Placing the ‘postsocial’ market: simulating space in the xeno-economy.

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Abstract

Following Knorr Cetina & Bruegger (2002), an understanding of financial markets as ‘postsocial’ environments has gained sway. This claim is premised on the idea that new technologies, in particular screen displays of complex real-time financial information, have displaced ‘the market’ from the social and economic relations in which it might otherwise be assumed to be embedded. We argue that recent historical transformations in trading and markets are better characterised as ‘re-spatialisations’ involving shifts in the placing and mediation of market spatiality. Material from the City Lives project and other sources is analysed to explore the transformation of the London International Financial Futures Exchange (LIFFE) from the early 1980s onwards. Using the notion of ‘xeno-economy’ (cf. Rotman’s, 1987 ‘xeno-money’) it is argued that the spatial redistributions of the market did not so much efface sociality as set up new kinds of relations between local traders and institutions, notably mediated through geographical displaced ‘trading arcades’. The immanence of modes of sociality to markets as intrinsically and necessarily social objects is thereby emphasised.
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Introduction

Within the discipline of marketing, markets themselves can often appear under-theorized (see, for example, Venkatesh et al 2006). This lack of attention has been the subject of extensive recent discussion. In a recent volume of this journal, Aurajo et al (2008:5) were able to note that:

Despite the lack of a consensus on a direction for reform, a growing call for the study of markets can now be heard that connects both to classic marketing thought and current developments in social science.

One aspect of markets that has received attention over recent years is the effects of the transition from interpersonal trading (whether in open cry trading rooms or by phone) to screen based trading. In their much cited article on the rise of the ‘postsocial’ market, Knorr Cetina and Bruegger argue that this transition has depersonalised, dehumanised and, in doing so, fundamentally transformed the nature of market interaction. As they put it (2002:p.163):

After the introduction of screens, the market became fully available and identified as a separate entity in its own right for the first time – with prices, interests and the relevant information all visually indicated on screen. The market on screen is a ‘whole’ market and a global presence; it subdivides into different information feeds and dealing systems, but these are configured to form a global picture framed by the boundaries of the screen, which also serves as a medium for transactions.
Knorr Cetina and Bruegger characterise this transition as postsocial. They argue, in effect, that though the virtualisation and reframing of market information the social element of interacting with the market is somehow ‘lost’. As a consequence questions of how subjectivities emerge through interactions with the market are negated because there is no social relation as such in the usual sense of that term. But at the same time a striking aspect of the changes they describe is not so much a de- or re-socialisation as a respatialization. The introduction of the screens certainly brings a complex market together in a way that it was not previously available (or, perhaps, visible), but this cannot be wholly described as a social change. The sociality of a market is undoubtedly altered by the technology through which it is delivered, but this was as true of the introduction of ticker-tape, the telegraph, the telephone and earlier generations of computers as it is of advanced screen-based trading. As markets are fundamentally interactive environments, any new form of communications technology or mode of communication introduced to them will necessarily alter their social form and the sorts of subjectivities that are indexed to them. What we want to argue in this paper is that for all the significance of the changes to the social in the postsocial market, the prior and more fundamental change that takes place with the introduction of the screen is a spatial one. The spatiality of any market is and always has been extremely complex. Although we tend to adopt familiar spatial shorthand to describe particular markets and market spaces – the British banking sector, the national currency, Indian retail industry, the local shop and so on – in practice markets consist of a number of overlapping spatialities. There are, for example, the institutional spaces (firms, buildings, cities, regions, government departments, raw material/component sources, etc.) that together define and, to a degree,
determine the shape and form of a market. There are the individual and collective geographies of market participants – producers, consumers, investors, regulators – all of which overlap and interact in complex ways. Then there are the softer institutional elements that influence what can and cannot be done within particular markets or, more generally, that which counts as a market transaction at all. These include the more direct and familiar elements of particular local, national and/or international legal codes, but also include more abstract and/or invisible things – cultural traditions (e.g. Islamic banking (Maurer 2005)), different material registers (Thrift 2005), gender, morality, etc. – all of which have determinant effects on market form. Furthermore, it also involves the mediation of ‘non-human’ or ‘non-social’ actors – such as aggregated displays of financial information, algorithms providing automatic analysis and so on. With respect to the theme of this special issue, the question of market spatiality is central. All markets, as spatial practices, involve the setting of boundaries, both formal and informal. These include boundaries that are territorial, gendered, discursive, legal, technical, sectoral and so on – often within and across single market spaces. This matrix of boundaries and spaces necessarily impacts on questions of identity: of the market itself, which presents itself to the world in particular ways; of the institutions participating in market activities; and of the individuals and (social) groups carrying out market transactions. What all this means in this context is that the spatiality of a market is both complex and emergent – it is continuously (if not constantly) in a process of development.

The assertion that a screen based market is therefore postsocial implies that previous markets were in some sense ‘more social’ – in other words they were less prone to determination by non-human agents and thus perhaps more legible as sites of reflexive
identity formation. For Knorr-Cetina and Bruegger the screen that displays complex financial information is the critical mediator in the market. It enables traders to develop the belief that the information brought together on the screen has a relative autonomy in relation to the human actors and actions in which it is entangled. The danger inherent in this argument, of course, is that in rendering screen based markets as in some sense exceptional, it misses and/or sidelines the non-human content of all markets. That is to say, all markets are mediated to some extent by artefacts that expand and complexify human action – indeed markets themselves and the products that are traded there are both such artefacts. Or put slightly differently, subjectivities have always been mediated by objects or ‘interobjective’ relations during the course of interactions with the market. Notwithstanding this, Knorr-Cetina and Bruegger have clearly identified something important that takes place with the introduction of the screen, but we would nevertheless argue that the fundamental shift here is a spatial rather than a social one tout court.

Using the example of trading on markets that have been historically and conventionally seen as taking place in London – particularly that of the London International Financial Futures Exchange (LIFFE), now known as euronext.liffe, and the International Petroleum Exchange (IPE), now known as ICE, we examine the ways in which during processes of virtualization and materialization, despatialization and respatialization take place almost simultaneously – spatial practices emerging very rapidly to fill and make sense of the voids left by corporate and market restructuring. In the move from ‘open-pit’ trading to a largely electronic system, we argue, both individual and institutional responses sought to replace the lost spatial relations (social as well as business) in order
to restore a legible, humanised spatial form to the market. These responses took the form of resistances (traders staging walkouts), exclusions (new boundaries being set and policed) and inclusions (new participants entering and reshaping the market). Some were the result of planned transitions (though not always with planned outcomes). Others were spontaneous reactions – positive and negative – to the new market structure. The implications of these processes of (re)spatialization are of more than academic interest. For any market, firm or other organization undergoing a radical restructuring process of the kind experienced by the IPE, and previously by LIFFE, an awareness of the strategic as well as social significance of space and place is critical.

Counterintuitively, perhaps, place has become all the more important for both individual and corporate market actors in the context of what we call here (following Brian Rotman’s mobilisation of the notion of xeno-money) the ‘xeno-economy’. Rotman’s xeno-money is that mode of being of the signifier of value that is related only and inevitably to its own future states (of value), as exemplified by the relation between the futures and spot markets for the imaginary currency of the Eurodollar. What we particularly want to emphasis in our use of the cognate term xeno-economy in this context is the relative dislocation and isolation of socio-economic activities from that which from other perspectives might be seen to contextualise them. This aspect of xeno-economy describes the result of several decades of market dis-placement – a deliberate, if piecemeal and often unintended, delinking of markets from conventional spatial locations. Technology has played a crucial role in this by permitting the development of financial and securities markets unhindered (and unthreatened) by the physical and social limitations of people and places. What we would see as the exteriorised ‘xeno-economy’
that emerges from this process (often captured by concepts such as ‘globalization’ or ‘offshore’ cf. Cameron & Palan 2004) is what Knorr-Cetina and Bruegger describe as the ‘postsocial’.

The purpose of this paper is to reflect on how combinations of people and (increasingly) institutions are responding to and/or coping with the xeno-economy as manifest in abstracted screen-based markets. Whilst many in the corporate world actively promote and welcome the ‘virtualization’ of business practices (cf. Carvel 2008) and whilst many millions of people are rapidly developing ‘virtual’ identities that can inhabit these placeless realms (Castronova 2006, 2007), these changes do not signal an unambiguous acceptance of the placelessness of the xeno-economy. Rather, confronted with the unsettling openness of virtualized markets, we are seeing the increasing emergence of processes of ‘re-placement’ – reinvesting economic activities with a legible and useable spatial form and meaning. This does not necessarily mean that we are simply reversing the process to rediscover lost spatial forms and subjectivities (though there is certainly some of that) but rather a complex set of processes whereby old and new spatial forms are being created and/or reasserted by individuals and groups within and across a variety of institutional forms (public and private, corporate and state, personal and collective).

The remainder of the paper consists of four sections. The first explains in greater depth the idea of markets as spatial forms, drawing on the work of spatial and other theorists. The second explores first-hand accounts of market change, drawing on both previously unanalysed interview-elicited accounts provided by participants in the history of LIFFE
to the British Library’s *City Lives* project researchers, along with our own ongoing research into the transformation of the IPE/ICE, primarily conducted with that market’s ‘local’ traders.ii Our purpose here is to reveal the degree to which the changes wrought in the markets by the introduction of screen trading technologies is couched in a complex socio-spatial language revealing both a desire to overcome market spatiality but also, and often unwittingly, a recognition of the significance of markets as social spaces. The third section investigates a particular socio-spatial response to virtualisation, in the rise of the ‘trading arcades’. Far from accepting the postsocial nature of the virtualised markets, the arcades constitute new modes of spatial interaction among traders and, by creating new spatial constellations themselves, create new market opportunities. The fourth and final section considers further the nature and meaning of the xeno-economy and the ways in which the spatiality of markets needs to be understood in response to it. We also attempt to draw some conclusions relating to the quintessential nature of spatiality to the functioning of markets and the necessity, whether we think we want it or not, of socialisation to that spatiality.

*Market Space*

The majority of the analysis of markets in economics, management, marketing and political science literatures tends to treat them as functional entities, or at best, processes. Given the complexity and importance of markets to contemporary economies this is understandable. What tend to be foregrounded are issues concerning the efficiency, sustainability, interaction and regulation of markets, responding to the concerns of policy-makers, the business community and the media. Important though these issues
are, this functionalist focus tends to overlook some of the more fundamental aspects concerning the constitution and meaning of markets – as though once established the market as a form ceased to develop in any structural sense and simply needed to be explained in terms of what it does. Most importantly for our purposes here, the fundamentally spatial nature of the market is, too often, not directly addressed.

However, the spatiality of markets is not a new topic by any means. Henri Lefebvre’s seminal account of *The Production of Space* (1991 [1974]), for example, regards markets as among the most significant ‘social spaces’ of an emergent capitalist political economy. The market for Lefebvre is not a natural product of economic activity – as many continue to assume – but a socially constructed and emergent entity comprising particular groups of people (merchants, traders, bankers, etc) and particular social technologies (money, calculation, text), all constituted in and through space. The space in question includes both physical dimensions – buildings, landscapes, towns, cities – and legally and socially constituted dimensions of inclusion and exclusion. Markets thus combine features of ‘publicness’ – they are visible, tangible and ‘known’ - and ‘privateness’ – access to them is restricted, selective and hierarchical. As a consequence the spatiality of markets (and any other social form) is never singular (there are always a multiplicity of spaces intersecting and overlapping in any given market) and never complete. The result is that, as socio-economic actors within multiple market spaces, we occupy what Soja (1996) describes as ‘thridspace’ – a hybrid ‘real and imagined’ spatial domain that, though typically describes in conventional topographical terms, is much more complex. As Lefebvre (1991:86) puts it:
We are confronted not by one social space, but by many – indeed, by an unlimited multiplicity or uncountable set of social spaces which we refer to generally as ‘social space’… The intertwinement of social spaces is also a law. Considered in isolation, such spaces are mere abstractions. As concrete abstractions, however, they attain ‘real’ existence by virtue of networks and pathways, by virtue of bunches or clusters of relationships.

Markets are, for Lefebvre, archetypal examples of a ‘concrete abstraction’ – something that we take as fundamentally real, that we inhabit and interact with without question, but which are built from systems and networks of artificial symbols, networks, expectations, assumptions, habits, stories, buildings and all the other paraphernalia of, in this instance, markets in practice. Lefebvre’s essentially Marxian notion of social space is echoed and developed by later writers from many disciplinary backgrounds seeking to explain the complexities of spatial relations produced in and through human activity and imagination. Geographers (Harvey, 1990, Crang & Thrift 2000, Pickles 2004), literary theorists (Ross 1989, Moretti 1999, 2007), social, historical and scientific theorists (de Certeau 1984, Latour 1993), political economists (Cohen 2000, Cameron and Palan 2004) and many others have all analysed spatiality as not just the setting for social and economic activity, but as, moreover, constitutive of it. In many social scientific contexts space is treated as an essentially passive ‘container’ for the complex drama of human interaction and development taking place within it. History is regarded as the essential locus of social dynamism, as exemplified by the temporarity writ large in the xeno-economy’s central dynamic between spot and futures markets, while space provides little more than a
backdrop. As the writers cited above and many others have argued in recently years, however, spatiality is never simply passive. As Kristin Ross (1989:8) argues:

Our tendency is to think of space as an abstract, metaphysical context, as the container for our lives rather than the structures we help to create. The difficulty is also one of vocabulary, for while words like “historical” and “political” convey a dynamic of intentionality, vitality, and human motivation, “spatial”, on the other hand, connotes stasis, neutrality, and passivity. But the analysis of social space, far from being reactionary or technocratic, is rather a symptom of a strategic thought and of…an “ethics of combat,” one that poses space as the terrain of political practice. An awareness of social space…always entails an encounter with history – or better, a choice of histories.

Translated into the terms of this special issue’s theme, altering the spatiality of a market entails changes in boundaries, identities and of the ‘ethics of combat’ (in our case the ethics and practices of trade) that can take place within it. The significance of this for the concept of the ‘postsocial’ market is clear. To be ‘postsocial’, a market would have to be ‘postspatial’ and there is simply no such thing yet in our experience as a market that so exceeds the spatial as to be sensibly rendered in such terms. Rather, and rather more modestly, there are complex, contingent and highly mediated transformations in the socio-spatial formations that compose markets. The socio-spatial content of the market may change with the introduction of the screen – it cannot do otherwise – but it does not disappear.

Whilst we clearly take issue, therefore, with some aspects of Knorr-Cetina and Bruegger’s characterisation of contemporary markets as postsocial, we agree with them that markets are being (re)constituted in the context of significant changes in the nature of socio-economic life. Specifically, the spatiality of the market is being reconstituted not simply with respect to existing spatial forms – states, national economies, international
systems, etc. – but with respect to an increasingly pervasive and, at first sight, anomalous space that we describe here as the ‘xeno-economy’.

The idea of a xeno-economy is developed out of Brian Rotman’s relabelling of Eurodollars as ‘xeno-money’. As he put it (1987:90):

For ‘Euro’ and ‘dollars’ one should write ‘xeno’ and ‘money’ respectively. The Eurodollar has long since shed its attachment to Europe. It is in fact, no longer geographically located, but circulates within an electronic global market which, though still called the Eurodollar market, is now the international capital market.

This superficially seemingly unlocatable market allows its product to substantiate itself primarily through the only thing not excluded by the xenophobia of its set up: future states of its own value. Of course, things have not stood still in the twenty years since Rotman wrote his account. In the intervening period one could perhaps say that currency has somewhat lost its currency or at least its absolute primacy as a medium of exchange. The Eurodollar market is not now the international capital market. Rather what we inhabit is a world in which all manner of financial instruments of ever more abstruse nature and derivation can and are being traded against each other in a dizzying whirl.

As Rotman also implies, the geographical dislocation of capital markets from states has not taken the form of a relocation somewhere else. Rather, through various legal means, capital markets have been constituted outside of any recognizable or (for the moment at least) regulated socio-economic space (Palan 2003). They are everywhere and nowhere – they are placeless and increasingly so. Where there was once a relatively legible market space, trading now takes place in everything, everywhere, in a system of exchange that,
despite its reliance on various forms of general equivalence, resembles more and more a barter based bazaar.

As the various processes unleashed in the 1970s - upon which such a trajectory is dependent (see, for example, Cameron and Palan 2004; Palan 2003) - have accelerated and proliferated, they have come to encompass more and more aspects of economic activity and, as a result, increasing aspects of everyday life.

What follows is an account of the way in which particular markets and their varied participants respond to changes in the socio-spatial context – some planned, some not – in which they function. Specifically, this is an account not of the emergence of postsocial or postspatial markets, but of markets that respond to seismic changes in the spatiality of economies – specifically the xeno-economy – by altering their own spatial content. As such they do not so much become postsocial and postspatial. Rather they renegotiate and reconstitute their sociality and spatiality.

**The Glocalization of LIFFE**

The London International Financial Futures Exchange, *LIFFE*, which began trading in 1982, in many ways typifies the transformation of financial and securities markets during the 1980s and 1990s. Starting out as a self-consciously innovative futures market based on experiences of the Chicago futures exchange, LIFFE was from the outset regarded as a pioneering City institution (Kynaston 1997). Not only were the products traded new in their increasing abstraction, but over time LIFFE was to innovate trading practices that would later become the norm for all City institutions. Read in one way, LIFFE’s history is the archetype of the developmental trajectory of the postsocial market. Revelling in
the language of deregulation and globalization, and deliberately adopting the brash and often aggressive individualism of the Chicago exchanges, LIFFE began trading as a consequence of the Thatcher government’s removal of exchange controls from British markets in 1979. LIFFE was a self-consciously ‘global’ player even before the idea of globalization had fully entered the public or media lexicon.

The account of LIFFE’s transformation into a fully screen-based market here is derived from materials gathered under the auspices of the City Lives project, whose results are held by the British Library’s Sound Archive (see Courtney and Thompson, 1996, for a brief account of this resource as well as some of its highlights). The project encompasses extensive interviews with some 200 participants in ‘the City’ during a period of rapid transformation and thus constitutes an invaluable resource against which more recent changes can be assessed. The interviews with participants are exemplary in the ways in which they have encouraged and elicited deep reflection and huge self exposure across whole swathes of life, work, family background and dynamics and, indeed, the broad historical and institutional context in which they worked. Of particular relevance for our discussion of LIFFE are the words of John Barkshire, the central figure in the founding of the market (Kynaston 1997:20). In his interviews Barkshire outlines the background to the creation of LIFFE, often in complex spatial terms:

It really started with the five months that I spent in New York and Chicago on Mercantile House’s [his own company] behalf, looking at the futures markets to see what was in it for us. And that led me to come back in September of 1979 with two recommendations, one was that Mercantile House should be involved in the futures market which led us to the acquisition of Woodstock and Rowse [American futures trading companies], and secondly a view that the futures markets were going to spread outside Chicago, and they were already beginning to spread into New York, and that if they did spread outside Chicago they were likely to become international, as international players were starting to become members of the
Chicago markets, and if they became international there ought to be a market in Europe, and if there was going to be a market in Europe it jolly well ought to be in London. And so...I mean they weren't very clever thoughts, they were just logically looking at the way futures had developed since they'd been invented in 1975, till that period in 1979. In 1975 they were, like all of the futures markets in Chicago, dominated by the locals, individual traders, who made up all the trading. By 1979 the major Wall Street houses were becoming involved in the markets; one or two were beginning to become members, or just starting to buy seats on the markets, and it was quite plain that the markets were going to become institutionalized rather than dominated by locals. And it was not as plain but fairly plain that they were going to become international. (BLSA interview)

The spatial redistribution that Barkshire claims as his vision of the future of the market requires a little unpacking. On the one hand it clearly embraces the possibilities of internationalisation (and, later, globalization) opened up by deregulation, but does not present a simple spatial displacement of existing market forms. Barkshire’s internationalism is one in which the existing spatiality of the markets spreading from Chicago to New York are further internationalised but within and through specific spatial networks and centres – “it jolly well ought to be in London” – and, of course, within the bounded market of futures transaction. As such, Barkshire’s vision was, from the outset, ‘glocalized’ (Swyngedouw 1997) or, more specifically, ‘glurbanized’ (Jessop 2000). Despite their unloveliness these twin portmanteau terms direct attention to the negotiation of the global in the local (and vice versa). In other words despite what would later
become a rather simplistic narrative of ‘globalization’, LIFFE was always couched within a complex and emergent urban spatial matrix. Barkshire’s vision is of a market with clear boundaries to entry and activity, but one that is also and already, international, and distributed across several sites and their interrelations.

Another layer of complexity is added to this spatial mix by Barkshire’s distinction between a market dominated by ‘locals’ and one that is ‘institutionalized’. ‘Locals’ are professional traders that trade on their own account, as opposed to trading funds for clients. Their main activity is speculation on the movement of prices within markets, typically through short-term positions. The practice of local trading is perhaps to be witnessed in its purest form in the act of ‘scalping’ – the trading off of the difference between the bid price of an instrument (the price at which participants in the market are willing to purchase) and its ask price (the price at which participants in the market are willing to sell). In Chicago in the 1970s locals were central to the operation of derivatives markets: ‘the army of professional speculators … who traded on their own account in the futures market there … provided up to 60% of total turnover’ (Kynaston 1997:10).

Locals are regarded as vital to many exchanges because they provide an ongoing bedrock of trading activity that delivers the liquidity deemed to be essential to any functional market. Locals boost the number of participants and transactions in a particular market and thus are key to maintaining market dynamism that might otherwise gradually be dominated and trammelled by big investors. In addition to their sheer number, the immersion of locals in the market contributed to the creation and reproduction of a fine-grained market knowledge that added a depth of analysis of particular trading
opportunities unavailable to the institutional investor. As one of our informants from the IPE comments:

When trading in the pit, most of us would trade over the very short term, trying to capture small profits quickly with little risk, taking advantage of brief inefficiencies that made a certain price either cheap or expensive. This could be done by watching the flow of orders into the market and knowing exactly what every traded month was worth against another. We could also buy the market if we saw Goldman Sachs for instance, buying the market. And taking a loss was far easier because we could see where the orders were to get out. (Trader T: personal email).

Barkshire’s most significant claim, therefore, is less the macro-spatial distribution of the futures markets across national borders than his belief that the market could and would function more effectively once the institutions took over from locals such as Trader T, whose local knowledge is expected to be effaced by the demise of pit trading. The displacement of the market is, thus, twofold for Barkshire – internationalism and institutionalism replace localism both in the sense of the ‘locally’ concentrated market and the ‘local’ knowledge embedded in the trading, social and personal networks of the traders themselves.

This hostility to the ‘local’ was not just Barkshire’s personal preference but also a strategic choice based on assumptions about the risk-aversion of the investors he needed to create LIFFE in the first place. Although a key feature of futures markets in their initial form, locals and market localness (particularly in Chicago) were regarded as sources of potential instability. Barkshire believed that big institutional players would
need to be reassured that by entering a derivatives market still seen by many as inherently risky would not entail an organisation swimming in the seemingly tawdry and dangerous waters of a market of speculation:

Why should these commercial people, who were good at making soap powders or ball-bearings, or whatever it may be, why should they take a risk of moving into what they perceived as a risky market? And their treasurer might well stand there and say, it's the avoidance of risk. And they'd say, well we did read something about it, and it's locals taking risks, whatever locals might be. We've read words like 'speculators'; we've read things like 'gambling' and all those sorts of things. Doesn't this happen in the market? To which he would say, 'Oh yes, speculation is very important, because it's the speculators who take the opposite side of your trade'. 'We're going to deal with speculators?' And one can see the conversations, and indeed I went to quite a number of board meetings of different companies to help treasurers with their presentations, and the reaction was not unfair. (BLSA interview)

As this extract implies, assessments of market risk were to some extent linked to the spatiality of the participants. It was perhaps because of this that at the outset risky, speculative locals were specifically excluded from LIFFE – all the trading ‘seats’ being taken by institutions (Kynaston 1997). Although LIFFE wanted to reassure its clients by restricting access in this way, it also recognised the significance of the appearance of a form of ‘localness’ to market function. The physical architecture and appearance of the trading floor, for example, specifically emulated the set up of the local-dominated Chicago exchanges:
There was never any doubt that it would be an open outcry market, but it was a conscious decision to base it physically on the Chicago model of futures markets rather than on, say, the cocoa or coffee markets in London. This model had three prime characteristics: pits (not rings), with steep steps; open, low booths (not boxes that allowed private conversation); and a big display board. The Chicago model also dictated that the traders would wear coloured jackets, never before seen in the City. Each member chose something different, and almost the only one rejected by LIFFE was a Union Jack design, the worry being that it would be seen on television as selling the pound down the river. (Kynaston 2001: 610)

Although self-consciously differentiated from existing London-based commodity markets, *LIFFE* was initially housed in the Royal Exchange Building – the physical and symbolic heart of the City of London and, arguably, the British economy (Kynaston 2001:610). All aspects of the new market both inside and out, were designed, consciously or not, with a view to ‘public’ consumption. The placing of a Chicago-style market in the Royal Exchange, and the initial relative marginalisation of the locals were used to send a variety of messages about the nature and function of the market to a range of viewers and actors. *LIFFE* used the physical space of the trading floor both to narrate its spatial and institutional relationships to others markets and to discipline the behaviours and identities of its (selected and exclusive) market participants. This itself was done in response to perceptions of the changing nature and spatiality of the wider markets in which LIFFE was situated, including, perhaps rather anachronistically, the national sensitivities of British investors and commentators over the fate of Sterling. As such LIFFE constituted itself as a ‘special public’ (cf. Merrill & Clark 1934) wrought within a
complex matrix of boundaries and identities. It was not long however before one aspect of the initial set up had to be radically transformed. Soon after opening to an exclusively institutional clientele, LIFFE felt obliged to admit locals in order to deliver not only the enhanced liquidity with which their presence is often associated but also the willingness to engage speculatively on their own part in order to enable an opposite party to hedge (Kynaston 2001: 610).

*Screens and Arcades*

Much as Barkshire and other powerful market makers might have been able to plan and construct their trading environments to a degree, they could only do so in the wider context of a rapidly changing economy. Whilst Barkshire’s designs for LIFFE were a response to the increasing international reach of emerging futures markets initially based elsewhere in the early 1980s, the rapid globalisation of securities and derivatives markets soon brought about further significant changes in trade spaces – specifically the introduction of screen-based trading.

LIFFE began to move to electronic trading in June 1998 (Kynaston 2001: 780), emulating many other markets initial partial moves away from complete mediation of trade by open outcry pits, by offering an electronic trading platform to run alongside activity taking place in its pits.

Given the obvious significance placed on the physical design of the market space, even this partial shift to screen-based trading constituted a very fundamental change and one that triggered complex responses. Ostensibly moving away from the open pit promised to further remove the risky idiosyncrasies of ‘localness’ from the trading process. Whilst
the screen did not render the individual trader wholly obsolete, particularly whilst the possibility of open outcry trading persisted, it began to change the identity of the traders (by opening the markets up to groups previously excluded from the aggressive, macho and overwhelmingly male trading floors) in part by altering what traders did. The most immediate change brought about by the screens - not fully realised until the pit was suspended in favour of total electronic trading - was that part of a trader’s business melted away. As one of our informants who experienced a similar process of partial to complete electronification of trading at the IPE/ICE put it: ‘In the pit, traders either made money by doing business for trading firms or they made money by buying low and selling high. On the screens, there is no need for trading firms to use traders as they have their own computer terminals and merely have to type the orders in themselves.’ (Trader T: personal email). However, this is not the only change wrought here. For a second means of making money for the local also seems to ebb away in the face of the screen:

But the biggest difference for myself and other similar traders trying to buy low and sell high is the lack of transparency on the screens. [...] On the screen however, we have no idea who is buying or how many they want to buy due to various computer programs available that disguise amounts or even pretend to look like they wish to buy when they actually don't. And when taking a loss, the price you see on the screen is rarely the price you will receive because the speed and hidden/non-existent orders often mean that you just press the button and hope. I for one am trading much less volume than I did in the pit because it is much harder to quantify my risk. (Trader T: personal email).
Just as the physical design of the original LIFFE exchange constrained the relative visibility and audibility of trades, so the design of screens at the IPE/ICE (and at LIFFE previously) disciplined trader behaviour by only showing them certain aspects of the market. That the space in question happens to be represented on a computer screen rather than physically enacted does not in itself alter the continuing process of spatial renegotiation such changes represent. The screen is every bit as much a concrete abstraction (in Lefebvre’s terms) as the trading floor. As such what it concretises are complex social relations. For example, hidden and non-existent orders are the manifestation of social strategies played out between traders, although they appear to take on a kind of autonomy when they are ‘read’ through the constantly updated data on the screens. We might say that this is social ‘noise’ mediated through computer programs that becomes entangled in the financial data and which must be disentangled by traders as part of every decision. But such a notion risks implicitly at least rendering the social and indeed the spatial as always outside of or remainder to a more fundamental purity of activity itself.

For whilst the introduction of the screens altered the social and spatial dynamics of trading behaviour, it did not eliminate them. Individual traders instead adapted their ‘style’ to accommodate the constraints and possibilities of the electronic market space. Particularly the locals:

[M]ost ex-pit traders have had to change their trading style due to the reasons I mentioned earlier. These changes mean quite a few fail, and many I know have left the business completely, becoming plumbers, taxi-drivers, etc. But most of us have relearned our trade and continue trading daily, with some going on to even greater
heights making even more money than they did in the pit. (Trader T: personal email).

Perhaps even more significantly for our argument, with the final closure of the pits and obligatory electronic trading, new forms of engagement with the market have developed that either recreate aspects of the pit, or which create new arenas of interaction altogether. Specifically, the responses of the dealers and wider stakeholders have been to *re-place* it in a variety of ways.

Of these, perhaps the most important have been their relocation into ‘trading arcades’. Arcades developed in parallel with the rise of screen-based trading in markets such as LIFFE and partly as a reaction against them. The arcade offers individual traders a space and the necessary facilities to engage in precisely the sort of idiosyncratic, ‘risky’, socialised trading characteristic of the open pits. Silverman (2001: 16) described the original American arcades in the following terms:

An arcade may have a hundred or more traders in it, or as few as two. The traders may trade for a proprietary “house” account in which all in the house share in the trading results, or they may be individual customers, each trading his or her personal capital and responsible for his or her own profits, losses, and business expenses. Demographically, arcades are melting pots, mixing professional traders with novices, mid-career changers with those fresh from a university, and both men and women (at this time there are still far more men, but the disparity in numbers is diminishing). Many different products may be traded in an arcade. A single screen may accommodate electronic markets in NASDAQ securities, stock index futures, cash bonds, and scores of other products from exchanges all over the world. The
traders may have access to analytical information such as charts and news services, software that allows them to test trading ideas, and Internet connectivity. There is also likely to be a squawk box service that broadcasts live prices from various open outcry markets. Finally, no trading arcade is complete without a television monitor hanging from the rafters tuned to CNBC.

The arcade embraces both the distanciated and distanciating technologies of the xeno-economy – particularly the multiplicity of screens - but draws it into a physical trading environment which deliberately reproduces the possibilities of interpersonal, social, interaction that characterised the open pits. That the pits are not simply reproduced in this process is seen in the radically different demographics of the arcade participants. And intriguingly, the arcade also reshapes possible modes and media of engagement with the market, outsourcing ownership of the trading seat, its mode of connection to the servers hosting the electronically enable market clearing mechanism, and often the analytical and visual software through which the market is realised as entity for the trader, re-engineering the differently integrative institutionalising trend initiated by Barkshire and colleagues.

This differential and even oppositional aspect of the arcades could, in some cases, be expressed by their physical location with respect to the exchanges. In 1997, for example, the Kyte Group opened an arcade – one of the first in the UK – directly opposite Liffe and populated by Liffe traders. As Peter Green, currently Director and Chief Executive of the Kyte Group Ltd, put it:

We opened it across the street from Liffe so that traders could move between the floor and our dealing room very quickly…At the time, most traders worked on the
screens during quiet periods in the market, but almost invariably they would run — literally — back to the pits if there was any real excitement in the markets. (quoted in Zwick 2007:60)

Thus although the arcades offer potential to redress the spatial imbalances of the institutional scale markets and to ‘resocialise’ trading (though this is not perhaps what their designers thought they were doing), they have not simply replaced the locales in markets such as Liffe take place. Rather, they have reintegrated themselves into the institutional structures of the markets in ways that both reintroduce and reassert the importance of locals, but which have subsequently also opened up new spatial and temporal trading forms.

David Kyte, for example, the founder of the Kyte Group trading arcade, was himself a ‘local’ on the Liffe exchanges. The interaction and, through their shared personnel, increasing integration of the arcades and the institutional markets created new market opportunities. Kyte himself developed a range of businesses entailing several hundred traders pursuing typically ‘local’ trading styles; some of these traders trading on their own account in full ‘local’ mode, others merely mimicking the style of those so positioned as they orchestrate the movements of another’s money. Morgan (2007) estimates that the arcade established by Kyte trades more than 10 million contracts per month – roughly comparable to many massive financial institutions in the US or Europe. Kyte’s arcade is the largest clearing agent on London-based derivatives exchange Euronext.liffe and for bond options on Frankfurt-based derivatives exchange Eurex it is the third largest clearing agent. What makes the arcade different is the means through which this volume in trading is mediated and enacted:
increasingly sophisticated directional trading houses [...] use sophisticated algorithms to identify trends and reversals. But these days, when we talk about algorithmic trading, we usually mean teams of mathematicians, physicists, and computer geeks looking to capitalize on very tiny aberrations in and among markets. [...] "Algo trading is now more than half our traders' business," says Green [of Kyte Group]. (Zwick 2007:60)

The key difference between ‘algo trading’ (i.e. trading driven by algorithmic calculation) and human managed trading (whether pit or screen based) is its speed. This creates novel spatial redistributions within the market. There is sometimes a re-placement of the arcade alongside traditional trading centres purely in order to reduce the speed of electronic transmission of information:

Kyte offers its clients proximity hosting at Eurex, whereby a server is installed next to the matching engine of the exchange to enhance trading speeds. This has reduced Kyte's roundtrip time for orders to 3 milliseconds. Given the sensitivity of algorithmic trading systems to market movements in price—which can leave behind those market-making decisions based upon obsolete data—access to such speed is crucial to Kyte's traders. (Morgan 2007)

The benefit from the speed of Kyte’s arcade is won, as we have seen, at the expense of other traders such as Trader T cited above. And with increasing technological sophistication of some arcades, the centralisation of the successful traders within certain sites is likely to continue. The inherent localism of the arcades combined with time and space compressing technologies has opened up a new phase of ‘glocalization’ in the markets – ““The machine is over there in Frankfurt and the trading parameters are set
over here [in London],” explains Green.’ (Morgan 2007). We are no longer within the boundaries of ‘the City’ it would seem. With the machine standing in place, Kyte’s main office moved to Islington in north London and they maintain a number of sites elsewhere in and around the City. This exodus from the traditional physical site of the City has been mirrored by many other trading arcades, now run from offices typically in affluent counties outside London. The shift in place is not the only change enabled by technology – traders are now becoming hybrids:

Green says a handful of senior programmers from leading independent software vendors (ISVs) have joined Kyte over the past year to start new careers as traders. The programmers usually work alongside traders in small specialist teams of two to 12 people. Green says that the programmers are pioneering a "gray box" style of trading. "This style of trading has been widely used in the arcade sector over the past six months. It is something of a hybrid model between the traditional screen-based trader and a black box. Clever bits of programming are used but there is more human involvement than in a black box," says Green. (Morgan 2007)

Perhaps some of this hybrid trading was causing the pain that trader T felt:

There is, of course, a dark side: some algorithmic traders have developed products that game the current algorithms by placing orders targeted to distort electronic order books and cause a brief but violent move in one direction or the other, with the intent of making money on the correction. Such activity, however, is nothing new. It represents an electronic version of the old floor-traders’ game of "running the stops," and retail traders simply need to be aware of the landscape. (Zwick 2007:62)
Boundaries and Identities in the Xeno-economy

The respatialisations taking place throughout these stories of market change are complex. They are both integrative – drawing together elements of the market that had previously been spatially separate, often invisible and ‘territorially nested’ – and disintegrative – they fragment established markets relationships and redistribute functional, interpersonal networks and groups. Whilst some of these become - in Knorr-Cetina and Bruegger’s terms – (partially) ‘postsocial’, what emerges in the trading arcades is a re-socialised and, therefore, re-spatialised form of market interaction. And with the new spatial, sectoral and ethical boundaries come new modes of market identity. As this implies, wholly postsocial markets are either unworkable – they need some form of socio-spatial ‘proximity’ (real and/or virtual) to function – and/or undesirable – for all the apparent predominance of technology, markets remain intrinsically human institutions.

This has entailed the mobilization of new spatial metaphors to provide boundaries of competency, agency and participation (trading screens, trading style, trading identities), new and/or adapted conceptual and physical geographies (‘the City’, ‘the’ market, arcades), and new software-generated virtual places of exchange. These spatial practices are developing through combinations of formal institutional systems and informal, interpersonal practices articulated through language and performance and (individual) practice. The result has been the creation of new market ‘places’ (differentiated from spaces by being centres of conscious ‘belonging’ on the part of market actors) that mediate new forms of identity. What arises in the trading arcade as an emergent market place – combining a reasserted physical proximity with the virtual proximities and
visibilities afforded by network technologies – can be seen in some ways as the very antithesis of the postsocial. This is not to suggest, as should be abundantly clear from our preceding argument, that we should understand emerging market structures as therefore post-spatial (though much of the literature on virtualization does just that), but to re-emphasise – as the markets themselves are doing in practice – the immanence of modes of spatiality to markets that are intrinsically and necessarily social objects. In common with a number of theorists and other scholars (particularly Baudrillard and his acolytes), Knorr-Cetina and Bruegger centre much of their attention on the novel possibilities of the ‘screen’. As they put it (2002:164), their argument is:

That the exteriorization, assemblage and contextualization of ‘the market’ on screen construe the market, which at one time was dispersed among isolated and specific human connections, as an external ‘life form’….

There is no doubt that the introduction of new technologies to the market has transformed it, but to argue that it is thus rendered ‘postsocial’ misses that point that markets have historically always been subject to technological transformation and were always ever a contingent mix of men and machines. Mary Poovey’s (1998) account of the History of the Modern Fact, for example, traces the profound effects of the introduction of such ‘technologies’ as double entry book-keeping and the more general ‘mathematization’ of European money economies (cf. also, Frängsmyr et al 1990) from the 15th century onwards. As each new technology has appeared market practices and structures adapt both to accommodate the changes (double-entry spread with extraordinary rapidity through 16th century Europe, for example), but also shape them in turn. The construal of the market highlighted by Knorr-Cetina and Bruegger, therefore, is only one part of the
story because the technology is itself construed by the markets and, further still, by the jurisprudence that accompanies it. The rise and evolution of the arcades represents, therefore, simply the most recent phase in the complex dialogic negotiation, imagination and emplacement of market form.

As this implies, the notion of ‘exteriorization’ needs to be approached with some caution. Screens, specifically, are not exterior to markets in any real sense. They may (seem to) contain and construe the market, but they are at the same time artefacts of the market. They thus constitute a conceptual distanciation of the market in which spatial metaphors and imageries are used to create the appearance of separation. This is important functionally because of the screen’s capacity, as Knorr-Cetina and Bruegger note, to aggregate formerly disparate elements of the market into one ‘place’. It is equally important because of the need it creates to legally (re)define spaces of economies. The virtualization of markets has been accompanied by a welter of legal scholarship and legislation (cf. the Digital Millennium Copyright Act), all of which is in one way or another designed to lend ‘material’ characteristics to virtual objects and processes.

This legalization of the ‘exterior’ space of the xeno-economy is important because of the need to ‘discipline’ both markets and market participants (Zaloom 2006). Indeed there is a mutually disciplining process at work here – a mutual constitution of a functional and therefore spatialized market form, and of the proper modes of ‘personhood’ appropriate to (i.e. construed by) that market. Subjectivities are produced in direct relation to the exteriorisation of the market. One way of reading the arcades, therefore, is as an interim
space within which a new and/or transformed market participants (Trader T above, for example) adapt themselves and each other through training, emulation, discussion and, of course, trading itself, both to become market persons and, by extension, to further emplace and embody the market itself. As this implies, far from being postsocial or postspatial (exterior), the evolving modes of interaction within the xeno-economy are profoundly, if differently, socio-spatial. Indeed, we would argue, they cannot be otherwise – markets are, by definition, social spaces.
References


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i In May 2000, Intercontinental Exchange was established, with its founding shareholders representing some of the world’s largest energy traders. The company’s mission was to transform OTC [Over the Counter] trading by providing an open, accessible, multi-dealer, around-the-clock electronic energy exchange. The exchange offered the trading community better price transparency, more efficiency, greater liquidity and lower costs than manual trading.

In June of 2001, ICE expanded its business into futures trading by acquiring the International Petroleum Exchange (IPE), now ICE Futures, which operated Europe’s leading open-outcry energy futures exchange. Since 2003, ICE has partnered with the Chicago Climate Exchange (CCX) to host its electronic marketplace. In April of 2005, the entire ICE portfolio of energy futures became fully electronic.

In January of 2007, ICE acquired the New York Board of Trade (NYBOT) now knows as ICE Futures U.S. Today, ICE Futures U.S. electronic products trade electronically on the ICE platform alongside with its traditional open outcry markets.

In July 2007, ICE acquired and integrated ChemConnect's markets to its over the counter business. And in August 2007, shareholders of the Winnipeg Commodity Exchange overwhelmingly approved its acquisition by ICE. ([https://www.theice.com/history.jhtml](https://www.theice.com/history.jhtml), last consulted 17th April 2008).

ii We are informed here by our more than a decade long series of interactions of varying levels of formality - both face to face and electronically mediated - with primarily local, but also some institutional, traders working on and through various exchanges in London and New York.

iii Although a notable exception would be the work emerging from the Stockholm School of Economics Market Studies research group and the Market Studies researchers within the Industrial Marketing and Purchasing Group (IMP). See Araujo et al (2008: 6) for a list of representative publications.

iv Many of the interviews were conducted over more than one occasion and often the totality of the recorded interaction between interviewer and interviewee extends over more than eight hours. In short this is no superficial gathering of mere opinion. What is provided is rather a sumptuously rich diet of full personages and their practices that happen to have inhabited the City during the latter half of the twentieth century. Indeed, given our purposes a churlish response to the archive might be regret at the over focus upon family, class and educational history that results from the otherwise laudable structuring of the interview process. There nevertheless remains much of considerable interest for our purposes here and there are few available accounts that could serve us any better in our aim. The recordings of the interviews, not all of which have yet been transcribed, are available via the British Library’s Sound Archive (BLSA).

v Initially of course the electronic trading enabled by this arcade pertained only to products on markets other than LIFFE since the latter’s own electronic trading platform did not come into being until the
following year, as we noted above. It seems highly likely that this electronic version of LIFFE to follow after the opening of the arcade had been anticipated by Kyte.

vi We use the word ‘men’ in this still overwhelmingly male context for reasons of ‘gender realism’ (see also Zaloom, 2003: 270n5).

vii Cf., for example, various entries on the virtual law blog ‘Virtually Blind’: http://virtuallyblind.com/