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ORIGINAL PAPER

# Markets as dualistic, semi-decentralized organizations

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**Abstract**
The theoretical ideal of a competitive market is generally assumed to separate organizing from trading, in an implicit dualism. Traders sell or buy within the market but do not organize it. This paper proposes an alternative, more realistic conceptual scheme based on duality, in which organizing and trading are distinct but intertwined. While the exchange of property rights is overseen centrally, many details of market trade are decided locally by traders. Producers and retailers may arrange the trading venue, specify the items traded, set and publish prices, provide information, and transport goods. They cultivate relationships with customers, recasting the pattern of trade and the social structures that underlie the market. Such dualistic, semi-decentralized organizing generates other dualities, including stability-change and continuity–creativity. A duality perspective can encompass the complexity of markets, as well as illustrate the numerous ways they may evolve.

**Keywords** Markets · Organization · Duality · Complexity · Evolution

**JEL Classification** B52 · D40 · L11 · L14

## 1 Introduction

The organizing of markets is often neglected by economists but has occasionally been noticed. Institutional economists have pointed out that market trade occurs within an organized institutional framework and could not exist otherwise (Lowry 1994; Rosenbaum 2000; Dolfsma et al. 2005; Hodgson 2008; Prasch 2008, Part I). Without property rights and rules for their voluntary transfer, any sustained exchange would be unfeasible. The need for prior organizing is acknowledged when markets are defined as "organized and institutionalized exchange" (Hodgson 1988, Chapter 8, 2008; Adams and Tiesdell 2010; Jackson 2019b, Chapter 1). A market must be prepared in advance and does not appear spontaneously.

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Market organizing has also been addressed by economic sociologists and organization theorists, who have studied how markets arise and operate (see, for example, Lie 1997; White 2002; Swedberg 2003, Chapter 5; Fourcade 2007; Beckert 2009; Ahrne et al. 2015; Brunsson and Jutterström 2018; Brunsson 2019; Aspers et al. 2020). There may be no single organizer, and traders themselves may set prices, brand products, provide information, and nurture relationships with other traders. Organizing and trading are mingled, so that central bodies only partially organize the market and traders fill the gaps (McMillan 2002, Chapter 1; Redmond 2010; Ahrne and Brunsson 2011; Brunsson 2019). Because organizing is spread across various agents, with few labeled as organizers, it is easily overlooked.

Economic and sociological literatures on market organizing differ in their emphasis. Institutional economics has followed John Commons (1924) in examining the legal foundations for market trade, though it has said less about how markets emerge and how trade is arranged. More recent economic literature has gone further, to consider the practical functioning of financial and other markets (examples are Orléan 1999, 2014; Revest and Sapio 2013, 2019). Economic sociology has stressed the local detail of how traders interact, with networking and partial organization by various agents (Baker 1984; Lie 1997; White 2002; Ahrne et al. 2015; Brunsson 2019; Aspers et al. 2020). Attention is devoted chiefly to particular cases of market trading, rather than the institutional background. Some strands of economic sociology have, nonetheless, investigated the structural basis for markets, notably in field theories (Fligstein 2001; Bourdieu 2005). Along with differences of emphasis, the economic and sociological literatures are separated by disciplinary boundaries and seldom collaborate or cite each other.

The current paper builds on these literatures and puts them within a novel conceptual scheme. In the theoretical ideal of perfect competition, trading should be pure and separated from organizing, to give a dualism. An alternative conception of markets, set out in the following discussion, regards organizing and trading as being intertwined, tied together in a duality (Bhaskar 1993, Chapter 2; Reed 1997; Jackson 1999). Markets do have formal organizing bodies, but many are not designated as such and take part in selling or buying. Real markets are best described by organizing–trading duality, which captures how traders reshape markets and how some but not all market organizing is decentralized. Portraying markets this way can illuminate issues such as the problems of regulation, the diversity of markets, their evolution, and their apparent contradictory features.

"Section 2" deals with the main tasks in organizing a market and whether they are centralized. "Section 3" explains the conceptual scheme of organizing-trading duality. "Section 4" looks at examples in actual markets, and "Section 5" considers implications for the study of markets. "Section 6" makes concluding comments.

## 2 Organizing markets

The word "organization" has no agreed meaning. A widespread view, consistent with everyday usage, is that an organization is steered by agents who select its goals and determine its internal hierarchy and procedures (Rowlinson 1997, Chapter 4; Daft 2021, Chapter 1). It has goal-directed agency and may be a legal agent in its own right. Formal, hierarchical organization has been differentiated from markets in a markets-or-hierarchies contrast, sometimes with networks as a hybrid case (Williamson 1973, 1975; Thorelli 1986; Thompson et al. 1991). Other meanings of organization are also discernible—it may refer to the process of organization, as well as to the outcome of this process.

For the sake of clarity, we can distinguish three senses of organization: "organizing body" refers to a formal organization with explicit goals and goal-directed agency, as with firms or governments; "organizing" refers to the process of organization, which could be distributed among several organizing bodies; "organized result" refers to the outcome of organizing. All three senses have relevance for markets. A market typically has several organizing bodies, some involved in trading, and the process of organization is essential to the sustenance of trade. The market itself can be seen as the organized result of these efforts. Although it does not have its own goals or goal-directed agency, it is the outcome of organizing by goal-directed bodies.

The organizing bodies may have multiple goals, some geared to public service, others serving private interests, including profit if the body is commercial. By helping to organize a market, however, every organizing body must want to facilitate trade and increase its volume. While the market as an organized result has no goals, its organizing bodies have at least one shared goal in promoting trade. Beyond this, the details of organizing are variable.

Aspers et al. (2020) argue that markets are fashioned through organization, mutual adjustment, and fields. Organization comes from an overt organizing body that runs a market on behalf of others who wish to trade. The organizing is visible, as in a stock exchange, but liable to be incomplete. Mutual adjustment happens when there is no single organizing body and the market emerges from partial organization by producers or retailers (Chamberlin 1933; Robinson 1933; White 1981, 2002). Organizing is dispersed across the major participants who adjust to each other. Fields envisage a wider origin for markets, from the social context of capital accumulation, production, power, and commerce: an understanding of market organization must heed the economic and social landscape (Fligstein 2001; Bourdieu 2005; Beckert 2010; Fligstein and Calder 2015). Details of any particular market will depend primarily on organization and mutual adjustment, yet they in turn are contingent on the field.

Institutions too have no agreed definition, but usually refer to rules, roles and procedures (formal or informal) as a structured setting for behavior (Neale 1987; Hodgson 2006). Unlike an organizing body, they have no goal-directed agency and form an impersonal structure within which agency is exercised. An organizing body creates institutions through the procedures followed by its members and participants. For market exchange, the organizing bodies of the legal system implement the roles of seller and buyer, which have certain rights and responsibilities. These roles are linked, as a seller cannot sell without a buyer, and yield a social structure of interconnected roles that exist independently of the role occupants (Lawson 1997, Chapter 12; Jackson 2007; Sayer 2010, Chapter 3). Any market trader must occupy the role of seller or buyer and respect the rules of trading. Markets have both institutional structures to support trade and organizing bodies to oversee the institutions.

Some of the organizing is centralized and external: it is concentrated among a few dedicated agents who do not trade and stay outside the market. The rest of the organizing is decentralized and internal, spread out across numerous agents, many of whom have entered the market as traders. Table 1 summarizes the main organizing tasks in a market. The first five cover the legal foundations for market exchange. Property rights must be defined and maintained, since exchange implies agreement on transfer of property. Trading contracts require oversight, through contract law distinguishing between voluntary (legal) and involuntary (illegal) transactions. Regulation of trade will be needed and may have to be tailored specifically to areas such as medicine or finance. Standards must be defined and enforced, with penalties for misconduct. These tasks come to the fore in trade disputes and have a low profile when trading goes smoothly. They are normally centralized and external, carried out by organizing bodies that stand apart from the market. Exceptions are possible, as in the historical cases where decentralized regulation by traders has emerged and proved workable (Greif 1992, 1993). For most trading, though, regulation has been conducted externally.

The five organizing tasks in the bottom half of Table 1 cover the practicalities of how markets operate. A trading venue (physical or virtual) has to be arranged, allowing trade to go ahead at a declared place and time, and the item being traded has to be specified and known to potential traders. Market prices must be set and published as a guide to the terms of trade, and reliable information on products and prices is necessary for sound trading decisions. Goods must be transported to and from the trading venue, or between the locations of seller and buyer. These tasks are often decentralized: sellers may arrange the trading venue, differentiate and brand their products, set prices, and convey information.

Markets have various organizers. The organizing bodies of the legal system oversee the formal setting for voluntary exchange of property rights. Some markets, such as stock exchanges and auctions, have further organizing by a specialized body assigned to promote competitive trade. Other markets, such as those

**Table 1** Organizing a market

| Main organizing tasks | Performance of organizing tasks |
|---|---|
| Defining and maintaining property rights | Centralized, external to the market |
| Overseeing trading contracts | |
| Regulating trade | |
| Defining and enforcing standards | |
| Dealing with misconduct | |
| Arranging trading venues and dates | Decentralized, internal to the market |
| Specifying the items traded | |
| Setting and publishing prices | |
| Providing information | |
| Transporting goods | |

for manufactured goods, have implicit, piecemeal organizing by producers/sellers. Although markets require organizing, some of it may be undertaken by agents viewed as traders and not labeled as organizers. Much market organizing is dispersed, and untraceable to a single external or internal agent.

## 3 Dualism and duality of organizing and trading

Under perfect competition, participants in a market are assumed to be pure traders. The market already exists as a setting for competitive trade, without any contribution from the traders, implying dualism of organizing and trading. Dualism as a philosophical concept denotes the separation of two items through a binary contrast that arouses tensions and opposition (Dow 1990; Sayer 2010, Chapter 1). Here, the conceptual scheme of dualism divides market organizers from traders. Organizers build an arena for trading, but do not trade. Traders sell or buy competitively, but do not organize the market.

Tacit dualism reflects the traditional idea of a market as a location for trade. The market then has prior existence as a place where traders come together to make commercial transactions. Historically, public or other bodies have authorized and regulated markets, acting as visible organizers. In late-medieval England, for instance, from the thirteenth to the fifteenth centuries, trading occurred in "market towns" or "market places" with the permission of the Crown or relevant local authorities (Postan 1972, Chapter 12; Britnell 1981; Casson and Lee 2011; Davis 2012). Interference by traders in this organizing was disallowed, so the organizers and traders were kept apart. Perception of markets as a pre-arranged location for trade has endured in modern usage, stoking the imagery of dualism.

Neoclassical economic theory, with perfect competition as its benchmark, encourages implicit dualism. The neoclassical model of a perfectly competitive market, as originally drawn up by Alfred Marshall and Léon Walras, was based on stock exchanges organized formally by specialist authorities (Aspers 2007; Ahrne et al. 2015). Competitive trade was made possible by prior organizing of the market. This has been forgotten in much subsequent economic theory, which dwells solely on rational trading behavior. Despite the silence about organizing, it is separated from trading in neoclassical theory and implicit dualism pertains. Economic theorists often relax the perfectly competitive ideal, yet it has been embedded in the teaching of economics and bears upon how markets are apprehended.

A market with organizing-trading dualism would have the two layers in Fig. 1. On the top layer come the organizers, who perform organizing roles that map out the physical and contractual terrain for voluntary property transfers. As non-traders, they are external to market trade. Typical organizing roles are the oversight of the property and contract law that delineates voluntary exchange, the regulation of trade, and the provision of information about prices and goods. On the bottom layer come the traders, who enter the market and perform seller or buyer roles. The roles are vacated when the transaction is finished, to be reoccupied when the next transaction is made. With open access, a market has a changing population of sellers and buyers, some trading frequently, others rarely. Both organizers and traders stick

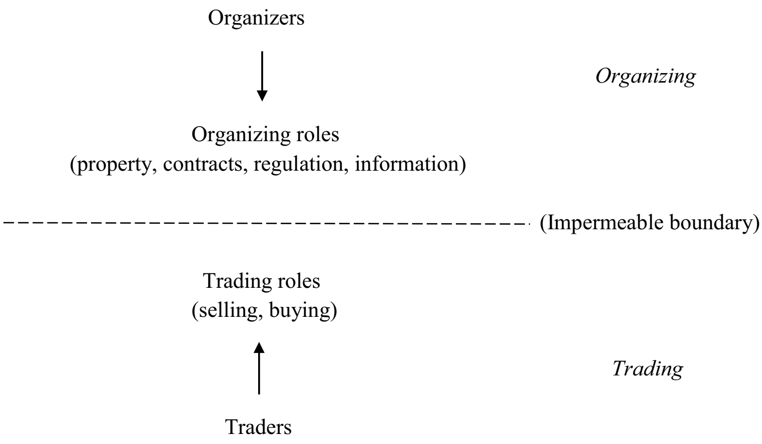


**Fig. 1** A market with organizing-trading dualism

to their specialized roles and never wander outside them. The dualism of Fig. 1, if rigorously applied, would separate organizing and trading across an impermeable boundary.

Organizing–trading dualism seems attractive as an ideal. By refraining from trade, organizers can be neutral referees, maintaining a balance between sellers and buyers. Traders stay away from market organizing and do not try to use it for their own ends. Separating organizing from trading can apparently preserve the even treatment of market participants. Evenness has been elusive in practice. Much organized trade, termed a market in everyday language, does not conform to dualism—traders are involved in organizing the market, so they breach the boundary between organizing and trading. Whatever its theoretical appeal, dualism was seldom translated to actual markets.

Figure 2 shows a market with organizing–trading duality. External organizers fulfill the core organizing roles that govern the legal basis for voluntary exchange. Although these roles are supposedly kept apart from trading, the separation is not always watertight: traders may, for instance, assist in the development of standards, lobby public authorities, and aim to influence regulation. Local details of trade in each particular market are guided by sellers and buyers who perform subsidiary organizing roles that embrace marketing, advertising, pricing, branding, and related activities. Because certain traders are now internal organizers, the boundary between organizing and trading in Fig. 2 is permeable and we have duality, not dualism. Along with external organizers and pure traders, there is a third category of traders-cum-organizers.

In reshaping the market, traders-cum-organizers add subsidiary trading roles, besides the core trading roles of seller and buyer. If, for example, producers/sellers forge roles of "regular provider" and "regular customer", then they bring about a bespoke sector of the market. The new roles bind producers/sellers with buyers as trusted trading partners, in a formalized relational exchange. These roles are voluntary, and their impact rises with the number of traders choosing

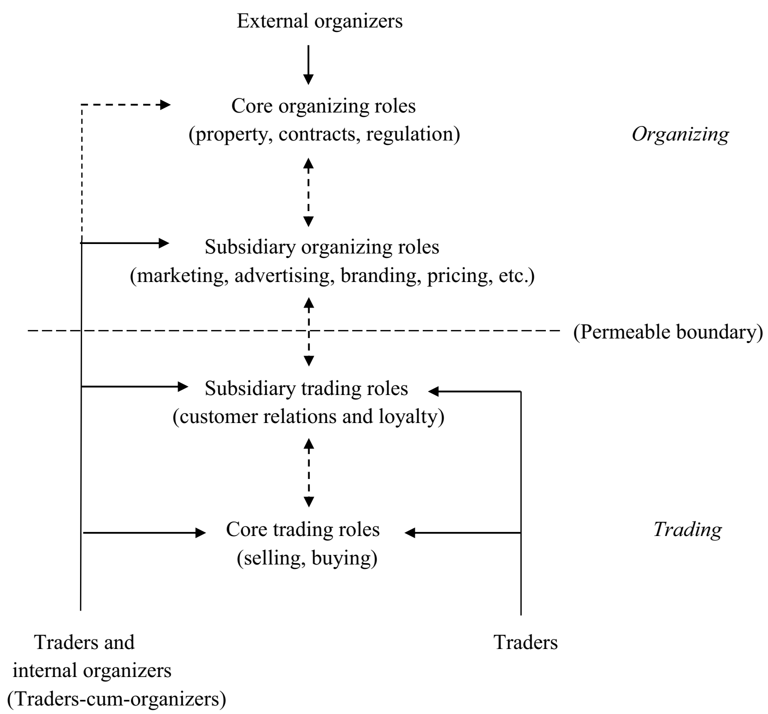


**Fig. 2** A market with organizing-trading duality

to fulfill them. The market as a trading space rests on core seller/buyer roles, but many details of the trade are fleshed out by subsidiary ones.

Building new roles is a touchstone of modern marketing. Not content to trade anonymously, firms trace regular customers and cultivate relationships with them (Morgan and Hunt 1994; Newell 2001; Bauer et al. 2002; Jackson 2019a; Kotler et al. 2021). Relationship marketing, analyzed at great length in the management and marketing disciplines, has become ubiquitous (Gummesson 2008; Godson 2009; Kumar and Reinartz 2018; Buttle and Maklan 2019). Marketers use information technology to track down frequent buyers and compile a database, enticing buyers to join loyalty schemes in return for discounts and special offers. Buyers lose their anonymity and enter a formal bond with the seller. The traders communicate with each other, in a normalized and institutionalized relationship, without meeting in person to negotiate trade. Such trading relations, at the heart of non-price competition, have been described as "domesticating" the market, so as to tame and control it (Arndt 1979; Redmond 1989). A firm will exceed the core seller role and make competitive gains by recasting the pattern of trade.

Both centralized and decentralized components of market organizing are prominent in Fig. 2. Central, external organizing is present through the organizing bodies of the legal system that implement the core seller and buyer roles, on which any market must depend. Local, internal organizing comes from the traders who forge subsidiary organizing and trading roles, for themselves and others. Markets are semi-decentralized, as they mix the two types of organizing.

How can this dualistic, semi-decentralized organizing be explained theoretically? In a transaction-cost argument, duality may have efficiency advantages over dualism. Ronald Coase (1937) suggested that firms with hierarchical management arise wherever they yield lower costs than trading, irrespective of the alleged benefits of perfect competition. The argument, first adopted to justify the existence of firms, can extend to institutions in general—the institutions that prevail will have the lowest transaction costs (Williamson 1985; Rao 2003; Tadelis and Williamson 2013). With the organizing of markets, the argument pertains not to the markets-or-hierarchies question but to the market itself. Traders and organizers cannot be separated in an actual market, for the knowledge needed to organize the market may be inaccessible to external agents. A market organizer standing apart from trade might struggle unless assisted by traders-cum-organizers with experience in how to trade. Arrangements made by traders could be well-suited to the case in question, with lower costs and higher social benefits than any alternatives (Groenewegen 1994; Richter 2007). Experience of trading may count for more than abstract neutrality. Part of market organizing may have to be devolved upon traders, so the trading practices are not imposed entirely from without. Given the intricacy and diversity of market trade, a blend of external and internal organizing could be the best response.

Another way to explain duality is to relate it to the self-organization of markets. The complexity of the real world ensures that trading contracts can never be complete and no external agent can dictate every detail of trade. Gaps may be filled by self-organization, mostly taken to emerge spontaneously from the unintended consequences of uncoordinated human actions, as in the invisible-hand metaphor (Ullmann-Margalit 1978; Rutherford 1994, Chapter 5; Williamson 1994; Samuels 2011). Nobody plans the outcome, as if an institution organizes itself. Less mysteriously, the "self" in self-organization can refer to traders-cum-organizers. There may be no external organizer to arrange everything, but major traders can help to organize and structure the market (Redmond 2010). Organizing is dispersed among partial organizers, who interact through mutual adjustment (Ahrne and Brunsson 2011; Brunsson 2019). Self-organization can thus be ascribed to concrete human agents, as opposed to the market itself. The dispersed agency has similarities with the Austrian views of the market that allow for decentralized design, where the invisible hand is not a disembodied external force but a series of separate interventions by designing agents on various levels (Boettke et al. 2004; Boettke and Coyne 2009; Storr 2013, Chapter 4). Human agency is visible but hard to discern because it is scattered across numerous actors. The decentralized organizing of markets lets them adapt quickly and evolve, with a fluidity absent from central planning (Hayek 2014). Yet, whatever its virtues, decentralization also has limits: some elements of markets, such as the legal basis for exchange, are best organized centrally. Duality does not entail total decentralization.

A less positive explanation of duality is to associate it with market power. If we never observe perfect competition, then trade must call forth market power, including organization by traders. Imperfect or monopolistic competition is widely accepted in the applied branches of economic theory such as industrial economics

(Bain 1959; Scherer 1980). Market power and oligopoly are the norm in monopoly-capital approaches and Post Keynesian accounts of price determination (Baran and Sweezy 1966; Kalecki 1971; Gu and Lee 2012; Lee 2013; Foster 2014). Along with price fixing, market power stretches to information, branding, marketing, and customer relations. Reorganizing markets has been a crucial ingredient of commercial success. As was remarked by J.K. Galbraith in his writings on the "new industrial state", the largest producers/sellers do everything they can to plan and control the conditions in which they trade (Galbraith 1972, Chapter 3). Their actions lead to the duality of organizing and trading, albeit in a biased version that benefits one side of the market over the other. Duality becomes a consequence of the traders' desire to influence the outcomes of trading. They can sway trade in their own interests if they create and fulfill organizing roles within the market. The result will be duality, though not in the common interests of all traders. One side of the market uses its organizing capacities to swing trade in its own favor.

## 4 Examples of organizing–trading duality

All markets must abide by property and contract law, the legal warrant for voluntary exchanges of property. Otherwise, they vary in their organization and may or may not have an official organizer. This section looks at examples of different cases and finds that the overall picture is duality, even when there is a dedicated market organizer seeking to attain dualism.

### 4.1 Auctions

A deliberate attempt at dualism can be seen in an auction. The aim is to conduct one-off exchanges at a specific time and place, with openness and competitive trade (McAfee and McMillan 1987; Milgrom 1989; Smith 1989b; Klemperer 2004; Krishna 2010, Chapter 1). The auction house acts as an organizer: it provides the venue for trade, gives reliable information, and sets prices for the transactions made. It should be independent of the traders and have no interest in high or low prices. An auction claims to guarantee balanced, competitive trading. Neoclassical economics sometimes invokes the "Walrasian auctioneer", a fictional agent who sets equilibrium prices independently before trade begins (Fisher 1989; De Vroey 2002). In a real auction, the auctioneer may not be a neutral referee and traders may not have well-defined preferences (Smith 1989a, 1993; Ariely and Simonson 2003; Cheema et al. 2012; Adam et al. 2015). The scale of the auction may be restricted and random, information from sellers may be false, and the auction house may receive a commission that impels it to pursue high sales volumes. Influences exerted by traders push the arrangements towards duality.

### 4.2 Financial markets

Another putative case of dualism is a financial market or stock exchange with an organizing body to promote competitive trade. Trading may seem competitive if the market has a homogeneous product, free entry and exit, a sophisticated trading arena, and rapid price movements. Organizers may be distinguished from traders, and modern technology can circulate information quickly. The design of financial markets may be inspired by theoretical notions of perfect competition, as argued in performativity approaches (Callon 1998; MacKenzie 2006, 2009; Aspers 2007; Svetlova 2012). Again, practicalities prevent genuine dualism. Empirical studies of financial markets show that personal relations among traders encroach upon organizing, information, and price setting (Baker 1984; Knorr Cetina and Bruegger 2002; Sassen 2005; Preda 2007; Carruthers and Kim 2011). Trading networks based on information technology interfere with anonymous competitive trade. Entry to the market may not be free and products may be fabricated on demand, removing any homogeneity. When traders go beyond their roles as sellers or buyers, the market shifts towards duality. Even if a market has been designed by economic theorists, after a blueprint for efficient competitive trading, it will normally have unintended consequences that cause it to miss the hypothetical ideal (Nik-Khah and Mirowski 2019; Rilinger 2023a). Dualism can be pursued in financial markets but still be unattainable. Actual financial markets take many forms, some decentralized with market-makers who also trade (Howells and Bain 2007; Pilbeam 2018). There may be informal, over-the-counter arrangements, organization by cooperatives of traders, or trading services provided by specialist companies. None of these variants conform to dualism: as in other markets, duality is standard.

### 4.3 Markets for manufactured goods

Most markets for manufactured goods have no single organizer and no organizing–trading dualism. Goods are branded and advertised, prices are fixed, traders know each other, external information is scarce, and new products can be offered for sale at any time. Producers look after the local details of market organizing, on behalf of their customers but with profit as the goal. Their ability to shape the market is examined in the discipline of marketing, which addresses the process of market formation by firms (Brown 1951; Keith 1960; Hunt 1976; Cochoy 1998; Kotler et al. 2021). Individual firms develop and sell branded versions of the product, and the market emerges from the rivalry and mutual adjustment of the main producers. Such markets are widespread in modern developed economies, as has long been recognized in theories of imperfect or monopolistic competition and monopoly capital (Chamberlin 1933; Robinson 1933; Baran and Sweezy 1966). While no single organizing body exists, traders must obey the rules of property exchange overseen centrally through the legal system. Large producers/sellers carry out numerous organizing activities, visible though seldom perceived as organizing. The number of traders-cum-organizers is greater than one but remains small, confined to a few big firms with market power. Since organizing overlaps with trading, there will be duality.

### 4.4 Retailing

In some markets, a dedicated organizer may be present without playing the part of a neutral, non-trading referee. This happens, for instance, when trade is organized by specialist, profit-making retailers (Hamilton et al. 2011; Dunne et al. 2014, Part 2; Fernie et al. 2015). They mediate between producer and consumer, simplify distribution, and fulfill several functions of a market organizer: providing a trading venue, delivering products, informing buyers about the items on sale, publishing prices, and handling disputes and complaints. Often, the premises of the retailer will be called a "market", as with supermarkets. Retailing spawns a class of agents devoted to organizing trade, though they are not disinterested, neutral referees. On the contrary, they have a commercial interest in enlarging trade, with vast expenditure on branding, marketing, and advertising, and they make a profit through a markup on prices. Successful retailers exert market power over both producers from whom they purchase and buyers to whom they sell (Dobson and Waterson 1999; Bloom and Perry 2001; Burt and Sparks 2003; Smith 2016; Geyskens 2018). They do not act as a single, unbiased organizer hoping to preserve the balance between sellers and buyers. Organizing is mixed with trading and concentrated among the dominant firms. Once again, this is duality.

### 4.5 Online trade

Recent developments in information technology have led to virtual markets, with electronic payments and no physical location. Although the need for physical organizing is reduced, the virtual trading space still has to be organized and regulated. In some cases, an effort is made to attain dualism. On an internet auction site such as eBay, the organizer aspires to be an independent, non-trading auctioneer overseeing competitive, one-off exchanges among market participants. As with physical auctions, the competitive ideal will be hard to accomplish: information may be open to error, outcomes may be random, and the organizer may be commercially motivated with a desire to encourage sales. Traders using online markets may find their own ways of interacting that extend outside any ordering imposed by the organizer (Aspers and Darr 2022). In a multisided market, the trading platform varies in its treatment of different groups of users, bringing outcomes that are optimal in some respects but not neutral or even (Evans and Schmalensee 2008; Rysman 2009). Other kinds of online trade make no attempt to keep organizing separate from trading. Many online retailers provide the website through which trading occurs but also supply everything on offer: they are simultaneously the market organizer and exclusive seller. Competition will be limited, as it requires the buyer to search the websites of alternative sellers. Price-comparison websites can be a form of virtual marketplace, compiling information from online sellers, though the information is liable to be selective and subject to commercial pressures. Online trade resembles physical trade in the tendencies towards duality.

## 5 Implications of organizing-trading duality

The duality of organizing and trading has various implications for the study of markets. As a general conceptual scheme, it is less restrictive than dualism, which is an artificial and stylized assumption propagated by economic models that embody perfect competition. Even if we admit the perfectly competitive ideal to be unrealistic, its lingering aura has framed how trading is perceived and conducted (Callon 1998; MacKenzie 2006; MacKenzie et al. 2007). Yet, actual trading falls short of dualism, for traders influence the market organization. Duality as a conceptual scheme can provide a richer, more accurate account of markets that allows them to take many forms and be organized in different ways. Organizing can derive from the interaction of several partial organizers, yielding the market as the organized result. Central, external organizing bodies will normally be present in the legal oversight of property exchange, alongside traders-cum-organizers who compete and adjust to each other.

Organizing–trading duality can be seen as having efficiency properties, as discussed in "Section 3", but gives no assurance of evenness or equity. Market organizers, external and internal, share the desire to ease and increase trade. Voluntariness of trading should ensure that all participants, in their own estimation, gain from their involvement. Standard arguments about gains from trade continue to apply, subject to any caveats about misinformation and manipulation of trading behavior. The dominant producers/sellers or retailers will, nevertheless, have a private interest in reorganizing the market for their own advantage. Their activities go beyond price fixing to cover marketing, advertising, branding, and customer relations, all of which bear upon trading and mold it to boost profits. Buyers, often a myriad of uncoordinated individuals and households, can do little to resist this market power. The outcome will be biased towards the producers/sellers or retailers best able to reorganize the market.

Duality can shed light on the difficulties of regulating markets. Asymmetries in market power are allegedly removable through regulation, such that the regulator is a neutral referee enlisted to break up oligopolies and preserve balance. The intervention, if successful, would attain dualism by separating organizing from trading: no market participants could reorganize trade for their private benefit. Practical efforts at regulation have a checkered history and are prone to regulatory capture, whereby the regulator colludes with dominant traders (Dal Bó 2006; Carpenter and Moss 2013). The ability of traders to reshape the market may blur the boundaries between public and private interests. Regulators may be in thrall to traders, consciously or otherwise. Deliberate support for private interests—material capture—would amount to malpractice, but biases may result from cognitive or cultural capture: regulators may have limited knowledge, rely on traders for expertise, and fail to detect private interests (Rex 2020; Saltelli et al. 2022; Rilinger 2023b). These difficulties are foreseeable within a duality scheme, as the traders' propensity to reorganize the market is treated as normal. Overturning duality in favor of dualism will prove troublesome: firms may be the local organizers of the market, keen to resist any challenge from external regulators.

Another implication of duality is the diversity of markets and their capacity to evolve. Compared with dualism, duality has more scope for variation. It allows traders to augment the market by forging organizing and trading roles, acting as "institutional entrepreneurs" (Hwang and Powell 2005; Hardy and Maguire 2008). Table 2 compares the evolutionary capacity of markets with dualism and duality. A hypothetical market with organizing–trading dualism has little leeway for evolution. Organizers stay aloof from traders and remain the same, organizing roles are fixed, and the item traded is standardized. Dualism rules out subsidiary organizing roles created and occupied by traders, or subsidiary trading roles based on seller-buyer connections. The only variable is the population of traders, on the bottom row of Table 2, as they have the option of entry or exit and can withdraw from the market if unhappy with the price. This must be implicit in a static model, and the evolutionary process goes unrepresented. Under market-clearing equilibrium, the market would adapt through prices alone to reach an efficient outcome with no changes in the product traded or anything else. The market organizers, guardians of a given competitive structure, are not supposed to be agents of change.

In a market with organizing–trading duality, the avenues for evolution are broader. A durable market structure is still present, so the core organizing roles of the state and the legal system provide the organized setting for trade. The top two rows of Table 2 are the same for dualism and duality. The next four rows show that duality has a greater evolutionary capacity than dualism. With duality, traders perform subsidiary organizing roles that transform the market. Products are differentiated through branding, customer loyalty is sought through advertising and marketing, and sellers communicate with buyers. Both non-price competition and cooperation among traders become feasible. New roles and relationships are added as the market evolves, and old ones are discarded. In response to technical changes, some firms may specialize in certain sorts of retailing and market organizing, building new competencies and offering new services. All of this unfolds within the market structure, which lends the market its continuity and identity. The population of

**Table 2** Evolutionary capacity of markets

| Organizing-trading relationship | | |
|---|---|---|
| | Dualism | Duality |
| Population of core organizers | Constant | Constant |
| Core organizing roles | Fixed | Fixed |
| Item traded | Standardized | Differentiated |
| Population of subsidiary organizers/traders | Zero | Variable |
| Subsidiary organizing roles | None | Variable |
| Subsidiary trading roles | None | Variable |
| Population of traders | Variable | Variable |

traders varies through entry or exit, as with dualism, but is no longer the only route to change.

Among the advantages of organizing–trading duality is that it can appreciate the apparently contradictory properties of markets and mesh with other dualities considered in organization theory (Reed 1997; Janssens and Steyaert 1999). Prime examples relevant to markets are the dualities of stability–change and continuity-creativity. Although stability and change seem to be opposites, forming a dualism, they are in fact interdependent and form a duality (Farjoun 2010; Marsh 2010; Sutherland and Smith 2011). Organizations must adapt if they are to thrive, and those that accommodate change will be the most stable. Markets, as semi-decentralized organizations, epitomize this: the trading can be adapted and partially reorganized within a durable trading arena. Continuity and creativity may also seem opposed, but the norms and routines upheld by an organization need not stifle creativity and may succor it (Graetz and Smith 2008, 2009; Sonenshein 2016; Fortwengel et al. 2017; Sydow 2018). In a market, open access for producers/sellers ensures that new ideas can be tried out. Such innovations have a destructive side, expressed by the Schumpeterian concept of “creative destruction”, itself a duality (Schumpeter 1987, Chapter 7; Metcalfe 1998). Creativity undermines former trading habits and forces turnover in market power, so it comes with destruction, but even the most dramatic changes occur inside market structures. Without the market, the commercial promise of new products could not be tested. Markets engender continuity and creativity, neither elevated above the other.

The duality of organizing and trading can be related to the complexity of markets. In academic usage, complexity refers to variety within a structured environment: a complex system maintains its identity over time, but generates multiple, unpredictable outcomes (Rosser 1999; Hodgson 2003; Elsner 2017). It is structured yet fluid, ordered yet unruly, and stable yet changeable. The juxtapositions and interactions evoke dualities, hence the kinship between complexity and duality (Smith and Graetz 2006; Morçöl 2010). Markets, with their semi-decentralized organization, offer a prime example of complexity. Market trading can blend price sensitivity, role compliance, brand loyalty, and relationship formation, in a composite method of organizing that defies any markets-or-hierarchies assumptions (Elsner et al. 2010). Compulsory seller and buyer roles are incomplete, other trading roles are optional, and traders have room for variation in how they trade. Producers or retailers may be early adopters of new technologies, acquiring competencies that guide the organizing, practice, and regulation of market trade. All the variation and adaptation occur within a single, durable market. The upshot is complexity, in which a common market structure gives rise to diverse, evolving, and unpredictable trade.

## 6 Conclusion

A duality perspective can highlight the distinctiveness and peculiarity of markets as semi-decentralized organizations. Markets do have centralized elements, especially in the legal oversight of property exchange, but these are never quite comprehensive and have to be supplemented with further organizing by traders. Organizing is not isolated from trading, as in the hypothetical ideal of dualism, and they coexist as a duality. Sellers and buyers communicate with each other, provide information, differentiate items on sale, set prices, create market niches, and bond with known trading partners. Much market trade turns on new organizing and trading roles, devised and performed by the traders themselves so as to shape trade within the overall market structure. The market is then the organized result of actions taken by several organizing bodies, including traders.

Organization by traders, while departing from the hypothetical ideal, may have advantages: local knowledge of agents with trading experience may be vital in supporting trade, ensuring its stability and increasing its volume. These are the usual benefits called upon to explain why the organizational background of markets is important. Organizing-trading duality has other benefits: it lets markets evolve, assists product innovation, permits diversity of trade, and promotes cooperative behavior. Competition will be channeled into non-price forms less susceptible to being volatile.

The drawback is that duality fosters asymmetry between sellers and buyers. In many markets, the producers/sellers are large corporations with marketing departments that can manipulate trade. The buyers, fragmented and far greater in number, are ordinary people and households. Producers/sellers carry out the internal organizing of the market in a biased manner to bolster their market power. Curbing this power through regulation will not be straightforward, as the regulators may be pulled into the same uneven duality and fail to act as neutral arbiters. Other remedies for asymmetry would require coordination among buyers, so as to have a bigger impact on market organizing and resist the might of the producers/sellers. This too faces hurdles, given the size of multinational corporations and their huge expenditures on marketing and advertising.

Semi-decentralized organization is fundamental to markets and, in the spirit of duality, its positive and negative traits are best understood as being interwoven. Sustenance of trade, with the potential for collective gains, comes with outcomes tilted towards the dominant traders-cum-organizers. Markets are intricate and adaptable to an extent that makes them ambiguous: their virtues come with blemishes. The ambiguity means that local detail remains crucial in evaluating any particular market.

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## Declarations

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