the private sector attitudes.

Deepening the analysis, those who value food as a strongly mono-dimensional good (the hardliners of food as a pure commodity) are positively correlated to gradual reformers and negatively to the counter-hegemonic transformers. Conversely, the defenders of a multiple-valuation of food as a commons are positively correlated to counter-hegemonic transformers and negatively to gradual reformers. It is worth mentioning the alter-hegemonic transformers (those who seek to "build a different food system") are not significantly correlated to any particular valuation of the food dimension nor any locus in the transition landscape and yet they often tend to consider themselves as working in "revolutionary niches". Conversely, the more-appropriately termed "counter-hegemonic revolutionaries" that seek a complete overhaul of the food system (values, institutions, policies) tend to consider themselves more humbly as "small niches" and not as "revolutionary". As expected, the intermediary and diverse group of those who value food as mildly mono-dimensional (that could also be interpreted as mildly-multidimensional) cannot be correlated to any political stance or placement in the transition landscape.

Alter- and counter-hegemonic attitudes challenge differently the regime

Although alter- and counter-hegemonic attitudes are both considered innovative and transformative, the way they challenge the system differs and that may be partially explained by the different valuation of food they hold. Many alter-hegemonic professionals, whose attitude can be defined as alternative or interstitial, are aware of major faultlines of the current system but at the same time recognise the paramount difficulties to change the dominant regime, so they prefer to work through incremental erosion (i.e. Food Cardiff, Food Ethics Council), in fringes not fully explored by the regime (i.e. Commons Strategies Group, Australian Food Sovereignty Alliance), ignoring the state (i.e. Food Guerrilla, Commonsfest), locally (i.e. Group de Consum Ecologic I local del Terraprim) and doing things rather than protesting (i.e. Local Organic Food Co-ops Network). Generally speaking, they rather prefer building a different food system at local level that satisfies their aspirational goals and the day-to-day access to healthy and fair food.

On the other side, the counter-hegemonic position, that has been termed as oppositional and ruptural, seeks to uproot deep structures and build a new configuration based on different values. The position is thus quite political, denouncing flaws and inequalities and having a marked normative contestation [236]. The results confirm this definition since the normative (and different) valuation of food as a commons is positively and significantly correlated to this group and not to the alter-hegemonic one. Our results are also aligned with [154], who stated that reclaiming the commons as a realm of social life which develops alternative modes of meeting life goods characterised the counter-hegemonic potential of food-related activities. Actually, civic

[24] The results cannot claim that those who see food as a mono-dimensional good adopt a reformist attitude in the food system, or viceversa.

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collective actions for food[25] where citizens are devoting leisure time to food-related activities have been termed as counter-hegemonic [237] as they are innovative in their means, values, governance systems and institutional setup, develop alternative narratives to the dominant regime and many of them seek to challenge, disrupt, modify or replace the regime practices, these days epitomised by the industrial food system. In our sample, the following respondents represent well that group: Souper Saturday, Incredible Edible Bratislava, Slow Food Youth Network, Confitures Re-belles, Re-bon Gleaning Network, Proyecto AliMente, Falling Friuit and Part-time Carnivore.

Plenty of scholars [34,143, 154] have pointed out the alter-hegemonic attitude may not be transformative enough since it does not question the structural principles of neoliberal markets. This constituency may inadvertently reinforce the ''neoliberal narrative'' through (a) their discursive emphasis on personal responsibility, voluntary action, competition, and efficiency [150]; (b) de-politicizing food politics and placing the transformative agency on the shoulders of conscientious consumers, innovative entrepreneurs and well-intended volunteers [238]; (c) emphasizing entrepreneurial solutions and local market linkages, thus obscuring the importance of state duties and citizen entitlements [239], and (d) having a local focus rather than a national one [240], thus contributing to the process of devolution often associated with neoliberalism [241]. By de-politicizing food politics, these initiatives conform with the discourse that re-label citizens with a right to food guaranteed by the State into consumers with food choices and responsibilities. There are 14 respondents that consider themselves alter-hegemonic and yet do align with the neoliberal narrative of food as a commodity (see appendix c). Among those, one can find social entrepreneurs, Ministerial officers, European university researchers, international NGOs and members of food councils.

Combining agency with food policy beliefs

Regarding the second question (policy beliefs associated to valuations of food), the analysis shows that only two policy beliefs out of 12 (16.6%) are significantly different between the strongly mono-dimensionals (SMD) and the multi-dimensionals (MTD), but both fit with the "a priori" expected pattern. Although food policy belief preference is rather dispersed, logically mirroring the sample diversity, some significant patterns have been identified that link the mono-dimensional cluster with the non-preference of certain food policy beliefs that clearly challenge the dominant narrative of the neoliberal industrial food system such as "banning financial speculation of food products" [242] (Ghosh, 2010), "prohibiting patents on living organisms" [243] or "establishing Universal Food Programmes to guarantee food to those who cannot afford it" [244]. The belief of "banning patents on living organisms" is opposed by half of the SMD but preferred by 90% of MTD, whereas the belief that "food can be a private good and en essential resource for our survival" is the second most preferred belief in absolute terms by SMD (60%) but only by 15% of MTD. Although not statistically significant, the impossibility of market-driven food security is just preferred by one fifth of SMD but almost 60% of MTD. Additionally, although the importance of minimum wage to guarantee an adequate amount of household food has been proven successful by health economists [245-246], this economic measure touches one of the most sensitive issues of the neoliberal doctrine, namely the liberalisation of wages with no minimum thresholds as a means to activate the economies [247-248]. Understandably, this policy belief splits the sample in two nearly equal clusters (55% of preferred, 45% opposed or neutral), and there is no significant differences between SMD, MMD and MTD.

In all the relative preferences and in half the absolute ones, the mildly-mono-dimensionals (MMD) score between the SMD and the MTD except in one very striking policy belief, the consideration that "Food and nutrition security is a global public good", where SMD preferences are similar to MTD ones (around 72%) and much higher than MMD preferences. This policy belief emerges as the most preferred by the most contrasting groups. It is rather awkward to see the commodity hardliners to defend that food policy belief. Usually, the only food-related elements that were accepted by the neoliberal mainstream as global public goods were those that facilitate free trade and transboundary competition [249](p. 43), such as binding WTO agreements, mechanisms to guarantee stability in food markets [250] and strategic foodgrain reserves [251]. According to the

[25] This term refers to food-related actions promoted by individual people, civic movements (legally formed or self-regulated) or formal non-governmental organisations (NGOs) that seek to produce, transform, distribute and consume food differently from the industrial food system, associated here to the dominant regime or hegemonic mainstream.

proponents of the definition, a global public good is a good available worldwide, essential for all human beings, that cannot be excludable and whose production and distribution cannot be governed by one state [176]. Global public goods are goods that are governed in a common manner as they are beneficial for every human being [252]. Although providing an explanation is beyond the scope of this paper, one suggestive justification may lay in the world "global" that firstly deviates the idea of food as a public good at local or national level, positioning the debate to international fora where binding obligations become often diluted; and secondly it conveys a moral meaning where many people can find a common ground ("food is important for individuals and societies"; "food is a special resource") but, by being global, it does not threaten the institutional set up of the current national food systems. It is perceived as desirable and harmless and the same time, being a beautiful aspirational sentence that fits well with a socially-desirable response with no practical implications (at least not in the respondent's view).

9.- CONCLUSIONS

The world's food system is in a deep crisis, epitomised by a growing amount of people eating badly by excess or default, food-producing resources (soil, water and seed diversity) being depleted or appropriated by private hands at an alarming rate, and food being wasted because is cheap and just valued as a commodity. Basically, the value and the price of food are thus mixed-up. The dominant narrative in the industrial food system (i.e. the regime) is that food is ontologically a private good that has ultimately been considered as a commodity. As such, food has to be produced at the lowest cost and to be sold where the utilities are the highest, be that speculative markets, bio-fuels, by-products for non-human consumption, land-fill wastage or non-healthy ultra-processed food.

As the commodification of food is considered one of the root causes of this crisis, perhaps time has come to think outside the "the permitted ideas" [253], and revamp a discourse as old as human societies, namely the socially-driven consideration of food as a commons and the appreciation of the public dimension of food, a natural resource that has to be governed for everybody's interest [103]. Once we change the way we see food, the policies, legal frameworks, incentives and governance arrangements will also change. As it happened when health and education stopped being considered goods only accessible to wealthy pockets and they became public and universally granted.

Along those lines, this paper presents a conceptual framework that could enrich the different transformative narratives that are challenging the industrial food system: the normative consideration of food as a multi-dimensional good, with six economic and non-economic dimensions that are equally relevant to human beings. The value-in-use of food rests in the proper valuation of these six dimensions that ultimately converts food into a commons because it is a vital resource for each and every one, produced by Nature (and humans have mastered its culture), owned in multiple proprietary regimes, distributed by market and non-market mechanisms and been granted the consideration of human right in our age. Additionally, it is a basic pillar of our individual memories, relationships and a civilisation determinant. Therefore, it cannot be solely left to money-mediated profit-seeking rules for production, allocation and access. This consideration is a political social construct and we have explored how relevant it may be to sustain transformative alternatives of transition.

It is worth mentioning this social construct is at odds with the most prominent alternative discourses that are confronting the hegemonic productivist narrative, either be food sovereignty, agro-ecology, permaculture, sustainable intensification or even those who support the alternative management of common-pool resources. After an exhaustive scrutiny (see Vivero-Pol for a systematic review of scholarly literature [254]), only a few authors that consider food as a commons have been found [255-256]. Possible explanations can be attributed to "normalization from below" [257] and "manufacturing of consent" [32]. The hegemonic power to govern the industrial food system regime is conferred to the economic elites by people (citizens and consumers) accepting as "normal" the social construct that justifies the commodification of food, and thus the manufacturing of consent emerges from a bottom-up normalization. Of course, the thinkers and rulers of the regime are also instrumental in convincing the citizens and consumers that such as essential resource for our survival can be treated as a disposable good, a neutral commodity or an excludable private good to be exclusively produced according to market rules. Since transition pathways are greatly moulded by narratives, ideas and shared

values [117, 133], the clash of competing narratives to reach the hegemony of the mind is a never-ending tension [258].

Seeking to understand the relevance of the valuation of food dimensions as a shared value in the global landscape of food transitions, this research has found that the socially-constructed view of food as a commodity (a normative consideration where their tradeable features supersede other non-economic considerations) is associated to the reformist attitude, no matter where the person positions himself (regime or niches). Conversely, the alternative social construct of food as a commons is a belief associated to the counter-hegemonic transformative attitude. Those preliminary patters have been unveiled by statistical analysis. Exceptions can be found in each group and yet the correlations are strongly significant and commonsensical.

The results contribute to agency-sensitive analysis in food transitions by validating the hypothesis that the way food professionals value food is related to the political attitude with regard to the existing food system and its transition trajectories, although no causality can be inferred by this sample. In other words the normative consideration of food shapes the priorities for action (political attitude) and, to a certain extent, specific food policies we support/accept (preferred policy beliefs). Therefore treating food as a commodity or commons has an explanatory power (yet to be elucidated with further research) when trying to understand "agency in food systems in transition". Since beliefs and values drive transition pathways, the consideration of food as a commons will certainly open up new policy options and regenerative claims in the future.

The hegemonic consideration of food as a commodity is challenged from within and outside. Actually, multiples loci of resistance with counter-hegemonic attitudes are challenging the hegemonic paradigm as one can see by the institutional diversity of the sample investigated. This diverse people working in rather diverse institutions have a set of shared food policy beliefs and a convergent regard of food as a commons. This result concurs with previous authors that defended that counter-hegemonic agency should be multi-faceted and necessarily pluralistic [253]. If power is exercise in multiple locations with paradigms normalizations, counter-hegemonic resistance defending food as a commons requires multiple projects to de-normalize the assumed paradigm associated to gradual reformers.

Although the counter-hegemonic agency may provide a radically transformative narrative to confront the system, it is not enough. The industrial food system is quite powerful in means, actors, financial resources and narratives. There is a need of convergence of transformative movements to confront it. But how to articulate the development of alter-hegemonic innovations that seek to build autonomous spaces outside the mainstream with counter-hegemomic initiatives that struggle against the mainstream to change the policy and regulations that sustain it? Can the hegemonic powers of food capitalism be confronted with dispersed, autonomous, localized, and essentially communitarian solutions? Critique, resistance and isolationism are important, but something else is needed: powerful aspirational and inspirational alternative narrative. A different discourse that may gather support from different constituencies that feel represented by the underpinning principles and moral grounds and the concrete solutions to daily problems. The construction of new narratives may lead to the reconfiguration of the entire system with different goals, values and transition pathways. In that sense, there is a need of "convergence in diversity" [33] or a "movement of movements" grounded in conviviality [259] for transformative groups trying to change the industrial food system. And "Reclaiming the commons" can nicely summarise that resistance to neoliberalism [260]. The multiple valuation of food as a commons may enrich the diversity of transformative alternatives (food Justice, food sovereignty, de-growth, commons, epistemologies from the South, transition towns, veganism, right to food, food security, nutrition transition) including those more transformative or more reformist.

Additionally, the consideration of food and nutrition security as a global public good (a very particular political category within the private/public good debate) conceals an ample consensus within the sample, no matter how food is valued. That could also pave the way to use this idea as a converging discourse to bring about both constituencies, those who see food as a commodity and those who see food as a public good. So far, this item has only attracted a meagre attention in developmental and scientific debate.

If we are to achieve a more sustainable and fairer food system, the transformative agency of the food professionals working in multiple institutions needs to be pluralistic and anchored in different loci of the transition landscape and yet it requires a convergence based on moral grounds and a normative contestation of food as a commodity. The latter is a normative construction that favours a particular pathway of transition and

discard other options. Only if the production of food is viewed as a commons rather than simply a commodity made available via the logic of the market, will public policies adjust to guarantee a universal and adequate access to food by all. The reclamation of food as a commons will consist of a long-term incremental process to dismantle the absolute reliance on market logic [154], a process that is led by transnational food movements in the international arena [261] but that needs to be complemented and re-enforced by local food movements working in customary and contemporary alter- and counter hegemonic niches in order to build a "globalization from below" [262]. Eat locally but re-claim globally.

Supplementary Materials:

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Appendix 1: Complete list of food-related professionals by political stance vis a vis the current food system

Table A1 Gradual Reformers (N=25)

N	Institution	Position	Country	Self-placement in the transition landscape	Political stance in the food system	Valuation of food dimensions
2	Citizens' Initiative "Despertemos Guatemala"	Member of the Steering Committee	Guatemala	NI-AL	GR	MO-ST
65	CIHEAM/IAMM	PhD Candidate on metrics of Sustainable Diets and Food Systems	International (France)	NI	GR	MO-ST
68	Katholieke Universiteit Leuven	PhD research on multisensory gastronomic experiences	Belgium	NI-RV	GR	MO-ST
30	Gorta Self Help Africa	Nutritional adviser	Ireland	RE	GR	MO-MI
44	Vrije Universiteit Brussel	Researcher on integration between taste and hearing	Belgium	NI-AL	GR	MO-MI
53	Universidad del Valle de Guatemala	Researcher on ethnobotany and agroforestry	Guatemala	NI	GR	MO-MI
4	University of Alberta	Researcher on Indigenous food security	Canada	NI-AL	GR	MD
22	Katholieke Universiteit Leuven	PhD researcher on small holding conservation agriculture	Belgium	NI-AL	GR	MD
41	FEWS NET Famine Early Warning Systems	Regional Food Security Analyst.	Guatemala	NI	GR	MD
49	Hunger Solutions Minnesota	Employee	USA	RE	GR	MD
56	European Commission	Officer dealing with food and nutrition security governance	International (Belgium)	RE	GR	MD
62	The cotswold chef	Chef and social entrepreneur on food issues	UK	NI-RV	GR	MD
79	Member of local food groups	Food activist, researcher at university in physics	USA	RE	GR	MD
18	Wageningen University	Researcher on EU governance of food security	Netherlands	RE	GR	MO-ST
33	Rust Belt Riders Composting	Employee and co-owner of the cooperative	USA	NI-AL	GR	MO-ST
93	FAO	Officer on Food Security and Nutrition	International (Italy)	NI-AL	GR	MO-ST
36	Bioversity International	Regional representative in Central America	International (Italy)	NI-AL	GR	MO-MI
42	Oxford University	Senior researcher	UK	RE	GR	MD
50	University of Sussex	Research on market access to diverse and nutrient food	UK	RE	GR	MD
94	UK Agricultural Biodiversity Coalition	Employee	UK	RE	GR	MD
5	Global Harvest Initiative	Executive Director	International (USA)	RE	GR	MO-ST
40	European Commission	Public servant dealing with Food Security	International (Belgium)	RE	GR	MO-ST
59	FANTA Technical Assistance Project	Food Security specialist	USA	RE	GR	MO-MI

66	International Institute of Rural Reconstruction	Program associate for food and nutrition security	International (Philippnes)	NI-RV	GR	MO-ST
84	Ministry of Foreign Affairs	Responsible for food and nutrition security policies	Netherlands	RE	GR	MO-ST

Table A2 Counter-hegemonic Transformers (N=32)

N	Institution	Position	Country	Self-placement in the transition landscape	Political stance in the food system	Valuation of food dimensions
72	Citizens Co-op	Member of the voluntary Board of Directors	USA	NI	TR-CO	MO-ST
74	Universidad Central del Ecuador	Researcher on Short Alternative Food Supply Chains	Ecuador	RE	TR-CO	MO-MI
83	Provincial Government of Galapagos Islands	Consultant on food security issues	Ecuador	NI-AL	TR-CO	MO-MI
3	Oxfam Intermon	Policy and advocacy advisor on food, agriculture, climate change	Spain	RE	TR-CO	MD
6	Shareable	Journalist writing on ways to democratize the food system	USA	NI	TR-CO	MD
13	Souper Saturday	Volunteer activist	UK	NI-AL	TR-CO	MD
17	Radboud university	Researcher on motivations to act for nature and agro-biodiversity	Netherlands	RE	TR-CO	MD
21	Researcher, anti-poverty activist, journalist	Researcher, anti-poverty activist, journalist	Spain	RE	TR-CO	MD
23	Slow Food Youth Network	Member of the network secretariat	International (Italy)	NI-RV	TR-CO	MD
27	Commons Abundance Network	Member working in educational activities	International (USA)	NI	TR-CO	MD
29	Re-Bon Réseau de glanage nantais	Volunteer member	France	NI-AL	TR-CO	MD
48	Ecologistas en Acción	Employee	Spain	NI-AL	TR-CO	MD
64	Eastern Mediterranean Public Health Network	Executive director, health researcher	International (Jordan)	RE	TR-CO	MD
75	Taranaki District Health Board	Doctor and food bank volunteer	New Zealand	NI	TR-CO	MD
76	UN Standing Committee on Nutrition	Technical officer	International (Italy)	RE	TR-CO	MD
78	Part-Time Carnivore	Member	UK	RE	TR-CO	MD
80	Providencia Municipality	Public Servant	Chile	NI-AL	TR-CO	MD
81	Greenpeace International	Senior Ecological Farming Campaigner	International (Netherlands)	NI-RV	TR-CO	MD
96	Université Catholique de Louvain	Senior Lecturer and researcher on agro-ecology	Belgium	RE	TR-CO	MD
98	Falling Fruit	Co-founder and board member	USA	NI	TR-CO	MD
24	Disco Soup Paris	Member	France	NI-RV	TR-CO	MO-ST
26	Disco Soupe Lille	Member	France	NI-AL	TR-CO	MO-MI
97	Food activist and journalist	Food writer and journalist	Argentina	RE	TR-CO	MO-MI

14	Incredible Edible Bratislava	Volunteer activist	Slovakia	NI	TR-CO	MD
25	Confitures Re-Belles	Social entrepreneur, co-founder	France	NI	TR-CO	MD
32	University of Manitoba	PhD researcher on indigeneous peoples' access to foods in forests	Canada	NI	TR-CO	MD
55	Fair, Green and Global alliance	Coordinator	Netherlands	NI-AL	TR-CO	MD
67	Proyecto AliMente	Core member and media activist	Mexico	NI	TR-CO	MD
70	FLACSO-Ecuador	Researcher	Ecuador	RE	TR-CO	MD
95	FAO	Staff at Secretariat Regional Hunger-Free Latin America Initiative	International (Italy)	RE	TR-CO	MD
54	International Forestry Students' Association	Director	Indonesia	NI	TR-CO	MD
99	Plant a fruit	Member	Kenya	NI	TR-CO	MO-MI

Table A3 Alter-hegemonic Transformers (N=38)

N	Institution	Position	Country	Self-placement in the transition landscape	Political stance in the food system	Valuation of food dimensions
51	Food Forward Toronto	A consultant, chef and food activist	Canada	NI	TR-AT	MO-ST
39	Organic food Consumer	High School Teacher and part-time organic food producer	USA	NI	TR-AT	MO-ST
85	Save the Children UK	Policy and Advocacy Adviser in Nutrition -Hunger Team	UK	RE	TR-AT	MO-ST
1	Social Entrepreneur and food activist	Social entrepreneur, lecturer, researcher, food and agriculture consultant	Australia	RE	TR-AT	MO-MI
19	Universite Catholique de Louvain	PhD researcher on legal issues affecting biodiversity, seeds and commons	Belgium	RE	TR-AT	MO-MI
46	World Food Programme	Liaison Officer with donors	International (Italy)	RE	TR-AT	MO-MI
47	Transfernation	Founding member and director	USA	NI-RV	TR-AT	MO-MI
92	Food Cardiff	Member of the secretariat	UK	NI-AL	TR-AT	MO-MI
7	CommonSpark	Commons activist and founder	USA	NI-RV	TR-AT	MD
8	Doors of perception	Motivational speaker, writer, social activist on sustainability and innovation	France	NI	TR-AT	MD
12	Kaskadia	Transition Communicator and Commons Activist	USA	NI-AL	TR-AT	MD
20	Katholieke Universiteit Leuven	Senior researcher	Belgium	RE	TR-AT	MD
28	Australian Food Sovereignty Alliance	Member of the steering committee	Australia	NI-RV	TR-AT	MD
35	Food Guerrilla	Food activist	Netherlands	NI-RV	TR-AT	MD
37	International Development Consultant	International Development Consultant	Spain	RE	TR-AT	MD
52	GoMarketing Digital Communications	Digital Media Consultant	Ireland	NI-RV	TR-AT	MD
57	Katholieke Universiteit Leuven	PhD researcher	Belgium	NI	TR-AT	MD
58	CommonsFest	Organiser	Greece	NI-RV	TR-AT	MD
61	University of Sussex	Senior researcher	UK	NI-RV	TR-AT	MD
63	Oslo and Akershus University College	Lecturer on public health and nutrition	Norway	RE	TR-AT	MD
69	Katholieke Universiteit Leuven	PhD researcher	Belgium	NI-RV	TR-AT	MD
88	WWF	Staff member working on food security and sustainability	International (Belgium)	RE	TR-AT	MD
87	FLOK Society	Researcher at the core steering group	Ecuador	NI	TR-AT	MD
89	Grup de Consum Ecològic i Local Terraprim	Group member	Spain	NI-AL	TR-AT	MD
90	Building Roots Toronto	Team member	Canada	NI	TR-AT	MD

100	Local Organic Food Co-ops Network	Co-operative member and staff	Canada	NI-RV	TR-AT	MD
43	Wageningen University	Researcher and lecturer on food and agriculture issues	Netherlands	RE	TR-AT	MO-MI
77	UMeFood - University of Maine	Member of a graduate student group	USA	NI-AL	TR-AT	MO-MI
86	Oxford University	Senior Visiting Research Associate on socio-ecological challenges	UK	NI-RV	TR-AT	MO-MI
16	Food Ethics Council	Staff member	UK	RE	TR-AT	MD
34	Commons Strategies Group	Commons activist, thinker, lecturer, co-founder	International (Germany)	NI-AL	TR-AT	MD
60	Humanitarian & food assistance worker	Humanitarian and food assistance professional	Spain	NI-AL	TR-AT	MD
73	Africans in the Diaspora	Staff supervising food and agriculture investment portfolio	USA	NI	TR-AT	MD
91	Scaling Up Nutrition	Staff at SUN secretariat	International (USA)	NI-RV	TR-AT	MD
82	Stockholm Resilience Centre	Senior Researcher	Sweden	NI-AL	TR-AT	MD
9	Ministry of Foreign Affairs	Responsible to follow up food and nutrition in the multilateral context	Netherlands	RE	TR-AT	MO-ST
11	Social Entrepreneur, agricultural consultant	Change Manager, lecturer, researcher, focussed on innovation	New Zealand	NI-AL	TR-AT	MO-ST
71	GoMarketNC	Founder	USA	NI-RV	TR-AT	MO-ST

Appendix B: Questionnaire

1.- Name of your organization/enterprise/group

2.- Contact

3.- Sector where you carry out the food-related activities

a) Private sector

b) Public Sector

c) Private Public Partnership

d) NGO/Civil Society Sector (legal entity)

e) Self-regulated Collective action (informal arrangement)

4.- Age and gender

Age

a) 18-30

b) 31-40

c) 41-50

d) 50-60

e) 61-70

Gender

f) Male

g) Female

5.- How long have you been active in hunger eradication/food security/alternative food actions?

a) Never

b) 1 year

c) 2-3 years

d) 3-5 years

e) 5-10 years

f) +10 years

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6.- At present, are you involved somehow in any food-related activity ? Please, describe it briefly (what, where, when, objectives, results to date, people/institutions involved) Open question

7.- How would you describe the food-related activity you are involved in? (choosing one option is preferable but two options may also be selected and ranked)

A **SMALL-NICHE**	activity that	a.- improves the existing food system
		b.- struggles against the existing food system
		c.- builds a different food system
A **MAINSTREAM**	activity that	d.- improves the existing food system
		e.- struggles against the existing food system
		f.- builds a different food system
A **CONVENTIONAL**	activity that	g.- improves the existing food system
		h.- struggles against the existing food system
		i.- builds a different food system
An **ALTERNATIVE**	activity that	j.- improves the existing food system
		k.- struggles against the existing food system
		l.- builds a different food system

A **REVOLUTIONARY**	activity that	m.- improves the existing food system
		n.- struggles against the existing food system
		o.- builds a different food system

8.- Have you done any of the following during the past months?

a.- Producing food yourself
b.- Choose locally produced food products
c.- Eat organic/ecological foodstuff
d.- Recycling food in different ways so as to minimise food waste at home
e.- Sending e-mails about food-related issues to my friends
f.- Being part of a group/organization whose purpose is to increase the public awareness on the food system/hunger problem
g.- Sensitizing close relatives or colleagues in order that they change their food habits
h.- Financially supporting an organization that works for a more secure food system or anti-hunger actions

9.- Rank every statement according to your preferences

	Strongly Disagree	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*
a.- Food is a common good that shall be governed by citizens and being beneficial for all members of society					
b.- Every citizen should be entitled to get a minimum amount of food (or its money equivalent) to eat every day					
c.- The legal minimum wage should be always equal to the price of the Food Basket in every country					
d.- The financial speculation of food products should be banned by law					

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e.- Free food programmes should be part of Universal Food Coverage to those that cannot afford it					
f.- Living organisms, such as seeds, animal breeds or genes shall not be patented by individuals or corporations					

Choose the statement you prefer (only one shall be selected, but explanations can be provided).

10	a.- Food is a basic human need every human being shall enjoy every day, regardless his/her purchasing power	
	b.- Freedom from hunger is a human right as important as the right not to be tortured	

11	a.- The price of food in the market reflects well its value for human beings	
	b.- Food shall be cheap so as to enable more people to get access to it	

12	a.- Food is a common good that should be enjoyed by all humans and governed in a common way	
	b.- Food is a human right that shall be guaranteed by the state to all	

13	a.- Food is a life-sustaining commodity that cannot be treated as other commodities	
	b.- Food is an important part of my cultural identity	

14	a.- Food, as a scarce resource, has to be distributed according to market rules	
	b.- The State has the obligation to guarantee the right to food to every citizen	

15	a.- You can eat as long as you have money to purchase the food or means to produce it	
	b.- Food is a natural resource that it is better exploited by the state	

16	a.- Food has to be beautiful and cheap	
	b.- Food has to be nutritious and expensive	

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17	a.- Food is a natural resource that is better exploited by the private sector	
	b.- Food is a natural resource that is better exploited by citizens	

18	a.- Food is a commodity whose access is exclusively determined by the purchasing power of any given customer	
	b.- Free food for all is good	

19	a.- The best use of any food commodity is where it can get the best price, either fuel, feeding livestock or exporting market	
	b.- A bread loaf should be guaranteed to every citizen every day	

20.- From the following list, please pick the three sentences you agree the most with and rank them (First, Second, Third)

a.- Food can be at the same time a private good and an essential resource for our survival and identity	
b.- Current market rules with less State intervention will enable us to reach a food secure world	
c.- Food is like any other commodity	
d.- The current food system is capable of producing food in a sustainable way	
e.- The state has an important role in producing, distributing and guaranteeing food for all the citizens	
f.- Patents are essential to foster innovation in agricultural production	
g.- If food is distributed according to the market rules, we will never achieve food security for all	
h.- Food and nutrition security is a global public good	
i.- Biofuel cultivation does not affect hunger	

21.- Provide any comment you may consider about this questionnaire, your feelings or suggestions. Open question

Appendix C: Political Stance + Valuation of Food Dimensions

Table C1 Gradual Reformers + Strongly Mono-dimensional (N=10)

N	Name of Institution	Description	Position	Country	Self-placement in the transition landscape	Political stance in the food system	Valuation of food dimensions
2	Citizens' Initiative "Despertemos Guatemala"	Advocacy and activist collective initiative to raise awareness about the most pressing problems affecting the country and what citizenship and civil society can do to address them. Chronic malnutrition, affecting nearly 50% of under-five children, is a priority issue. The Initiative "I have something to give" (Tengo Algo que Dar) was launched in 2012 to mobilise young urban people to get acquainted to malnutrition problems in the rural areas. http://despertemosguatemala.org/web/	Member of the Steering Committee	Guatemala	NI-AL	GR	MO-ST
5	Global Harvest Initiative	A corporate advocacy group that works on policy analysis, education and advocacy about the solutions to improve agricultural productivity and conserve natural resources and to improve food and nutrition security. The biggest transnational agri-food corporations are members. www.globalharvestinitiative.org	Executive Director	International (USA)	RE	GR	MO-ST

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65	CIHEAM/IAMM	The IAMM is one of four Mediterranean agronomic institutes of the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), an intergovernmental organisation created in 1962 by the OECD and the Council of Europe and composed of 13 member states. http://www.iamm.fr/	PhD Candidate on metrics of Sustainable Diets and Food Systems	International (France)	NI	GR	MO-ST
68	Katholieke Universiteit Leuven	Joint collaboration between the Laboratory of Experimental Psychology at KULeuven and the Acoustic Sensing Lab of Vrije Universiteit Brussels http://ppw.kuleuven.be/home/english/research/lep	PhD research on multisensory gastronomic experiences	Belgium	NI-RV	GR	MO-ST
93	FAO	United Nations Organisation for food and agriculture www.fao.org	Officer on Food Security and Nutrition	International (Italy)	NI-AL	GR	MO-ST
33	Rust Belt Riders Composting	Service-fee organic waste removal initiative available to Cleveland residents (US). It is organised as a co-operative run and owned by the workers. We divert compostable organics from entering landfills by working with community gardens to cultivate high quality compost www.rustbeltriderscomposting.com	Employee and co-owner of the cooperative	USA	NI-AL	GR	MO-ST
40	European Commission	The EC is the European Union's politically independent executive arm. It draws up	Public servant	International (Belgium)	RE	GR	MO-ST

		proposals for new European legislation, and it implements the decisions of the European Parliament and the Council of the EU. http://ec.europa.eu/index_en.htm	dealing with Food Security				
66	International Institute of Rural Reconstruction	A training institute with an international scope created by Dr Y.C. James Yen, a Chinese entrepreneur and social activist, that launched a rural education programme in China that targeted more than 200 million peasants. Currently working in more than 15 countries, mostly in Asia and Africa. http://iirr.org/	Program associate for food and nutrition security	Internation al (Philippnes)	NI-RV	GR	MO-ST
18	Wageningen University	Dutch university specialised in food and agricultural issues with a remarkable international outreach http://www.wageningenur.nl/en/wageningen-university.htm	Researcher on EU governance of food security	Netherland s	RE	GR	MO-ST
84	Ministry of Foreign Affairs	Governmental institution responsible for foreign affairs, international trade and Development Cooperation. https://www.government.nl/ministries/ministry-of-foreign-affairs	Responsible for food and nutrition security policies	Netherland s	RE	GR	MO-ST

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Table C2 Counter-hegemonic Transformers + multi-dimensional (N=20)

N	Institution	Description	Position	Country	Self-placement in the transition landscape	Political stance in the food system	Valuation of food dimensions
3	Oxfam Intermon	International development and humanitarian NGO, based in Spain, but a member of the international network of national OXFAMs. Implementing field projects and high-impact research and advocacy campaigns focused on inequality, justice, human rights, food security, water and livelihoods. http://www.oxfamintermon.org/	Policy and advocacy advisor on food, agriculture, climate change	Spain	RE	TR-CO	MD
6	Shareable	Shareable is a nonprofit news, action and connection hub for the sharing transformation. We've told the stories of sharers to millions of people since 2009. www.shareable.net	Journalist writing on ways to democratize the food system	USA	NI	TR-CO	MD
13	Souper Saturday	We provide meals through a soup kitchen and a safe non-judgemental social environment for homeless and otherwise impoverished people in Edinburgh, Scotland https://soupersaturdayblog.wordpress.com	Volunteer activist	UK	NI-AL	TR-CO	MD
17	Radboud university	EU-funded project on motivational attitudes and collective actions for nature, including agro-biodiversity and agricultural schemes. www.biomotivation.eu	Researcher on motivations to act for nature and agro-biodiversity	Netherlands	RE	TR-CO	MD

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21	Researcher, anti-poverty activist, journalist	Lecturing courses on food justice and food systems' visualization. I also blog and advocate on food related issues. Former OXFAM Policy coordinator and advocacy campaigner. Writing a blog on development, justice, media, poverty, hunger in El Pais journal	Researcher, anti-poverty activist, journalist	Spain	RE	TR-CO	MD
23	Slow Food Youth Network	The SFYN unites groups of active young Slow Food members from all over the globe. The local groups create original events aimed at raising awareness about food issues and providing means to take action. Such as the Disco Veggies, people cook fresh but unwanted fruit and vegetables that would otherwise have been discarded. The meal was prepared and distributed for free at the sound of music provided by DJs, encouraging a dance celebration. http://www.slowfoodyouthnetwork.org/	Member of the network secretariat	International (Italy)	NI-RV	TR-CO	MD
27	Commons Abundance Network	Web-based clearing house on Commons. The Commons Abundance Network (CAN) is an emerging co-learning, research, innovation and action network operating both offline and online as an incubator or laboratory for transformative action towards commons based abundance. http://commonsabundance.net/home-page/about/objectives/	Member working in educational activities	International (USA)	NI	TR-CO	MD
29	Re-Bon Réseau de glanage nantais	French gleaning network to reduce foodwaste by harvesting with volunteers fields that were not supposed to be harvested (over production, esthetic criteria), and redistribute this food to caritative organisations (foodbank mainly). Part of European Gleaning network. http://re-bon.wix.com/re-bon	Volunteer member	France	NI-AL	TR-CO	MD
48	Ecologistas en Acción	Ecologists in Action is a federation of over 300 environmental groups distributed all over Spain. It develops social ecology, which means that environmental problems stem from a model of production and consumption increasingly globalized, which also derives from other social problems. Awareness campaigns	Employee	Spain	NI-AL	TR-CO	MD

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		on GMOs, agro-ecology or legal actions against those who harm the environment, while also running innovative & alternative projects in several places. http://www.ecologistasenaccion.org/rubrique9.html					
64	Eastern Mediterranean Public Health Network	EMPHNET is a group of epidemiologists & public health workers who work to prevent and control diseases, to conduct multidisciplinary research, and to translate research into practice in the Eastern Mediterranean Region. They address nutritional issues related to hunger and obesity in partnerships with WHO, Columbia University, US Centre for Disease Control. http://www.emphnet.net	Executive director, health researcher	International (Jordan)	RE	TR-CO	MD
75	Taranaki District Health Board	Medical doctor (general practitioner) leading the Whanau Pakari Healthy Lifestyle Programme, promoting healthy lifestyles for children in low-income and maori neighbourhoods of New Plymouth, considered as food deserts. Obesity is triggered by ultra-processed easily available food and this doctor works to prevent those eating habits. http://www.tdhb.org.nz/patients_visitors/documents/Whanau_Pakari_info_Families.pdf	Doctor and food bank volunteer	New Zealand	NI	TR-CO	MD
76	UN Standing Committee on Nutrition	Policy advocacy and knowledge-sharing. The mandate of the UNSCN is to promote cooperation among UN agencies and partner organizations in support of community, national, regional, and international efforts to end malnutrition http://www.unscn.org/	Technical officer	International (Italy)	RE	TR-CO	MD
78	Part-Time Carnivore	Small non-profit campaigning organisation based in Cardiff aimed to cut consumption of intensively produced meat. Around 40 institutions have been involved in the campaign http://www.parttimecarnivore.org/	Member	UK	RE	TR-CO	MD

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80	Providencia Municipality	At the municipality of Providencia, in Santiago, we are developing an urban agriculture plan/strategy. The main objective is to validate urban agriculture as a tool that improves quality of life and helps people become more aware of food systems, facilitating the transition to a more sustainable one. http://www.providencia.cl/	Public Servant	Chile	NI-AL	TR-CO	MD
81	Greenpeace International	Campaigning on global food and agriculture issues. Objectives: transition to agroecology, by switching investments from pesticides, GM, monocultures, etc. to ecological farming and through mass mobilisation of people as consumer, eaters and citizens http://www.greenpeace.org/international/en/	Senior Ecological Farming Campaigner	International (Netherlands)	NI-RV	TR-CO	MD
96	Université Catholique de Louvain	Interdisciplinary research projects on food transition, agro-ecology, conventional agriculture and livestock and lecturing. Also some conferences on agroecology http://www.uclouvain.be/eli	Senior Lecturer and researcher on agro-ecology	Belgium	RE	TR-CO	MD
98	Falling Fruit	Nonprofit initiative based in Boulder, Colorado that encourages urban foraging throughout the world by crowdsourcing maps with availability of free fruits, vegetables and wasted food. Just in 2014, in Boulder 10,000 lbs food picked, over half donated, 20 events, 215+ volunteer participants. Our hope is to encourage people to see food (even that growing on private property, especially if it is going to waste) as a commons. We can grow so much more food in cities by even just replacing our current landscaping, if only we decide food is a priority and a public good. www.fallingfruit.org http://fruitrescue.org/	Co-founder and board member	USA	NI	TR-CO	MD
14	Incredible Edible Bratislava	Planting herbal gardens, vegetables and trees around town, in vacant lots and abandoned places to grow food for all. We've planted several orchards and there are more to come.	Volunteer activist	Slovakia	NI	TR-CO	MD

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		Reproducing the Incredible Edible movement originated in Todmorden, UK. https://www.facebook.com/IESVK					
25	Confitures Re-Belles	Two young social entrepreneurs launched this idea in Paris (Oct 2014). Jar and marmalade producers for short-circuit shops. A gourmet idea to fight against food waste https://www.facebook.com/ConfituresReBelles	Social entrepreneur, co-founder	France	NI	TR-CO	MD
32	University of Manitoba	Protected forests can challenge access to food in conjunction with agribusiness and weak implementation state legal frameworks and/or international human rights. Running a blog presenting research results. http://farmsforestsfoods.blogspot.be/ http://umanitoba.ca/	PhD researcher on indigeneous peoples' access to foods in forests	Canada	NI	TR-CO	MD
55	Fair, Green and Global alliance	The Fair Green and Global (FGG) alliance is an alliance of six Dutch civil society organisations. Both Ends, ActionAid, Clean Clothes Campaign, Friends of the Earth Netherlands, SOMO and Transnational Institute. The development, promotion and scaling up of inspiring examples of sustainable development in developing countries including those related to access to food and food security www.fairgreenandglobal.org	Coordinator	Netherlands	NI-AL	TR-CO	MD
67	Proyecto AliMente	Promoting a social movement to think critically on food issues and the food chain. First campaign "que no te den la espalda" supports breastfeeding in Mexico. Soon to be part of Alianza por la Salud. Organising events on food related issues: where are we? how did we get here? what can we do about it? www.quenotedenlaespalda.org	Core member and media activist	Mexico	NI	TR-CO	MD
70	FLACSO-Ecuador	Coordinating a research project on agricultural certifications systems (organic and Fair Trade) and public policies in Ecuador. Engaging with producers' organizations and policy makers in	Researcher	Ecuador	RE	TR-CO	MD

		Ecuador during the research process. https://www.flacso.edu.ec/portal/					
95	FAO	The Hunger Free Latin America and the Caribbean Initiative is a commitment by the region to eradicate hunger within the term of a generation (2025). It was launched in 2005, the secretariat is provided by FAO and get funds from Spain, Brazil and Mexico. It works in public policies, budget allocations, legal frameworks, strategic thinking, capacity building and communication and awareness. http://www.ialcsh.org/es	Staff at Secretariat Regional Hunger-Free Latin America Initiative	International (Italy)	RE	TR-CO	MD
54	International Forestry Students' Association	PhD researcher on Forest and Food Security at the Bogor Agricultural University http://ifsa_lcipb.lk.ipb.ac.id/	Director	Indonesia	NI	TR-CO	MD

Abbreviations

The following abbreviations are used in this text:

EU	European Union
FAO	Food and Agriculture Organisation of United Nations
GMO	Genetically Modified Organisms
MMD	Mildly Mono-dimensional
MTD	Multi-dimensional
MLP	Multi-Level Perspective on Sustainable Transitions Theory
NGO	Non-governmental Organisation
OECD	Organisation of Economic Cooperation and Development
SDR	Socially desirable responses
SMD	Strongly Mono-dimensional
UK	United Kingdom
UN	United Nations
US	United States of America
WTO	World Trade Organisation

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