



Article Market Power Extended: From Foucault to Meadows

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Abstract: Market power is a complex matter that is approximated with quantitative indicators within economics. However, these indicators may not fully capture market power, or they may fail to identify it, although it may be present. Moreover, a quantitative approach restricts market power as a concept, impeding the ability to discuss its relationship with other concepts, such as sustainability. This paper extends the definition of market power, following Foucault's understanding of power and the associated theoretical discussions of power from different disciplines. We extended Foucault's work by including systems thinking to capture the importance of the prevalent system's paradigm, which is the ultimate initiator of action. Apart from distinguishing different elements of power, we also integrate an instrumental view on the elements of power. The developed frame allows us to understand the dynamic character of power as a force that strives to maintain or ameliorate the position of the paradigm that it serves. Based on this frame, we outline how this extended understanding of power can be used to analyze market power itself, and its relation with sustainability.

Keywords: power; market power; Foucault; sustainability; systems thinking

1. Introduction

On first sight, market power is easily explained, yet a second look indicates that it clearly is a much more complex issue. The European Parliament [1] explored this complexity in a report on unfair trading practices in the food supply chain. The report noted that too narrow a definition of market power as the basis for antitrust legislation can result in the inability to prosecute certain practices with a negative effect on trading partners. Therefore, the European Parliament suggested the enactment of legislation to cover unfair trading practices stemming from power imbalances. The report provided a list of practices that transcend pricing and payment issues, suggesting that market power is more than the ability to charge a markup. Blaug [2] indicated that the problem lies much deeper, in the understanding of competition. Orthodox economists assume that some sort of equilibrium can be reached: a state of optimum, a state of perfect competition, a state in which all competing forces are abrogated. However, Blaug [2] challenged the existence of such an optimum, a final stage, and suggested instead that competition is an ongoing dynamic force. From this position, he concluded that quantitative assessments do not suffice, and qualitative assessments are needed.

Undoubtedly, a sustainability transition is needed [3–7]. The economy is inextricably connected with the environment. Past examples include the pollution caused by chlorofluorocarbons (CFCs), which thinned the ozone layer [8], fertilizers that poisoned water supplies [9], and acid rain that destroyed forests [10]. In all cases, economic agents were part of the problem, although they can be part of the solution, too. Previous environmental problems have not served to eliminate the

harmful effects of economic activities. An economic system built on growth necessitates a throwaway society, reflected in persistent food waste [11], e-waste [12], and plastic waste [13] that can poison the environment and the food chain.

There are many reported cases of market power affecting sustainability [14]. Maxwell and Briscoe [15] illustrated DuPont's key role in phasing out chlorofluorocarbons (CFS). While this was a positive example, industry lobbies also have blocked the implementation of stricter regulations [16,17]. Economic agents may impact sustainability through lobbying, and also through altering their own business operations, such as the "greening" of Walmart [18]. When the number one Fortune 500 company [19] changes its business practices, we can assume the impact will be larger than when a small company takes the same action. In a recent study, Pulker, et al. [20] investigated the link between supermarket power and human health, which is related to sustainability [21]. They characterize supermarkets as gatekeepers that exercise power on different levels.

Despite these examples, the literature on neoliberal economics does not provide a comprehensive definition of market power that includes its relationship to sustainability [22]. Other economic theories may provide a broader understanding of market power. However, we focused on neoliberal economics. Note that we are aware that the term neoliberalism has differing meanings and connotations [23–25]. Anyhow, we do not intend to embark on the distinctions between the variations of neoliberalism. Rather, we want to keep it concise by stating that we focus on the predominant neoliberal economic theory that puts market forces within a free market at the center, as this is the dominant economic theory [26–28]. However, as Biebricher [29] points out, most neoliberal thinkers have turned a deaf ear to a clear definition of market power. Therefore, he states: "all varieties of neoliberal thought harbor a blind spot regarding specific forms of power. This means that certain forms or effects of power are either overlooked or systematically brushed aside by definitional fiat. This failure to acknowledge power effects of various kinds in neoliberal thought should be properly registered and scrutinized in any critical account of neoliberalism" [29].

In this paper, we seek to close this gap as we present an amended understanding of market power based mostly on Foucault's [30] work regarding the structure and complexity of power. Foucault identified the complex dimensions of power, which go beyond the categorizations provided by other social scientists, and at the same time, he examined power in a very structured way. Foucault [30] discussed three dimensions of power: (a) its basic nature, (b) its origin, and (c) its manifestation. Thus, Foucault's structured and complex understanding of power serves to integrate other research on power from different disciplines, such as political science or economics, allowing us to take an interdisciplinary approach to answering the research questions: What is power? What is market power? How can (market) power be defined? How can market power be analyzed? How does market power relate to sustainability?

In their book about power in the agri-food system, Clapp and Fuchs [22] illustrated the relationship between power and sustainability; specifically how market power shapes an understanding of sustainability. We also aim to understand how market power and sustainability are related, but we seek a broader view between these two concepts—exploring the possibility of sustainability's potential effect on power as well. Moreover, power not only shapes the interpretation of sustainability, but also sustainability issues themselves. For example, Pulker, et al. [20] investigated the effect of supermarket power on human health, employing the categories of sources of power outlined by Clapp and Fuchs [22]. Such a categorization of power supports the analytic analysis of power's complexity, but nevertheless, these authors did not use these categories to develop a theory. We close this gap.

We base our analysis on Foucault's [30] article, "The Subject and Power," a clearly structured text, perhaps due to Foucault's own late-career lucidity about power. Foucault's perspectives changed throughout his lifetime [31,32], which is why scholars may have come to different conclusions when applying a Foucauldian lens. Therefore, some readers may miss a focus on Foucauldian "core" topics such as knowledge or governmentality [29]. Indeed, we could expand on these topics, but we have omitted lengthy excursus here in the interest of providing as comprehensive yet as concise a discussion

as possible. Moreover, we emphasize that we seek to use Foucault's work as a tool [33] to understand power, rather than to reproduce his work.

In this paper, we aim to understand the potential relationships between market power and sustainability; however, this goal first requires a comprehensive understanding of power, specifically market power. Although we believe that the definition of power that we develop in this paper can be useful to many researchers, we recognize that our analysis was influenced by our ultimate research goal [34] and by historical circumstances [30]. The current reality differs from the reality from 10, 20, or 50 years ago. Sustainability has become a ubiquitous term, and the emergence of some multinational companies has underscored the influence of market power [35].

The importance of analyzing the relationship between economics and sustainability can be found in Foucault's work. He outlined the concept of "subjectification" channeled by neoliberalism, the predominant current economic system, leading to the increasing importance of self-government and the decreasing legislative discipline [31]. In the neoliberal system, subjects are entitled to govern themselves rather than be directed by governments. In a world in which governments are the main force directing human conduct, any analysis of market power and sustainability would need to focus on governmental power. But if we accept Foucault's suggestion that governments have less impact on humans' conduct in the neoliberal system, we must focus on the nexus between the market system and sustainability. The analysis of sustainability in economics is usually limited to corporate social responsibility (CSR), the triple bottom line [36], or green washing [37]. Companies, which are increasingly required to include sustainability within their business strategies, tend to view sustainability as a competitive advantage [38]. However, the connection between market power and sustainability has been missing, and with increasing market concentration, we must understand how market power influences sustainability, and vice versa. Therefore, not only the structured nature of Foucault's work, but also his interest in the subject, constitute the reason that his work provides a suitable framework for our analysis of market power and sustainability.

In this paper, we offer:

- 1. A categorization of power that can be used to analyze power and its relationship to other concepts.
- 2. A categorization of power that recognizes the interactive, dynamic character of power as an active force for change, even as it is subject to change.

We begin with the orthodox definition of market power that is found in economics textbooks, and then outline an extended understanding of power, including a definition that we have developed based on the literature studied. Next, we focus on the problems of market power, the limits of governmental intervention, and the importance of underlying values that guide the direction of power. We conclude with a short excursus on how this theory could be used for future analyses.

2. Market Power

In orthodox economics, market power is defined as "[...] the ability to set prices above cost, specifically above incremental or marginal costs, that is, the cost of producing an extra unit" ([39],compare with: [40]). Students, being presented the basic ideas of neoliberal economic theory, learn that market power is negative; a market failure that leads to a deviation from optimality which is indicated by a deadweight loss (see for example: [40]: chapter 10).

Several researchers have noted the necessity of an extended understanding and definition of market power. For example, Bardhan [41] stated, "Economics is, of course, not confined to the exercise of economic power and is often concerned with the consequences of other forms of power, particularly political and ideological." White [42] also pointed out the complex manifestation of power within the market system, which is not merely related to a measurable markup or market share: "[Power] is a protean phenomenon and power resources in the markets are many and various" [42]. Expanding on corporate power in the agri-food sector, Clapp and Fuchs [22] noted that market power is usually equated to the market share, and that corporate power transcends the pure economic dimension.

They stated that market power and political power are related; however, the complex nature of this relationship calls for comprehensive analysis. "Accordingly, it is important to unpack corporate power and to look at its different political facets as well as to consider important additional sources besides market power such as access to information and the policy process, or the perceived political legitimacy of corporate actors" [22]. Moreover, in a recent report, the European Parliament emphasized that the narrowness of the orthodox definition of market power can reduce the number of antitrust cases, and therefore, introduced a broader concept of unfair trading practices [1].

Therefore, market power discussed within economics often suffers from a truncated delineation [42]. The observation that market power is a highly political matter is indeed not new. Quite the contrary is the case. The limited conceptualization of market power within orthodox economic theory is even more astonishing if we consider that Adam Smith, the founding father of this very economic theory, assigned a much greater importance to power [43]. Elliott [43] stated, "[...] Smith's argumentation incorporates, indeed features, causes and consequences of the pursuit and exercise of social power by individuals, organizations, classes, and governments. Thus, the scope of Smith's social or political economy is broader than twentieth century orthodoxy in economics and expressively includes within this corpus the 'visible hand' of power and politics as well as the 'invisible hand' of market exchange relationships." Elliott [43] even went so far to state that Smith's writings can illuminate an "internal flaw" in the neoliberal economy, which is the interconnection of "market exchange and power." Bowles and Gintis [44] argue that the marginal role of power issues within neoliberal economy is based on the oversimplification of Smith's political economy, and call for a return to a new political economy that offers more comprehensive means to understand exchange.

Transaction cost theory reduces the importance of market power to a question of efficiency. Williamson [45] understood market power as a vague concept that is used to explain instances ex post for which other explanations are lacking. Efficiency, rather than power is the main driver for organizational change [46–48]. Therefore, economics offers two different points of view on market power: a negative view in which market power reduces welfare, and a positive view in which it increases efficiency. Although these views may appear to be a fundamental disagreement, they are rather the symptom of the cognitive amalgamation of (market) power and its legitimate use. On the one hand, orthodox economic theory evaluates market power as deviating from optimality, and therefore having a negative impact on welfare. On the other hand, transaction cost theory evaluates market power (or rather market concentration) as having a positive effect on cost reduction. In the latter case, the superordinate goal (transaction cost reduction) legitimizes market concentration, if and only if that goal is achieved [45].

Perfect competition has not always been the prevalent way of organizing economic activity [2], as the economic system existing in a point in time is a result of the respective circumstances [49]. Neoliberal economic theory resulted as well from a counterreaction to a system that was understood to be repressive [26,29,50]. In reviewing the history of cartelization and decartelization between 1780 and 1995, Schröter [51] noted that cartelization was commonly supported until the end of the Second World War. According to his analysis, the main reason for the postwar change of perspectives was the acknowledgment of the potential adverse effects of economic power, coupled with political power, which supported Nazi Germany. The defeat of the Nazis allowed the "American Way," which supported competition (compare with: [29,31]). Rieter and Schmolz [52] review the contribution of Ordoliberalism to the transformation of the war economy after the Second World War. They point out that the Ordoliberalists [23,29,52,53] called for governmental intervention to break up existing monopolies. This was a necessary step to ensuring that the post-war economy would not suffer from monopoly power. Even before the war, Pigou [54] had identified the problematic interrelationship between economics and politics: "These things lie outside the economic sphere, but the risk of them may easily be affected by economic policy. It is true, no doubt, that between economic strength and capacity for war there is a certain rough agreement" [54]. Clearly, the main problem is the illegitimate use of (market) power, rather than (market) power per se. Moreover, the principal reason

for demonizing market power is a political one. Consequently, market power should not be reduced to the market sphere, and a much broader definition is needed.

Following the analysis of Bonefeld [53] the apolitical view on neoliberal economics represents "an exception to neoliberal dogma" [53] that has been reevaluated with the economic crisis of 2008. After all, the political character of neoliberalism becomes clear by its proliferation through governmental force and elites [55]. While neoliberal theory reduces the importance of politics, the political economy and its variants [44,56–61], explicitly connect the economic sphere with the political sphere.

This brief outline of market power within neoliberal economic theory illustrates the ambiguity and the complexity of (market) power. The exertion of power seems to be legitimate when based on an overarching normative goal [62], and therefore, (market) power per se is not negative, but rather it achieves the purpose for which it is employed. Accordingly, the exertion of (market) power to support the sustainability transition could be understood as a legitimate exercise of power that should be supported rather than prosecuted. Indeed, this view is rather truncated, and the downside of such a perception is discussed below.

3. Market Power Extended

Following the definition of market power cited above, market power is understood within orthodox economic theory according to Hobbes' approach to power, as a quantifiable matter; that is, having more of a certain characteristic (possession, capacity, or attribute) entitles an entity with power [63]. This view is in analogy with market power measurements, based on the market share or the ability to charge a markup. Thus, the market share is the reason for the ability (power) to charge a higher price, which in turn consolidates the possessed power.

Williamson [46] stated that, "there are those who possess economic power and those who do not. The organization of economic activity is under the control of those who possess power. The reason why one mode is chosen over another is that it permits those who are in control to extend and perfect their power." This statement aligns with the notion of power as being quantifiable and indicates that there are strategies within the economic system to consolidate power. However, Williamson's statement does not reveal the source of power, whether there are strategies and/or possibilities to change power relationships, or if the exercise of power is positive or negative for sustainability.

In the following, we outline a more comprehensive understanding of power for analyzing and understanding market power. Indeed, ours is not the first attempt to extend the understanding of power within economics [41,42,64]. Although our literature review offered some interesting elements for the analysis of power, none of the works were comprehensive enough. On the other hand, we found that Foucault's understanding of power provided a comprehensiveness that allowed for the integration of other conceptions of power, and it was a suitable starting point for our analysis. Our goal was to understand power and its relationship to sustainability, and the understanding of power that we developed was influenced by this goal [34]. Nevertheless, we believe that the understanding that we have established will be helpful for the general analysis of power. In the following we will delve into these dimensions and their relationship to the economic system (see Table 1).

Nature of Power							
Freedom	Dependency Potential						
Origin of Power							
Capacity	Communication	Structure	Paradigm				
Manifestation of Power							

3.1. Nature of Power

We extended Foucault's nature of power to add two more elements: dependency, because it builds the antagonistic element to freedom [29], which has a measurable equivalent within economics, demand and supply elasticity; and potential, because it illustrates that power is not always visible.

The nature of power is comprised of fundamental elements without which it could not develop. Nevertheless, all three elements of nature of power—freedom, dependency, and potential—are interrelated and influence each other. Hence, the analysis of power suffers from the chicken-and-egg problem.

3.1.1. Freedom

The most important element for the exertion of power is freedom [30] of actors, which also lies at the heart of neoliberalism [31]. "At the very heart of the power relationship, and constantly provoking it, are the recalcitrance of the will and the intransigence of freedom" [30]. The free market economy organizes the exchange of commodities among sovereign market agents. Foucault [30] stated that the very nature of power is to influence someone's action within a set of options. Therefore, a deviation from the free market constitutes a situation in which market agents (who have freedom of choice) are influenced to act in a certain way. If there is monopoly (or monopsony) and insurmountable entrance barriers, the consequence is the market agents' infringement of sovereignty and freedom. According to Foucault, such a situation exhibits an extreme on the range of power manifestations, which is repression [63].

3.1.2. Dependency

Another crucial element of power relations is dependency. Emerson [65] pointed out that the root of power is control over something that another party wants. "[...] Power resides implicitly in the other's dependency" and defines "[t]he dependence of actor A upon B [as] (1) directly proportional to A's *motivational investment* in goals mediated by B, and (2) inversely proportional to the *availability* of those goals to A outside of the A-B relation" [65]. Within the market system, supply and demand elasticities indicated such dependencies, and Pigou [54] determined supply and demand elasticities to be a main precondition for the prevalence of market power. If both freedom and dependency are part of any power relationship, then dependency must never become so large as to eliminate freedom, a conclusion that Rezabakhsh, et al. [64] confirmed, pointing out that monopoly annihilates the consumers' power to exit the market and not buy anymore. Therefore, dependency has to be the area between perfect demand/supply elasticity and inelasticity (see Figure 1).

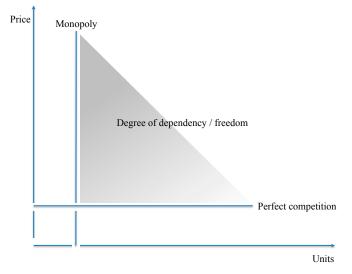


Figure 1. Illustrating the relationship between demand/supply elasticity and dependency/freedom.

3.1.3. Potential

For Foucault [30], "power exists only when it is put into action [...]." Still, one needs to distinguish between potential power and factual power [30,64,65]. In perfect competition, the power game may be played, but no party effectively exerts power over another, and mutual dependencies exactly weigh each other off. Even so, power struggles may still exist [65], either in relative balance to each other, or with one party powerful enough to suppresses any struggle [62]. Kaplow [66] similarly expanded on this notion of potential and factual market power, writing about market power and the actual (ab)use of that power. Market power is a function of both factors, whereas companies' market power does not necessarily result in the (ab)use of this power. Contrarily, a relatively low amount of market power and the actual existence of market power. A mismatch which may be due to the respective market definition taken [67], a non-trivial decision that has led to questionable anti-trust verdicts [68]. The distinction between actual and potential power is important, because not being able to measure or identify market power does not mean there is none.

Williamson [45] may have fallen into this trap: "The confusion to be avoided is to assume that nonstandard practices at the contracting stage invariably magnify power disparities in the initial stage. That needs to be shown rather than assumed." Again, just because one cannot show market power, does not mean that it is not there. Foucault [30] claimed the exertion of power is a process, which is part of every social interaction. Accordingly, we should start with the general assumption that some power struggle is in place, rather than assuming that it is not.

3.2. Origin of Power

We utilize Foucault's categorization of power because his identification of the sources of power goes beyond the quantitative elements [30,63]. Foucault referred to three sources of power: capacity, communication, and relations. Levy and Egan [69] developed a neo-Gramscian approach using three pillars of power (economic, discursive, and organizational strategies), which can be integrated into the origin of power. The critical point of their approach is understanding these pillars as strategies, which harness most power when coordinated into a super-strategy. White [42] differentiated between four different dimensions of power within the market system (state, association, market structure, and socio-cultural status), which can similarly be integrated within this dimension. The same is true for the sources of power (reward power, coercive power, legitimate power, referent power, and expert power) offered by French and Raven [70]. Finally, Lukes [62] differentiated between five different means to exert power: coercion, influence, force, manipulation, authority. Apart from these theoretical conceptualizations, Pulker, et al. [20] illustrated how such categories may be used in their analysis of supermarket power and human health. The categories they selected were drawn from Clapp and Fuchs [22], who distinguished between instrumental, structural, and discursive power. While this categorization has similarities to the one that we suggest, there are some differences in the specific integration of phenomena under a respective element (see Table 2). Pulker, et al. [20] extended the framework in Clapp and Fuchs [22] with "political legitimization." We agree with the need to add an element of legitimization; however, we do not reduce legitimization to the political. Instead, we amended this dimension with the element paradigm, taken from systems thinking. An illustration of the dimensions of power with the various elements is shown in Table 2.

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Table 2. Integration of literature within the dimensions of the power framework. ¹ Foucault; ² Emerson; ³ French and Raven; ⁴ White; ⁵ Levy and Egan; ⁶ Meadows; ⁷ Lukes; ⁸ Clapp and Fuchs.

Nature of Power ¹									
Freedom ¹			Dependency ²				Potential		
Origin of Power ¹									
Capacity ^{1,5,7}		Communication ¹		Structure ^{1,5,8}		Paradigm ⁶			
Reward power ³ , manipulation ⁷	Authority ⁷ Coercive power ^{3,7} force ⁷	Expert power, Information ^{3,7}	State 4,8	Discourse ⁵	Association ⁴	Market structure ⁴	Socio-cultural status ⁴	Legitimate power ³	Referent power ^{3,8}
Manifestation of Power ¹									

3.2.1. Capacity

Hindess [63] reported that power is usually understood as some quantitative substance, like abilities, capacities to do something, or the possession of something (compare with: [41]). From a purely economic point of view, market share can be listed as a key element, and is particularly important within the New Empirical Industrial Organization (NEIO) approach. Capacity is related to the size of an individual company or a group of companies within a market, which equips the organization with the ability to influence the market in certain ways [39,71].

Three out of the five sources of power identified by French and Raven [70] fit this element: reward power, coercive power, and expert power. The first two are related to the ability to exercise positive and negative reinforcement, and the third corresponds to the possession of an asset (here knowledge) that may equip someone with power. Lukes' [62] categories for the exertion of power (coercion, influence, force, manipulation, authority) similarly constitute different types of capacities, and indicate that an evident struggle does not always need to be present. For example, manipulation is a very subtle way to induce another party to act in a certain way. Foucault [30] acknowledged this element of the origin of power, but added two more elements: communication and structure.

3.2.2. Communication

According to Foucault [30], communication—not limited to language—is a means to transmit meaning. Communication is related to capacities as well as structures. Still, it should be understood as a separate source of power. As we have shown, expert knowledge is a capacity, but one that may become effective only through passing on or suppressing information. Or, as Foucault noted, changing the structure of the information flow also affects power balances. This aspect aligns with the neo-Gramscian approach of Levy and Egan [69], pointing to the ability to shape discourse in order to increase power. Also, manipulation, which Lukes (1974) identified as a source of power, is indeed related to communication. Indoctrination or persuasion require some means of communication. Advertisement is one example of how companies use various means of communication to influence consumers' behavior to their favor [26,72,73].

Economics also acknowledges the crucial importance of communication, where asymmetric information represents another market failure. Williamson [45] stated that the significance of market power is higher in labor and final product markets, because of the inherent problem of asymmetric information. Similarly, labels are a type of signaling that reduce information asymmetries. The more labels are institutionalized, the more they are connected to the structural element of power.

White [42] identified lobbying as one dimension of power (state) that constitutes a special type of communication that is aimed at influencing other entities in favor of the lobbyist. Moreover, lobbying is a clear example of where power transcends the economic realm, penetrating the political sphere [22].

3.2.3. Structure

Foucault [30] described power as embedded within a certain structural web of relationships. Economic theory also acknowledges the importance of structure, particularly Industrial Organization (IO), which focuses on the impact of structure on market power [39,74]. Other researchers have also recognized the relational character of power [69]. For example, Emerson [65] pointed out that power is not an attribute, but a relationship building upon mutual dependencies: "[...] these ties of mutual dependence imply that each party is in a position, to some degree, to grant or deny, facilitate or hinder, the other's gratification" (ibid). Both, Bardhan [41] and White [42] undertook investigations in the realm of power within economics, and both pointed to the structural (relational) character of power.

Three of the four power dimensions described in White [42] can be categorized under the structural element of the origin of power: "association," "market structure," and "socio-cultural status." Association may be related to unionization, but also to the development of common rules through private standards. According to White [42], "usurpation represents a counter-attack by

threatened or subordinated actors, such as workers or consumers, to improve their power within the market." The existence of unions is confirmation of power struggles within the system. Moreover, association may include legal/official groups and illegal ones, such as cartels. Describing the market structure dimension, White (ibid.) referred to market interactions as a political process, and therefore, no transaction within the market system can be seen, apart from power concerns. "Markets can thus be analyzed as political games in which outcomes are structured in terms of choices taken in the context of variable but structured asymmetries in the capacities of participants, which vary across specific markets and which may in certain contexts result in systematic exploitation through unequal exchange" [compare with 1,42]. Similarly, Clapp and Fuchs [22] emphasized the role of structure in the fight for power. They discussed corporate social responsibility (CSR), the role of labels and standards as a means by which corporations set the rules of the game, and thereby construct the market structure. Finally, socio-cultural status means that markets are embedded in a wider socio-cultural context with their own values and institutions, which necessitates the analysis of markets and market power within this wider context [69].

3.2.4. Paradigm

As we have discussed, power arises within a relational interaction that has a certain structure, which allows the flow of power to be dynamic [34,69]. Therefore, power is found within a certain system. But as Foucault [30] stated, "[...] there are also 'blocks' in which the adjustment of abilities, the resources of communication, and power relations constitute regulated and concerted systems." Thus, from systems thinking, we can gain another insight related to the origin of power. The question is, what makes entities influence other entities towards a certain direction? We suggest that entities (sub)consciously follow a particular paradigm. If that paradigm is to grow, entities will do everything in their power to influence others, in order to achieve growth. Meadows [75] proposed a list of 12 leverage points that are used to influence or transform a system. Among these, we can identify quantitative leverage points, which are those easiest to use, such as capacity. Thus, changing the market share may potentially influence the power balance. Other leverage points include communication, which is also an element of the origin of power, and those that are related to the structure of the system, or that are related to the relationship between the parties. Finally, leverage points relating to values or paradigms, which have the most influence on the whole system, are also the most difficult to use (see Table 3). For example, a system having growth as its paradigm will resist competing forces that aim to change this focus (e.g., growth versus de-growth).

The correlation between these leverage points and the elements of power gave us the insight that the paradigm was another element of the origin of power. We followed Meadows' idea, that the paradigm is the ultimate initiator of action [75]. The paradigm is also a normative force, and not only a source of power in terms of giving incentives for action. The neoliberal system, with its dictum of growth, not only provides the incentive to set actions that will increase the actor's power, but also legitimizes these actions. The two remaining sources of power identified by French and Raven [70]—"legitimate power" and "referent power"—can be placed here. Both correspond to reasons for why entities accept or even aspire to being ruled by some other entity.

Legitimacy gives permission not only to the exercise of power, but also to the means of this exertion [70]. The higher the degree of legitimacy, the more likely that coercion will be accepted. This effect is examined in criminology, where people's acceptance to obey police or military forces in order to maintain social order are analyzed [76,77]. On the other hand, people do not accept civilians, hurting others to make them obey. Expert power is categorized as capacity, since people must have certain knowledge, as well as the ability to pass it on. We point out that communication is linked with ability and structure, but it is also related to legitimacy. Not everyone is automatically understood as an expert, as certain criteria must be fulfilled to legitimize that status. The legitimacy, and thus the acceptance of expertise is what French and Raven [70] referred to as "expert power," a first-order influence in communication. The second-order influence in communication is the impact of repressed

or disseminated information, which Clapp and Fuchs [22] identified as "discursive power." Legitimacy also warrants structural changes. Not only do capacities serve the paradigm, but structures are also built to do so [78]. As the transaction cost theory case illustrates, market power may be accepted for the sake of increased efficiency; therefore, a change in the structure of the market will be accepted in order to increase certain capacities.

Including the concept of paradigm in the analysis of power also reveals the different levels of power, a superstructure (macro level) and a substructure (micro level). Paradigm is located on the superstructure, but unfolds on lower levels. Therefore, power is not an end in itself, but an instrument to achieve a higher goal. For example, in the capitalistic system, power is used to accumulate more capital. If capital were completely purposeless, no one would use power to gain capital. The scheme depicted in Figure 2 indicates how power works on different levels, and how these are interrelated, which helps to understand the directionality of the power dynamic. For example, Clapp and Fuchs [22] included the element of "instrumental power," which relates to lobbying. In our framework, lobbying is part of communication, but indeed it has influence at other levels. However, the critical insight is that all elements of power below the macro level (paradigm) are instrumental (see Figure 2).

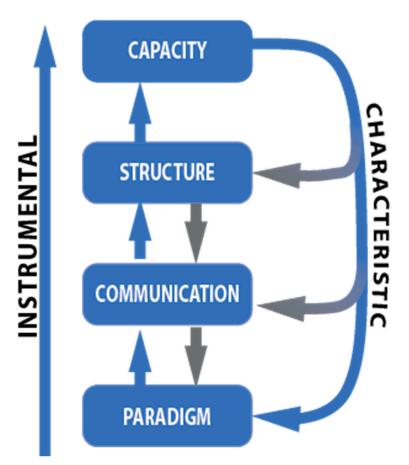


Figure 2. Relationship between the different levels of the origin of power.

We must point out that there is not one paradigm, but a predominant one among several that are struggling for domination [69,79,80]. From systems theory, we know that drawing the limits of a system is a matter of defining analytical limits, rather than identifying actual boundaries. Hence, the economic system is not separate from the environmental, cultural, or political systems. Therefore, the predominant paradigm may be challenged by emerging paradigms that are outside of the economic system (see Figure 3). The sustainability challenge may serve as illustration. As Colby [79] described, the biophysical reality may lead to the formulation of a new paradigm to challenge the current

economic system's predominant paradigm. For example, organic food, originally an initiative of farmers, was a counteraction to industrial agriculture, and could be seen as following the paradigm of sustainability. Over time, however, organic agriculture became conventionalized [81,82], and thus was made to fit within the neoliberal economic system [83]. Padel, et al. [84] illustrated the process of how values of one paradigm (organic agriculture) may be brought into alignment with the current paradigm. In the example of organic agriculture, an initiative of individual farmers was overtaken by big players who used the organic label to consolidate their position. Finally, governments may try to counterbalance such power struggles by creating a legal framework [83]. Springer [58] takes a cultural political economics perspective and frames neoliberalism as a discourse. A frame that resembles the dynamics between competing paradigms as outlined in Figure 3. He outlines the mutability of neoliberalism that has been born in its manifold implementations, due to the differing regional conditions and historic transformations that changing conditions made necessary [23,85].

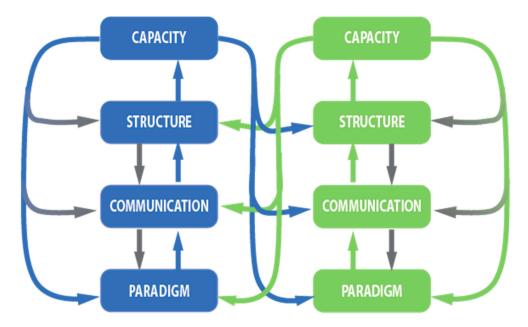


Figure 3. Power struggle between paradigms.

The predominant paradigm's defense of its position bares the danger that a system may become a self-operating entity [29–31,34]. Barry [80] described this danger: "[...] power is, on one hand, the power and struggle of ideas and, related to that, how those ideas that win or are dominant create the economy they prescribe. In other words, dominant framings or conceptualizations of the economy, such as neo-classical/capitalist economics, do not simply 'objectively' or 'neutrally' describe an economy that 'just is', but rather, actively prescribes and bring into being an economic system that is aligned with normative and ideological assumptions" (compare with [55,61]). Hence, paradigm not only exploits the other levels (instrumental), but each level that is below the macro level (paradigm) supports the maintenance of the system (Figures 2 and 3). The ability of the system to recreate itself, is based on its paradigm—increasing growth, calling for increased profits of companies. As market power can be a means to increase profits, market power is a logical result [86]. Korten [87] discussed this dilemma: "The problem is not business or the market per se, but rather a corrupted global economic system that is gyrating far beyond human control. The dynamics of this system have become so powerful and perverse that it is becoming increasingly difficult for corporate managers to manage in the public interest, no matter how strong their moral values and commitment."

A paradigm does need not originate from the economic sphere, but that is the case at present [31], and this reality necessitates once more a broadened understanding and definition of market power.

Even more so, if, as some argue [55,61], capitalism and market liberalization have been pushed by the interests of the capitalist class.

In contrast to other categorizations of power, we suggest that the elements of power are hierarchically ordered. Moreover, we argue that legitimacy has a source as well: the paradigm. According to systems thinking and Meadow's [75] leverage points, power has an ultimate source, or stated differently, there is a specific reason why all entities aim at becoming powerful and why they act in a certain way. Therefore, paradigm exploits communication, structure, and capacities to sustain itself. In that sense, power is an instrument, but it also is a characteristic that describes an entity's ability to reinforce the paradigm. Figure 3 depicts this self-operating mechanism. Capacities that are exploited as instruments to sustain the paradigm work not only within their own system, to improve communication and structure in support of the paradigm, but capacities also work within other systems to fight and to suppress other paradigms.

Element of Origin of Power	ement of Origin of Power Leverage Point			
Capacity	Constants, parameters, numbers	Low		
Capacity	The size of buffers and/or stabilizing stocks, relative to flows			
Structure	The structure of material stocks and flows			
Communication	The length of delays, relative to the rate of the system change			
Capacity	The strength of negative feedback loops, relative to the impacts that they are trying to correct against			
Capacity	The gain around driving positive feedback loops			
Structure/Communication	The structure of information flows			
Structure	The rules of the system			
Capacity	The power to add, change, evolve, or self-organize system structure			
Paradigm	The goals of the system			
Paradigm The mindset or paradigm out of which the system arises				
Paradigm	The power to transcend paradigms	High		

Table 3. Connection between leverage points and the elements of the dimension 'origin of power'.

3.3. Manifestation of Power

The original intention of exerted power is not necessarily visible in the final outcome, as involved or affected actors can react in different ways [34]. Foucault [30] understood power as a force that is expressed through action, which "[...] does not act directly and immediately on others." Not only can the outcome of the exertion of power be elusive, the exertion itself may be disguised. Lukes [62] pointed out that actions of power may be unconscious or unintended, because the actors may be unknowingly trapped within a system, making them the media that consolidate this very system. Accordingly, power can be difficult to identify, let alone measure.

The manifestation of power is not simply its quantitative measurable effect, such as a markup. Rather, market power also may have other subtler effects (such as manipulation via advertisement, or lobbying). Therefore, econometric models may not suffice in the task of identifying and measuring market power. To determine the capacity element of the origin of power, as well as the dependency of the nature of power (understood as demand/supply elasticity), quantitative methods may indeed deliver useful proxies; however, as explained, within each dimension of power, market power has several elements that must be considered to fully capture its occurrence.

One main difficulty in capturing market power solely in quantitative terms may be the tendency of market power to remain latent, which is a general characteristic of power, according to Lukes [62]. Power is expressed not only by evident struggle, but also by the absence of struggle. This latency may stem from the potential hazardous consequences of power struggles that serve to silence the opposition, even in its onset, or from the ability of those in power to shape people's interests, and thus prevent opposing ideas or desires from emerging [22]. The way in which an actor accumulates power may as well be characterized by silence. Pulker, et al. [20] described this element in their analysis of supermarket power, in which supermarkets have achieved their power through consumers' and governments' inaction. Foucault [30] stated that the goal of power is the manifestation of power itself. Nevertheless, one manifestation of power may be the ability to use disguises. Blunt manifestations of power run the risk of opposition, and in turn, more struggles for power and potential loss of power. The less than obvious market power has the chance to persist, not the least because anti-trust legislation needs evidence to be enforced.

3.4. Definition

In economics textbooks, market power is described as an agent's power to influence market prices [39,88,89], but this is not the only effect that market power may have [90]. Pointing out the many blind spots and problems in market power research, Kaplow [66] stated that the actual channels of market power are understudied.

Indeed, a clear definition of power that assists in easy identification and quantification of market power would be convenient. However, any such definition would most probably fall short in capturing power's subtler elements. Therefore, we support a description of power that follows Foucault, who emphasized the structural (qualitative) elements of power. In this respect, "[...] power is seen as a matter of instruments, techniques, and procedures employed in the attempt to influence the actions of those who have a choice about how they might behave"[63].

Based on existing definitions and perceptions of power, we suggest the following definition:

Power is a characteristic that exists only in the relational interaction of free entities that are mutually dependent. The relational character of power gives it a dynamic quality, as it is continuously subject to change. Each interaction potentially allows changes in the extent of freedom, the extent and direction of dependency, and in the ability of parties to employ capacities and communication. Consequently, these changes may alter the whole structure, the whole power relationship itself, or even the paradigm that governs the direction of power. In the presence of actors' conflicting interests, but depending on the actors' consciousness of these conflicting interest, power is a characteristic that is evident or in disguise. Power serves the diffusion or the maintenance of a paradigm, and consequently, manifests as the characteristics of agents who are (1) in a struggle to influence another party in favor of their own preferred paradigm, (2) in a struggle to escape another party's influence, or (3) without a struggle because the predominant paradigm has blinded them to their innate interests.

In accordance, we define market power:

Market power is a characteristic that unfolds through the relationships of mutually dependent and free entities. Market power is constantly changing due to the dynamic character of relationships. Each interaction allows a recalibration of market power. The origin of market power lies in a predominant paradigm, by which it aims to support by exploiting communication, structures, and capacities. Neither entities' actions nor their effects are limited to the economic system. At the same time, power struggles within the economic system are affected by (superior) systems. The predominant paradigm of the (economic) system governs entities' actions, and these activities strive to increase and/or stabilize entities' own market power.

4. The Power of Paradigms

Now that we have provided a discussion and definition, we expand to some problematic elements of (market) power. First, we discuss an implication from transaction cost theory. We pointed out that

market power might be viewed as being positive, based on its contribution to a certain superordinate goal. However, there is a rub to this positive view. Next, we broach the issue of legitimacy of power, elaborating on governmental intervention, and finally we elaborate on the importance of paradigm to the effect of power on sustainability.

4.1. A Problematic Side of Market Power

Considering the transaction cost theory's contribution to an analysis of market power, we agree that market power may be seen as positive if the goal is to increase efficiency of transactions, and market power fulfills that goal. However, we want to briefly share some thoughts about where such a simplistic way of thinking may lead.

Bardhan [41] stated that the direction in which the dominator pushes the dominated actor does not need to be harmful. He used the example of parents who make children act in a certain way. Indeed, usually parents only want the best for their children. We could argue that a company with market power may be like a well-intentioned parent, but that comparison does not allow for the sovereignty of consumers. Elucidating the origins of capitalist theory in the era of mercantilism, Bassiry and Jones [91] wrote: "The political economy Smith was advocating, was thus based on maximizing consumer/citizen choice in both economic and political spheres. Smith's paradigm shifted the institutional emphasis from centralized to decentralized structures, from authoritarianism to representative democracy, from monopoly to competitive markets, from autarky to international interdependence through a spatially expanding division of labor, and from producer appropriation of societal surplus to consumer sovereignty." Therefore, the argument for market power as a solution to the sustainability challenge is a return to mercantilism. Interestingly, according to Bassiry and Jones [91], Smith's greatest fear concerning the adverse effects (dysfunctionality) of his theory was the formation of monopolies. Apart from the inefficiencies that they would cause, Smith foreshadowed the political impact that such economic players could gain. Accordingly, Smith realized the inevitability of market failure, making governmental intervention necessary.

Stopping the discussion with the statement that market power can be beneficial for sustainability simply because an econometric model may support this [92], would be quite shortsighted [93]. Ethics must be considered, particularly when we elaborate on sustainability, which is a normative concept, and therefore, calls for addressing ethical questions. Smith's considerations were based on deep ethical concerns. Bassiry and Jones [91] pointed out that Smith's fears coming true, makes the ethical foundation of the contemporary economic system questionable. To go a step further, we realize that the fact that some social scientists prefer not to deal with ethics, and would rather try to fix one problem with another problem, which legitimizes the problem, is the manifestation of a lack of an ethical foundation among those researchers whose research could impact every human's life.

4.2. Governmental Intervention

The ostensible shift of power from governments to corporations induces people to call for the restructuring of power relationships. "To reclaim the power that a rogue global economy has usurped from people and communities, we must press for sweeping political campaign reforms to get big money out of politics. We must re-establish that a corporate charter is a privilege—not a right. It is issued by government to serve a public purpose, and it is the inalienable right of the sovereign people to withdraw it any time they decide a corporation is not serving that purpose. We must also break up the largest corporations to restore the conditions essential for the efficient function of competitive markets. And we must return to nations and communities the right to set their own economic priorities and to regulate commerce within their jurisdictions" [87]. This power struggle is not only one that is related to market power, but also one that is related to the power of markets. Although fully elaborating on power at this level is beyond the scope of this paper, we point out that Foucault's work offers interesting and relevant insights. Foucault argued that competition as the ruling idea of neoliberalism needs governmental protection from the tendency of markets to concentrate ([31],

compared with [53]). As we have pointed out, a main task of governments is to establish the freedom of market agents; however, governments' superiority in steering society is not assured.

Buchanan [94] for example, pointed out that the marketplace may be the best form of direct democracy. Elliott [43] reviewed and analyzed Adam Smith's understanding of power. His research illustrated that inequalities make the installation of a political system necessary. If this is true, then governmental intervention will never succeed in eliminating market power. And finally, Pigou [54] pointed out that governments are also prone to unethical behavior: "The case, however, cannot become more than a *prima facie* one, until we have considered the qualifications, which governmental agencies may be expected to possess for intervening advantageously. It is not sufficient to contrast the imperfect adjustments of unfettered private enterprise with the best adjustment that economists in their studies can imagine. For we cannot expect that any public authority will attain, or will even whole-heartedly seek, that ideal. Such authorities are liable alike to ignorance, to sectional pressure and to personal corruption by private interest." Pigou [54] continued to point out that governments are not perfect, and that corrupt politicians can be open to lobbying. The extent that corruptive tendencies can be overcome depends on the design of the political system (see for example: [95]), which brings us back to the importance of structure for power relationships. In this regard, Ims [86] indicated that a voting system in which the majority automatically has all the power may not be ideal to achieve sustainability.

The ability of governments to regulate social life may be corrupted not only by the weaknesses of the human beings who form governments, but by the economic sphere. "Neoliberalism constitutes a new mode of 'governmentality,' a manner, or a mentality, in which people are governed and govern themselves. The operative terms of this governmentality are no longer rights and laws but interests, investment and competition" [31]. Read [31] also pointed out the tragedy of being trapped in a dominant system without an external reference point for correction [see also 55]). "Thus, while it is possible to argue that neoliberalism is a more flexible, an open form of power as opposed to the closed spaces of disciplines, a form of power that operates on freedoms, on a constitutive multiplicity, it is in some sense all the more closed in that as a form of governmentality, as a political rationality, it is without an outside. It does not encounter any tension with a competing logic of worker or citizen, with a different articulation of subjectivity. States, corporations, individuals are all governed by the same logic, that of interests and competition" [31]. Indeed, this statement relates to the problem of a self-operating system, as outlined above.

There may be two reasons for why governments are not potent enough to counterbalance market power. First, market agents may be strong enough to influence governments to their favor [55]. Second, the economic system absorbs all spheres of human life, which then subordinates the government to work as an agent of the economic system.

4.3. Get the Paradigm Right

Whether actions in the market are favorable to the general society depends on the values of the actors. For example, Rothbard [96] said, "When people are free to act, they will always act in a way that they believe will maximize their utility, i.e., will raise them to the highest possible position on their value scale." The question is: What are their values? The same is true for companies. If market power is used solely to increase their wealth to the detriment of society, then market power is indeed negative. But if market power has no harmful effects, it need not be demonized. Transaction cost theory allows such an approach: While focusing on the efficiency of transactions as the overarching goal, an emphasis can also be put on the contribution to sustainability. If market power is a means to support sustainability, then market power could be something that is fairly positive. Therefore, we must understand power as an instrument that is used to achieve an overarching goal.

This conclusion and the statements in Section 4.1 may appear to be contradictory; however, Section 4.1 illustrates that the promotion of market power for the sake of a transition to sustainability does not align with neoliberal economic theory. Despite that fact, market power per se does not need to be demonized.

The utility discussion usually conceals or prevents an exploration of the conditions under which the market system may generate the best outcomes for everyone. But according to Smith, overall welfare increases not by magic, but by a (higher) power pushing people to act according to certain moral standards [97]. Human beings' self-interest is guided by moral guidelines, and these moral guidelines make the difference between a positive or negative effect of market interactions on humanity [53,78]. Power does not have to be negative; it can be repressive or productive [34]. An entity may have the power to change the world for the better [98].

If sustainability were the new predominant paradigm, then we would need to ask how to achieve this goal. Is it possible to maintain the status quo and simply green the system [78,99]? Or do we need a new system altogether [80]? Will subjects create a critical mass to bring about the needed change through self-regulation? Or will governments create the conditions for such a transformation? Or will companies with enough power be the leverage? Will powerful companies support the transformation or block it? The future will show whether a sustainability transition will occur and which actors will steer the change.

5. Analyzing the Relationship between Market Power and Sustainability

The extended definition of market power presented here allows for not only a comprehensive analysis of market power, but also a linkage to other concepts, such as sustainability. In this final section, we briefly elucidate on how an analysis of the relationship between market power and sustainability could be undertaken, and how the theoretical foundations outlined in this paper can help researchers and practitioners.

First, sustainability may be understood differently, depending on the perspective. Discussions on the definition of sustainability can be found elsewhere [37,100–102], but an analysis must take the ambiguity of the concept into account. For example, the relationship between market power and strong sustainability may be different to the relationship between market power and weak sustainability. The same is true if one understands sustainability merely in economic terms, which is only one aspect of sustainability. Therefore, researchers must first clarify the meaning of sustainability. In addition, scholars may study the effect of power on the discussion and interpretation of a sustainability concept or on the aspects of sustainability itself. Finally, any analysis may be framed as a one-way street in which power is the only active force, or as a two-way street in which power itself is exploited in the struggle of opposing paradigms.

Regarding the analysis of power, we draw on the different dimensions and their respective elements that we have outlined. Based on Foucault's [30] guidance on how to analyze power, we suggest examining the following points:

- Dependency—Dependency can be expressed in demand/supply elasticities, which are related to the substitutability of commodities. In a nutshell, this means the identification of (missing) options on the market.
- Capacities—What are the abilities of the market players? For example, (how) can market players
 deter others from entering into the market? Or can they foster the actions of other market players?
 Do certain market players have more of something, such as expertise? Moreover, here we locate
 quantifiable elements, such as market share (NEIO approach).
- Communication—Typically, communication relates to lobbying, but it also can include the introduction of labels. More generally, issues of asymmetric information can guide investigations here. In addition, the influence of market players on discourse can be investigated.
- Structure—Structural elements which are related to communication are standards and labels. However, everything related to legislation, institutions, or the general rules of the game can be analyzed under the market power element. Such as, how do certain institutions support the occurrence of power imbalances? Further, are these institutions the expression of power imbalances themselves? Finally, elements of market structure as understood in IO theory should be considered here.

 Paradigm—What is the overall imperative for action? This element becomes particularly relevant when linking with other concepts, such as sustainability.

Indeed, these avenues for investigation do not substitute for orthodox market power investigations using econometrics, but rather should complement them. Foucault [30] also suggested looking at the effectiveness of entities' actions. For example, having a large market share may not be effective for one company, but may well be for another [69]. Alternatively, differentiation may increase the market power of one company, but not of another. Thus, the effectiveness of an action may decide whether or not it is successful, compared to the actions of the antagonist. Other elements, such as structure, might influence the effectiveness of the actions. Therefore, it is necessary to take as many elements as possible into consideration when analyzing market power.

The effect of sustainability can be related to each of the above-mentioned points. For example, an investigation could aim to discover whether market power leads to greater product differentiation, or to the introduction of labels, standards, or institutions that affect sustainability. Pulker, et al. [20] undertook such an analysis, which was focused on the market power of supermarkets and the effect on consumer health. Smythe [103] analyzed the process of developing intentional labels within the World Trade Organization (WTO) for food products containing genetically modified organisms (GMOs), which shed light on lobbying (communication) and labeling (structure). Moreover, GMOs are a highly contested topic due to different paradigms that supporters and opponents follow, and it is also related to sustainability (e.g., social sustainability: the right to food [104] versus food security [105]). Following the framework that we have outlined, researchers could study how power affects sustainability that is channeled through the different elements of power, depending on the sustainability perspective taken. Fuchs, et al. [106] undertook an analysis of retail power, relating it to sustainability, using two different elements of power. They pointed out the relevance of concentration on environmental and social sustainability, or the impact of structural power on foreclosing other players, and thus, on consolidating their market power. Their analysis indicated that the effect of power on sustainability can be a double-edged sword. The analysis of Senker [26] is an interesting example of how the framework developed in this paper could be used. He discussed how power contributed to the neoliberal economic system becoming and remaining the predominant system (see also [55]). Senker's analysis is an example of how the exercise of power at the microlevels supports the macrolevel, and with this the dominance of the neoliberal system. A system that, as he portrayed it, affects sustainability negatively in many ways. Nevertheless, there is no simple answer to the question of how market power affects sustainability. Thus, an analysis of the relationship between power and sustainability needs to embrace a comprehensive perspective on the matter. A shortsighted analysis could result in biased conclusions, which may adversely impact corporate and political decisions.

The concept of paradigm is particularly important to an analysis of the relationship between market power and sustainability, as it could be questioned whether sustainability is a strategy to fulfill another predominant paradigm, or whether it is itself a paradigm vying for domination [26,69]. If so, it could be questioned as to whether companies with market power are better supporters in this struggle than companies without market power.

Following the example of organic farming that has been sketched above, the developed framework can be used to analyze how the dynamics between market power and sustainability play out in a transformation process that aims at overhauling our current system towards increased sustainability. Such an analysis would also need to reflect on the existing body of transition theory and transition management [107–111].

This short outline of possible avenues for investigation illustrates that the comprehensive definition of (market) power that we have developed can help to illuminate the matter itself, as well as the relationship between market power and sustainability from different perspectives.

6. Conclusions

In this paper, we amended the understanding of market power provided in orthodox economic theory. With Foucault's work as the framework, we were able to include other theoretical discussions of power, and to integrate the economic view, illustrating that market power is more than market shares and markups. We have offered definitions of power and market power that are conceptually concrete, but allow flexibility for the actual analysis of (market) power.

The usefulness of the conceptualization of (market) power that we have presented must be tested through further research, not only through case studies, but through developed qualitative and quantitative methods, and new indicators to identify (market) power. We have pointed out, however, that the manifestation of (market) power can be very subtle and diverse, which is why a fixed set of methods and indicators may not cover (market) power comprehensively. Thus, we do not understand this paper as an end-point, but as a starting point for further investigations.

The importance of an amended understanding of power is exemplified by the call of the European Parliament to target unfair trading practices, which are not covered by antitrust legislation. Therefore, an amended understanding of market power may support policymakers who seek to tackle subtler types of harmful market power.

In addition, as we have discussed the importance of the ethics underlying paradigms governing actions, we call once more for an overdue and thorough deliberation of "our" values. Consequently, we must ask ourselves whether the overall paradigm aligns with these values, and/or whether the system governs us.

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