Abstract

*ParentCompany*'s decision to close *R&Dco* in North East England caused the loss of highly skilled scientific and technical jobs. *R&Dco* was a ‘white-collar’ R&D operation and supplier of services to *ParentCompany*'s lead factories in the East Midlands and South West regions. The economic and social costs of closure were acute for the North East with its relatively weak growth, high unemployment and limited R&D activity. The paper argues that a clearer understanding and progressive response to such closures may benefit from a conceptualisation founded upon spatialised social relations and characterised by a social process of production that unfolds over time, across space and in place. Periodised in episodic socio-spatial ‘moments’, a historically evolving social process of closure reveals differential potential - contingent upon specific conjunctures of structural forces, social agency and the particularities of places - to enable and/or inhibit intervention through public policy and institutional action and political mobilisation and resistance.
INTRODUCTION

*ParentCompany*... ...is closing its long-established *R&DCo* operation in Newcastle and switching the work to Derby. It is not a production facility. It does not employ a huge number of people. The company’s factories on Tyneside will, we are told, remain. So at one level, the departure is not shattering. But for more than 30 years, *R&DCo* has been part of the region’s skills base in the vital area of R&D. Former employees have moved on to begin other enterprises in the area. It has given the region a much-needed reputation at the cutting edge of technological development. Its departure diminishes that reputation. The departure is no small thing. Hopefully, the gap it leaves will be filled (Editorial, *The Journal*, 23 February, 1998).

In February 1998, a power engineering company announced the closure of its R&D operation — *R&DCo* — in North East England. The closure caused the loss of 84 highly skilled scientific and technical jobs held mainly by men aged in their forties, some with over thirty years service. *R&DCo* would close in June 1998 following statutory consultation with its recognised trade unions. *R&DCo* was a ‘white-collar’ R&D operation and supplier of engineering and laboratory services to *ParentCompany*’s lead factories in the East Midlands and South West. Contrary to industry-wide decentralisation of engineering and technology functions, *ParentCompany* sought to reduce costs and centrally co-ordinate its R&D activities from the East Midlands. The economic and social costs of closure were acute for the North East with its relatively
weak growth, high unemployment and limited R&D activity. Gordon Adam, Labour MEP, articulated local concerns:

All evidence shows that economic development is closely linked to research capacity. *R&DCo* have a proud record and profitable record. *ParentCompany* may cut some costs with the closure, its shareholders may benefit, but these are short term gains which must be set against the considerable long-term loss to the region (quoted in (Brady 1998a): 5).

This episode of the closure of a R&D operation in an old industrial region raises questions about how to understand closures and why they happen, what their implications are and what can be done about them.

As manifestations of the combined and uneven development of the spatially constituted evolution of capitalism, closures have been a recurrent concern in economic geography, especially during periods of de-industrialisation in advanced capitalist states (Bluestone and Harrison 1982; Martin and Rowthorn 1986; Fothergill and Guy 1990; Williams, Williams and Haslam 1990). Individuals, communities, organisations and territories can experience the ‘closure’ of a bank branch, community centre, factory, farm, hospital, mine, office or shop and its effects — lost jobs, output, income and service provision — as direct and indirect challenges to their prosperity and well-being. Social solidarity, political outlook, cultural identity and psychological health can be affected too. Traditional Marxist approaches interpreted closures as part of the everyday workings of the capitalist economy (Harvey 1982). The continued prevalence and intensity of closures may have rendered them an
even more accepted and inevitable part of economic geographies. Almost irrespective of broader business cycles, heightened, even ‘globalised’, capital mobility and the increased turnover of capital in time and space has intensified its abandonment of host economies: “In the new global context, the flexibility of capital means that firms readily disinvest in one locality to seek out cost, market and knowledge advantages in another” (Bryson, Henry, Keeble and Martin 1999): 12). Many territorial development institutions have developed standardised repertoires to deal with closures (Pike 2002), and increasingly emphasise regional adaptability and social learning (Wolfe and Gertler 2002) in the management of periodic episodes of decline: “the North East must recognise that products and services will have a faster turnover rate and actively plan for closures and departures” (Chairman, North East Regional Development Agency in (Bridge 2000): 5). In contrast to the broader and deeper waves in the 1970s and 1980s (Levie, Gregory and Lorentzen 1984; Hudson and Sadler 1986; Beynon and Hudson 1993), local and regional political mobilisation and resistance to closures have become spatially differentiated and place-specific with unevenness between cases of muted acquiescence and active contest (Hayter and Harvey 1993).

Connecting to the project of renewing Marxian political economy in economic geography (Martin 1994; Sayer 1995; Castree 1999; Hudson 2001; Storper 2001) and given their continued and perhaps increasing importance in (re)making the landscapes of contemporary capitalism, it is timely to revisit the longstanding tradition and periodic concern with closures. The aim is to build a geographical political economy of closure to address questions of
understanding and conceptualisation, explanation and causation, implications and geographically uneven responses in terms of public policy and institutions and political mobilisation and resistance. The argument is that clearer understanding and more progressive responses to closures may benefit from a conceptualisation founded upon spatialised social relations and characterised by a social process of production that unfolds over time, across space and in place. Periodised in episodic socio-spatial ‘moments’, a historically evolving social process of closure reveals differential potential - contingent upon the specific conjunctures of structural forces, social agency and the particularities of places - to enable and/or inhibit intervention by public institutions and/or collective resistance. The closure of a R&D company in North East England is used to explain and demonstrate how this geographical political economy approach can contribute to our understanding and address the key questions concerning closures.

A CRITIQUE OF THE EXISTING LITERATURE ON CLOSURES

The longstanding literature on the geographical anatomy of economic restructuring has increasingly emphasised its path dependent, often indeterminant, trajectories including and beyond closure (Massey and Meegan 1982; Clark 1990; Massey 1995; Hudson 2001). Closure is significant and can be separated analytically from often preceding in-situ decline (cf. Massey and Meegan, 1982) because:

Closure is more final, more dramatic and more painful than merely reducing employment levels. A plant, once closed, is unlikely to reopen;
a plant with contracting employment levels may subsequently increase its labour demands. Second, closure is a clearly distinguished event, whereas layoffs may be difficult to discern from the normal turnover of labour (Watts and Stafford 1986: 207).

A longstanding literature has addressed this distinctiveness of closures with particular approaches to conceptualisation and explanation (Erickson 1980; Fothergill and Guy 1990; Clark and Wrigley 1997; Tomaney, Pike and Cornford 1999). Where the focus is broader geographies of economic restructuring ‘closure’ is an unproblematic and clearly understood category (e.g. Bluestone and Harrison, 1982; Clark, 1990). Other work treats closure as a self-explanatory category (e.g. (Healey 1982). It uses a basic definition of the cessation of activities at a specific site of production or consumption and the finish and shutting of that particular site: “the decision to permanently contract, close or relocate a plant” (Howland 1988: 194) and “closure is a clearly distinguished event” (Watts and Stafford 1986: 207). Focusing upon closures within multi-plant firms, typological analytical frameworks distinguish between motivation (problem recognition and plant closure decision because of external/internal factors) and selection (particular plant closure decision because of internal and local, area-related considerations) and different types of closure (cessation, default and selective) (Fothergill and Guy, 1990; Watts and Stafford, 1986).

Explanation often distinguishes between ‘internal’ (plant-related) and ‘external’ (corporate, industrial, macro-economic, regulatory) causes with explanatory weight determined by frequency of mention in surveys and interviews by
affected interests (mostly firms) and their categorisation (Healey 1982; O’Farrell and Crouchley 1983; Fothergill and Guy 1990; Kirkham and Watts 1998). The ‘variables’ are ranked and constructed into an explanation (e.g. Watts and Stafford, 1986) or used to develop quantitative models (e.g. Howland, 1988). Fothergill and Guy’s (1990: 76) ‘chain of causation’ recognizes the multiple conjuncture of inter-related explanatory factors and groups ‘major’ and ‘minor’ reasons into categories (longer term shifts, recession-related, firm-specific and plant-specific) with structural changes in demand, recession, import penetration and technological change in product and process the most common.

There are several problems with existing approaches to closure. First, the conceptualisation of closure as a simply defined and clearly distinguishable event is questionable. As Fothergill and Guy (1990: 70) admit: “There really isn’t such a thing as an ‘average’ or ‘typical’ closure”. The diversity and heterogeneity of particular closure situations mean simple definition and typological classification, while offering valuable heuristics, can never be totally comprehensive (Clark and Wrigley, 1997: 342). Beneath superficial first appearances particular closures in places unfold differentially, blurring neat categorisations, potentially encompassing receivership, ownership changes, management and/or employee-led ‘buy-outs’, facility ‘mothballing’, shareholder dissent and community resistance. Second, empirical analyses reveal that specific closures can undergo temporal transformation in their particular status, form and character over time in place as they unfold. Activities may become more or less likely to close, assets or parts of activities
may be sold and/or relocated and initial confrontation may become acquiescence. Existing categorisations effectively take a temporal and spatial ‘snapshot’: “…plant closures… …have been explored over only a very limited time-period… …the sensitivity of results to the temporal context of research is uncertain” (Kirkham and Watts, 1998: 1563; Clark and Wrigley, 1997: 342).

Third, distinguishing between ‘internal’ and ‘external’ factors tends to emphasise the determinant role of structural ‘economic’ explanations for closure. Closures involve a wide variety of factors and processes across a range of levels that “interact in complex ways depending upon the specific situation” (Walker 1992: 56). Despite claims that “just a handful of reasons for closure dominate the picture” (Fothergill and Guy, 1990: 78), their inter-relations in particular cases, the role of social agency and their particular socio-institutional and spatial context are often underplayed. Indeed, the existing literature sometimes displays a somewhat reductionist, ‘external’ rather than integral view of space and place, such as Howland’s (1988:193) “local economic conditions” and Kirkham and Watts’ (1998: 1567) “area characteristics”. While acknowledging that “to some extent then, each closure is unique” (Fothergill and Guy, 1990: 84), existing approaches are weaker on the relations of what is necessary and contingent in explaining closures.

Fourth, existing approaches often fragment and disconnect the explanation of closure from its local and regional consequences. Analysis often divides the closure process into temporally discrete and separate stages, for example ‘closure’ and ‘post-closure’ (Noble and Schofield 1993; Hinde 1994), with few attempts at integration (Harrison 1986; Tomaney et al. 1999). Fifth, the
existing literature retains a relatively narrow focus upon manufacturing, particular industrial sectors (e.g. brewing, chemicals, steel), multi-plant firms and individual plants (e.g. Kirkham and Watts 1998). Few studies exist of services, especially R&D. The geographical focus has been somewhat broader, encompassing national, regional and local scales.

Last, existing approaches are weak in addressing the growing spatial differentiation and place-specific character of public policy and institutional responses and political mobilisation and resistance to closures. Albeit based on the limited availability of systematic review, marked unevenness is evident between cases of relative acceptance (e.g. Electrolux, North East England; Ford Cars, London; Maytag Corporation, Illinois) and resistance (e.g. Levi Strauss, Dundee; Oxford University Press, England; Renault Vilvoorde, Belgium). Explaining such unevenness connects with geographical political economy’s longstanding engagement with the normative and action-oriented concerns of praxis and progressive public policy intervention (Bluestone and Harrison 1982; Levie et al. 1984; Hudson and Sadler 1986).

BUILDING A GEOGRAPHICAL POLITICAL ECONOMY OF CLOSURE

The limitations of existing approaches suggest the need to “break open the black-box termed ‘exit’” (Clark and Wrigley, 1997: 342) to look beyond the deceptively simple and superficial conceptualisation and explanation of closures. To renew geographical political economy enquiry, Massey (1995:104) suggests the need:
to conceptualise processes and relations. Objects are not simply given to analysis, but are themselves products, and must be conceptualised in such a way as to incorporate, not just their descriptive characteristics, but also the process of their production, the larger dynamic of which they are part.

This ‘relational’ approach (Massey 1995; Allen, Massey and Cochrane 1998) provides a way to address the apparently simple object of a closure and conceptualise and explain it as the product of spatialised social relations and a social process of production that unfolds over time across space and in place. Rather than being treated as something external, space and place are incorporated into theorising closures as part of the constant (re)making of the economic and social landscape in particular ways by social agents (Harvey 1982; Herod 2001). The diversity and heterogeneity of specific closures can be interpreted as combinations of generalisable necessary relations (e.g. the dynamics of capital accumulation, competition, capital ownership, labour-management relations, state regulation) with causal powers only contingently realised at specific times in particular places, remaining empirical questions (Sayer 1999; Hudson 2001). The spatialised social relations that tie the fortunes of places together may have become stretched, distanciated and entangled within broader webs of connection in recent conceptualisation (Smith 2004). Yet this elaboration strengthens their analytical value.

Second, conceptualising a historical geography of spatialised social relations and social process of closure addresses the temporal transformation of closures changing their status, form and character over time, across space
and in place. The trajectory of the social process of closure is unavoidably shaped by its own historical and geographical evolution such that: “the end point of restructuring is path-dependent, thus determined by the interaction between actions, events and intentions… …economic imperatives are actually historically contingent and spatially heterogeneous” (Clark, 1990: 409). Perceptive existing analyses interpreted a “closure process” (Fothergill and Guy, 1990: 70) and “…various types of exit…should be understood… …to be part of an ongoing process” (Clark and Wrigley, 1997: 346), acknowledging that “the announcement of a plant’s closure is not quite the end of the story” (Fothergill and Guy, 1990: 132). Economic sociology’s understanding of the ‘social production of redundancy’ further supports this approach (Lee 1987; Turnbull and Wass 1997). The emphasis on process need not entail a shift away from explaining the roles and actions of agents nor the obscuring of the possibility of or responsibility for change (Markusen 1999).

Harvey (Harvey 1996): 106) understands causal processes and tendencies as the contingent realisation of socio-spatial conjunctures — ‘moments’ — in the unfolding social process of development of their constitutive social relations. An analytical framework can help to think through examples of potential ‘moments’ (amongst others) and their causation in the social process of closure (Table 1). Empirical research can reveal how closures experience common and dissimilar ‘moments’, connecting with Clark and Wrigley’s (1997) framework:

...there are many possible temporal sequences through the inter-related options represented and there is no intention to suggest that all
firms, or any firm, will necessarily have to move sequentially through all exit options (346)… Each of the possibilities considered should be viewed as having a ‘place’ in time and space… (348).

This framework too makes no claims to represent an inevitable linear sequence, typology, programme of stages or check-list through which each and every closure will pass. Instead, it seeks to move beyond a linear description of events over time. The approach focuses on those ‘time/spaces’ which capture the determining ‘moments’ that explain how things unravelled in the way that they did.

Table 1: Examples of Potential Moments and Potential Causation in a Closure Process Trajectory

<table>
<thead>
<tr>
<th>Moment</th>
<th>Causation</th>
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<tr>
<td>Origins of decline</td>
<td>Declining profitability</td>
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<td>Import penetration</td>
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<td>Market share loss</td>
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<td>Organisational marginalisation</td>
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<td>Technological obsolescence</td>
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<td>Under-investment</td>
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<td>Weak productivity</td>
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<td>Closure proposal and decision</td>
<td>Intra-corporate investment competition</td>
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<td></td>
<td>Increased costs</td>
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<td>Loan foreclosure</td>
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<td>Recession</td>
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<td></td>
<td>Re-location of activities</td>
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<td>Structural demand shifts</td>
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<td>Responses of agents</td>
<td>Collective ‘anti-closure’ campaigns</td>
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<td></td>
<td>Individual and/or collective acceptance and/or resistance</td>
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<td>Industrial action</td>
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<td>Public policy and institutional intervention</td>
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<td>Political lobbying (local, regional, national, international)</td>
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<td>Public demonstrations</td>
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<td>Impact of closure</td>
<td>Employment loss</td>
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<td>Increased social subsidy</td>
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<td>Lost income</td>
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<td>Negative multipliers in local goods and services markets</td>
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<td>Undermined local/regional prosperity</td>
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</tbody>
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### Competition and/or Conflict
- Alternative rescue plans
- Competing buyers
- Legislative challenges
- Local and parent company management disagreements
- Facility occupation and/or ‘Work-in’
- Vandalism of products and/or facilities

### Co-operation and/or Collaboration
- Management, workforce and trade union acceptance or collective mobilisation/resistance to closure
- Planned rationalisation
- Redundancy
- Re-training and/or redeployment of workforce
- Sale of business and/or facility
- Voluntary severance

### Dissolution
- Retraining effort
- Former employee job turnover
- Failure/closure or growth/expansion of rescued business(es)
- Demolition and site redevelopment
- Legal challenge settlement

**Source:** Author’s Research, Fothergill and Guy (1990: 78), Watts and Stafford (1986: 221).

Third, the geographical political economy approach seeks to qualify rather than deny the determinant position structural economic causes are often afforded in existing accounts of closure by giving appropriate weight to social agency and socio-institutional context in shaping specific outcomes in particular places (Clark 1990; Sunley 1996; Storper 2001). As Massey (1995: 316) argued:

> this does not mean that outcomes are totally indeterminate, in the sense that nothing can be anticipated - even in the case of human agency the potential courses of action are frequently restricted (people are boxed-in, there is only bounded indeterminacy).

Fothergill and Guy (1990: 132) echo this bounded indeterminacy between the two extremes of workforce acceptance and anti-closure campaigns:
“announcement of a plant’s closure is not quite the end of the story. Closure is not always accepted meekly by the workforce, by the plant management, or by the local authorities and regional development agencies.” Particular places have specific and contingent influence upon the historical evolution, character and form of local social relations and processes (Beynon and Hudson, 1993). Fourth, a ‘holistic’ geographical political economy (Beynon, Hudson and Sadler 1994; Allen et al. 1998; Perrons 2000) can integrate analysis of the temporally discrete passages of the closure episode. Borrowing from economic sociology: “instead of studying the redundancy and labour market situations of redundant workers separately, attention should be paid to their interrelation” (Lee 1987): 5). Fifth, the narrow focus of existing work can be broadened by studying an array of different closures — hospitals, military bases, mines, bank branches (Korman 1989; Turner and Gregory 1996; Hill and Markusen 2000; Marshall 2000) — and broadening the understanding of social relations to consider forms of social division (gender, race, identity) and social character (social forms of capital, regional political culture) as integral parts of geographical political economy rather than after-thoughts to the traditional capital-centric concerns of class relations (Beynon and Hudson 1993; Halford and Savage 1997).

Last, Harvey (1996) explains geographical unevenness in collective action in terms of spatialised social relations and a social process of closure. A distinction is drawn between potentially conflicting or complementary workplace and community politics. Workplace interests of protecting jobs shape the form of local social relations and political identity. These can
converge with wider and longer term community interests in supportive coalitions or diverge to cause division and conflict. Contrary to workplace interests in a car factory closure, community politics questioned the contribution to their longer term aims of preserving “shit-jobs” in a factory producing ecologically unsound, luxury commodities in an industry with acute overcapacity under the existing oppressive socio-economic order (Harvey 1996: 22). Particular local articulations between workplace and community politics shape the extent and character of localised responses to closures. Harvey (1996) revisits territory and class as bases for social and political organisation by drawing upon Raymond Williams’ ‘militant particularism’; that is the way: “ideals forged out of the affirmative experience of solidarities in one place get generalized and universalized as a working model of a new form of society that will benefit all humanity” (Harvey, 1996: 32). In closure situations attachments forged by localised social relations are not unproblematically generalised if: “a concern with a more general class solidarity is subordinated to a more immediate concern with work and life in a localised and spatially delimited community” (Hudson 2000): 206). Under capitalism, this can generate inter-territorial competition between cross-class alliances to defend jobs for ‘their’ people in ‘their’ community (Hudson and Sadler, 1986). Particular local articulations of workplace and community politics and militant particularisms are contingent but may range from strong class identities, rooted in traditional industries, contesting closures and demanding state intervention to consistent failures in resisting closures breeding acceptance and disillusionment with politics and public intervention (Beynon and Hudson, 1993). Critical for praxis is the understanding of closure
as constituted by a wider web of social relations and unfolding through a
social process – marked by ‘moments’ – that could open up space for
collective action to shape the extent and nature of the closure trajectory.
Particular ‘moments’ may provide opportunities for leverage and decisive
intervention to influence the closure process.

Massey’s (Massey 1995): 316) ‘bounded indeterminacy’ claims that “in
principle outcomes need specific investigation” and the geographical political
economy of closure requires empirical analysis of the relations between
agents, structures and places “allied with a sense of the definite limits to
social action” rather than empiricism, voluntarism or structuralist determinism
(Beynon and Hudson, 1993: 187). R&DCo’s closure in North East England is
analysed to illuminate the central argument concerning the clearer
understanding and potential for progressive responses by conceptualising and
explaining closures in terms of spatialised social relations and a social
process of production that unfolds over time, across space and in place.
Macro-level data on closures at the EU and national levels is limited. Many
aggregate studies rely on press reports of ‘closures’ and are unable clearly to
distinguish between rationalisation, job loss and outright closure (e.g. (Watts
2001). R&DCo is the case study because it was a ‘white-collar’ R&D services
operation, employed 84 highly skilled scientists and technicians and was
strategically important to the regional economy. The intensive research
method comprised: i) in-depth, semi-structured interviews with the
management, trade unions and workforce; ii) analysis of published and
unpublished secondary materials (e.g. press reports, reports and accounts);
and, iii) participant observation leading action-research projects for the trade unions in \textit{R&DCo} and \textit{ParentCompany} (Pike 1998).

\section*{THE CLOSURE OF \textit{R&DCo} IN NORTH EAST ENGLAND}

To broaden its focus and maintain its technological leadership, Tyneside-based engineering group Parsons established \textit{R&DCo} independently in 1962, consolidating its Nuclear Research Centre and other group R&D activities. It employed over 350. In late 1950s Newcastle, Parsons claimed to:

\begin{quote}
...make Heaton a major centre of peaceful nuclear research and bring more work to the North East with greater safeguards against... ...possible recession... ...The proposed laboratories and their equipment would... ...be amongst the finest in the country and Tyneside could be justly proud of them... [providing] an unrivalled link between the Universities and Technical Colleges in the North East (Submission for Planning Permission, Parsons Group cited in (Wright 1996): 2).
\end{quote}

\textit{R&DCo} emerged amidst the technological ‘White Heat’ of then Prime Minister Harold Wilson’s modernisation strategy for the British economy. Internally, “the range of expertise available from \textit{R&DCo}'s engineers, scientists and other skilled workers made the company one of the foremost establishments of its kind, certainly in the North East of England, if not the whole country” (Wright, 1996: 72).
SPATIALISED SOCIAL RELATIONS IN NORTH EAST ENGLAND AND 

PARENT COMPANY 

The geographical political economy of closure’s emphasis upon the particular 
character of spatialised social relations and their constitution as part of an 
unfolding social process emphasises the particular context of the North East’s 
historical evolution of social relations and the specific history of changing 
social relations of ownership and control of R&DCo within ParentCompany. 
The North East’s 19th Century growth of ‘carboniferous capitalism’ shaped the 
particular character of regional social relations through, sometimes 
paternalistic, industrial pioneers and moderate, often accommodative, trade 
unionism (Austrin and Beynon 1997). Long-run decline of its industrial base 
created a ‘state-managed’ (Hudson 1989) ‘branch plant economy’, 
economically weak and politically peripheral, with an increasingly service-
oriented economic base, characterised by external control and limited 
strategic functions such as headquarters and R&D (Pike, 1999). Recurrent 
rationalisation and closure have punctuated this dependent industrialisation, 
including Fujitsu and Siemens’ demise in the 1990s (Dawley 2003), creating 
relatively high redundancy rates.

Historically, traditional industry closures mobilised local political resistance 
(NorthTynesideTradesCouncil 1979; Hudson and Sadler 1986). Such 
collective action has largely waned, bar some limited localised cases, amid a 
sense of inevitability and politics of post-industrial modernisation (Robinson 
2002). The depth and chronic nature of de-industrialisation have underpinned 
a neo-corporatist consensus around institutions of adaptation. Closures have
become accepted symptoms of volatile ‘globalised’ investment flows with a standardised institutional response (Pike, 2002). Social relations in the North East have been dominated by the politics of the workplace, supported by an allied and supportive community politics, and its militant particularism has been largely accommodative to the needs of capital and national and regional state modernisation strategies.

Historically, *ParentCompany* has forged close relations to the British state and finance capital in The City of London as a ‘Blue Chip’, leading member of ‘UK Plc’ and bellwether of British manufacturing technological leadership. It has a London headquarters and array of international manufacturing and service operations. In the late 1990s, intense competition led *ParentCompany* to focus and internationalise its core business of industrial power systems, particularly in civil and defence aerospace markets. A matrix structure of ‘customer facing business units’ supported by operating units and functions (including engineering and technology) was established to enhance customer, product and operations focus, quicken decision-making, devolve accountability, and enhance flexibility and responsiveness (*ParentCompany* 1998a). Despite claims of ‘globalisation’ and significant manufacturing contracting-out, *ParentCompany* remained highly embedded in its British ‘home base’, accounting for over 75% of employment and turnover and nearly 66% of net assets in the late 1990s (Pike, 2001). The particular character of spatialised social relations in the North East and the historical legacy of repeated changes in the social relations of ownership and control combined to shape the initial moments of marginalisation of *R&DCo* within *ParentCompany’s* new corporate organisation and strategy.

**MOMENTS IN THE UNFOLDING SOCIAL PROCESS OF CLOSURE OF R&DCo**

The geographical political economy of closure seeks to reveal the underlying social relations and social processes involved rather than treating closure as a
discrete event. The origins of R&DCo’s closure were historically entrenched tendencies shaped by its particular embeddedness in the North East and its relations with ParentCompany, comprising strategic and organisational marginalisation, under-investment, fragmentation and the selective incorporation of specific activities. R&DCo’s changing ownership history meant unstable development and local roots erosion: “the original identity of R&DCo was lost, the old company logo dispensed with and there was a general impression that NEI did not really know what to do about R&DCo” (Norman Searle, Former Departmental Head, in Wright, 1996: iii). R&DCo’s lack of a role was reinforced by a legacy of relative under-investment. ParentCompany’s pursued ‘shareholder value’ through short-term revenue and profitability growth (Williams 2000) and under-invested in R&D despite increasing sales revenues (5.7% of turnover (£206m) compared to 10% amongst its main rivals ABB, SNECMA and Siemens in 1996) (Pike, 1998). From the 1960s, R&DCo pioneered the outsourced and fragmented model of internal and external contract R&D (Whittington 1992). Amid intensified external competition, R&DCo had to generate and/or raise capital and meet return on investment targets while ParentCompany under-invested in R&D. R&DCo displayed elements of technological leadership, generating some spin-off companies and licensing agreements, but its culture was research not manufacture. Its commercialisation record was relatively weak, hampered by inefficient costing and relatively high overhead costs.

Following a fire at R&DCo’s premises and a public campaign in 1994 (Pike and Tomaney 1994), ParentCompany budgeted £3m for a ‘new’, smaller
R&DCo with a reduced range of activities on a new site nearby. ParentCompany management replaced local R&DCo management, enforcing a pay freeze, test tower closure and cessation of the metal spraying and optical filters activities (Wright, 1996). Challenging (Checkland 1975)’s ‘Upas Tree’ thesis, the latter team established a profitable spin-off company in Tyneside. ParentCompany allegedly collected a £12m insurance payment and £400,000 from Newcastle City Council to retain R&DCo in the city. ParentCompany’s new Advanced Engineering Centre (AEC) was established outside R&DCo.

From a peak of over 350 in 1967, R&DCo’s employment collapsed from 225 in 1993 to 84 in 1998, fuelling rumours regarding its viability. R&DCo was reorganised into disciplinary teams embracing core markets for aeroengine and marine propulsion factories in Derby and Bristol and external contractors (materials testing and instrumentation, coatings and joining and electro-mechanical systems including the stress analysis team). As highly qualified ‘knowledge workers’ (8 PhDs, 25 BScs and 20 HNCs with 21 years average service) with a predominantly masculine employment culture, R&DCo’s different engineering disciplines worked together ‘under one roof’ in one place, increasing technological spill-over potential and the exchange and utilisation of tacit knowledge. By 1997, R&DCo was trading profitably within ParentCompany. A specific social process of closure shaped by the particular articulation of social relations and R&DCo’s characteristics conditioned its evolutionary trajectory and fostered many of the conditions that precipitated its eventual closure. The geographical political economy approach reveals the
particular transformations over time in the status, form and character of R&DCo’s closure.

Clark and Wrigley’s (1997: 343) claim that: “In unpacking the concept of exit, there is a clear need to deal explicitly with the incremental and sequential nature of corporate decision-making” connects directly with the geographical political economy approach to the unfolding social process of closure — characterised by episodic socio-spatial ‘moments’ — marked by specific conjunctures of structural forces, social agency and the particularities of places. ParentCompany’s strategy to establish defensible technological leadership in industrial power systems consolidated the group engineering and technology function, directed from a single site in Derby (East Midlands), to develop close links to new business and operational unit needs, explore medium and long-term business development, strengthen group technology development and exploitation and improve group technology base access (ParentCompany 1998a). The social relations of ownership and control exercised social power through ParentCompany in proposing R&DCo’s closure as it sought to relocate the core electrical machines and stress analysis teams and AEC to Derby. ParentCompany sought technology group integration and development, recruitment and career development, communication and integration with internal customers, accelerated group technology dissemination and adjacent location to related technology teams and support facilities (ParentCompany, 1998a: 4).
On 18 February 1998, the formal closure proposal was announced. R&DCo’s activities were described as contract engineering and testing work, primarily for internal customers based in Derby, that was not considered viable on a “small, independent site” due to:

i) business risk – the order book horizon is short and the nature of the work, overflow from other groups, means that R&DCo is exposed to significant work load uncertainties of its customers in the medium to long term; ii) overhead – the sites costs and management overheads of a small independent site are a significant burden when compared to the cost of integrating these activities with existing groups on larger customer sites (ParentCompany 1998b: 4-5).

ParentCompany announced a ‘comprehensive programme’ of intra-group outplacement or redundancy support. Rather than any single or easily identifiable determining event or factor, the closure proposal was shaped by social relations and social power and the conjunction of particular historically developed tendencies at R&DCo. The proposal was cast in corporate terms that constrained R&DCo local management, trade unions and regional institutions’ scope to contest and respond.

WORKPLACE AND COMMUNITY POLITICS AND MILITANT PARTICULARISM IN THE SOCIAL AGENCY OF THE WORKFORCE AND REGIONAL INSTITUTIONS

The particular configuration of social relations and the unfolding of the specific social process of closure of R&DCo revealed differential potential that both
enabled and inhibited possibilities for social agency and collective mobilisation by the workforce, trade unions, community and local and regional institutions. Echoing the moderate traditions and workplace dominated politics of regional trade unionism, R&DCo’s Joint Union Committee (JUC) had a long history of joint working with management. The JUC’s response to closure sought clarification, challenged the proposal and lack of consultation, pursued workforce redundancy and closure payments, represented transferred members and mobilised community politics for a political and press anti-closure campaign and alternative strategy, lobbying public representatives (Ministers, MPs and MEPs) and the ParentCompany board.

The anti-closure report highlighted the ‘headless economy’ created by the loss of strategic R&D activities and jobs not easily replaced by recent call centre and assembly-oriented inward investment (Pike, 1998). R&DCo appeared profitable, growing, able to cover its overheads and could be integrated into ParentCompany’s decentralised engineering and technology structures to tap into geographically dispersed centres of expertise. The costs of closure comprised £3m from R&DCo’s 1994 relocation, penalties for current contract delays and loss of goodwill with strategic customers, redundancy and closure payments, relocation and equipment removal expenses. Alternatives comprised finding a buyer and attracting public support to re-integrate discarded fragments into the regional engineering research and technology base. ParentCompany remained unresponsive. Its ‘proposal’ hardened into a ‘decision’ until the stress analysis team’s decisive social agency and refusal to relocate. Rather than an expression of labour solidarity, ParentCompany’s
rationale for closing R&DCo was being undermined by the collective sum of individual decisions amongst a key section of the workforce to remain in the region and reject an enhanced salary (up to 15% higher) with temporary terms. ParentCompany’s initial stance then softened: “We are continuing with the policy of relocating core technologies within R&DCo to Derby but... …we hope to redeploy some of our specialist engineers within the North East” (ParentCompany spokesperson quoted in (Cameron and Brady 1998): 1). The unorganised AEC staff either agreed to transfer or found jobs elsewhere.

Despite low levels of business R&D in the North East — 0.86% of regional GDP (1.34% nationally) and 0.48% of the regional labour force (0.67% nationally) in 1995 (CSO 1997) — and R&DCo’s perilous situation, the social agency of regional institutions was constrained. A coherent response failed immediately to emerge due to R&DCo’s small size relative to larger existing and externally-owned regional R&D operations (Northumbria Water, Procter and Gamble), the inward investment agency’s confidence in attracting further R&D activity and other technology development initiatives. Government Office North East (GONE) Director commented: “The R&DCo news is bad news but there are other things that we need to explore, and the emphasis should be on innovation” (quoted in (Cameron 1998b): 5). Labour MEP Alan Donnelly eventually convened senior officials from GONE, Northern Development Company and Tyneside TEC behind closed doors to address R&DCo’s plight. Their institutionalised politics and collective diagnosis — a private decision by a private company — aligned with the prevailing political-economic order and conditioned their agency and ability to shape events at this ‘moment’ of
potential intervention. A ‘business case’ with public funding was put to ParentCompany’s board to retain at least some jobs at their existing operations in the region, supported by trade unions and the press:

But beyond the importance of this valuable facility to individual staff is its immense significance to a region which already suffers from a shortage of key R&D facilities. If the North’s economy is to flourish in the long term, its growth must be underpinned by the technical know-how and innovation provided by units like R&DCo. The region can ill-afford to lose such facilities: keeping hold of even a faction of their expertise will at least provide some foundation for a recovery in the future (Editorial, The Journal, Monday 30 March 1998: 10).

ParentCompany made no application for assistance. Local councillors accused it of reneging on its deal with Newcastle City Council to re-establish R&DCo (Cameron and Brady 1998). Social process involves “disruption, change and conflict as such the outcome is always uncertain” (Massey, 1995: 311) and contains no linear or programmatic set of stages as agents adjust their aspirations, intentions and action in the light of events. The particular social agency and pragmatic militant particularism of a section of the workforce and local and regional state institutions mediated the structural economic imperatives articulated by ParentCompany in their decision to close R&DCo.

Geographical political economy’s linkage of explanation to analysis of implications revealed how closure triggered the break-up of a technical workforce and the splintering of its collective assets in organisational and
geographical terms (Table 2). Efforts to salvage jobs for the region were limited. Fifty one (61%) secured employment through relocation and transfer within ParentCompany: 29 (35%) in the North East, 20 (24%) in the East Midlands and 2 (2%) in the South West. Amidst claims that their relocation was never finalised, ParentCompany had to accept the stress analysis team’s refusal to move to Derby and relocated all 13 staff to a nearby ParentCompany aerospace plant in Sunderland with enhanced salaries but temporary contracts. Four other members of the electrical machines team accepted similar temporary contracts and moved to Derby while the remaining 3 work away in Derby from the North East. Thirty two (38%) were made redundant, including the welding and instrumentation teams. The relative dearth of venture capital and R&D activities in the region, combined with asset stripping and ParentCompany restrictions on equipment re-use, undermined potential spin-offs. Bodycote purchased the R&DCo site, safeguarding 11 materials testing jobs but without trade union recognition.

<table>
<thead>
<tr>
<th>Number</th>
<th>Destination and Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Redundant. Unknown destination.</td>
</tr>
<tr>
<td>13</td>
<td>Electrical Machines/Stress Analysis Team relocated to ParentCompany aerospace factory, Sunderland.</td>
</tr>
<tr>
<td>11</td>
<td>Advanced Engineering Centre relocated to new Engineering and Technology Centre, Derby.</td>
</tr>
<tr>
<td>11</td>
<td>Materials Team, including machine shop and materials testing, acquired by Bodycote on former R&amp;DCo site.</td>
</tr>
<tr>
<td>7</td>
<td>Electrical Machines Team relocation to ParentCompany factory, Derby. 5 on 1 year contracts, 2 on permanent contracts.</td>
</tr>
</tbody>
</table>
3  Relocation to *ParentCompany* factory, Hebburn, South Tyneside.

2  Relocation to *ParentCompany* factory, Derby, East Midlands.

2  Relocation to *ParentCompany* factory, Bristol, South West region.

2  Relocation to *ParentCompany* factory, Gateshead, Tyne and Wear.

1  Former AEC employee moved jobs to wind turbine connector company.

Total 84

**Source:** Author’s research.

The final ‘moments’ of *R&DCo*’s closure unfolded as a slow dissolution outwith the public realm. The community politics of former employees, the social agency of affected groups and the contingency of local context shaped the JUC’s actions, particularly *ParentCompany*’s local history of undermining pension rights in a forging operation closure in Newcastle. The JUC negotiated enhanced redundancy settlements and closure payments but their Industrial Tribunal claim for a protective award failed following a pre-emptive settlement. The rising cost of closing *R&DCo* — estimated at £400,000 — led to the departure of several senior managers and *ParentCompany* board level recriminations regarding the handling of the closure.

**CONCLUSIONS**

After 36 years, *R&DCo* finally closed on 12 June 1998. This empirical case has been analysed with the aim of building a geographical political economy approach to closure by addressing the issues of understanding and
conceptualisation, explanation and causation, implications and geographically uneven responses. The approach has built upon the critique of existing approaches by conceptualising closures as constituted by spatialised social relations and characterised by a social process of production that unfolds over time, across space and in place. The historically evolving social process of closure — marked by particular socio-spatial ‘moments’ — reveals how spaces may open up, contingent upon the specific conjunctures of structural forces, social agency and the particularities of places, to support and/or hinder the potential for intervention by public institutions and/or mobilised coalitions of resistance.

The conceptualisation of spatialised social relations illustrated: the particular historically constructed character of social relations in North East England; the structuring role of the social relations of ownership and control exercised through a corporate entity over time, across space and in place; and, the ‘bounded indeterminacy’ between spatialised social relations and the contingent nature of their specific manifestations in particular times and places. This understanding shaped the explanation of causation in the analysis of R&DCo’s demise in general terms (e.g. changing ownership structures, authority and social power to decide upon and enact closure, British capitalism’s short-term focus on ‘shareholder value’ and under-investment in R&D, spatial interdependencies in corporate geographies) and in specific articulations particular to corporate context (e.g. refocused corporate strategy, centralisation of engineering and technology), social agency (e.g. elements of the existing workforce’s regional embeddedness and
unwillingness to relocate) and time and place (e.g. North East’s history of accommodative and moderate trade unionism, weak levels of R&D investment and employment). This analysis demonstrates the conceptual, analytical and explanatory value of placing social relations, social power and social agency at the heart of geographical political economy.

The social process of production of closure integrated temporal evolution across space and in place with the specific conjunctures of structural forces, social agency and the particularities of places into the analysis of causation and implications. Transformations in the status, form and character of R&DCo’s experience of closure were periodised in particular socio-spatial ‘moments’ comprising: the evolution of historically entrenched legacies shaped by its relations with ParentCompany; the discursive construction and contestation of the closure ‘proposal’; the workforce and community politics, militant particularism and constrained social agency of the trade unions and local and regional state institutions; the splintering of the workforce; and, the slow dissolution. Although these moments were unique to R&DCo’s experience, the analytical framework of unfolding concrete events that integrates historical evolution across space and in place is generalisable. This approach can interpret how other closures may experience both common and different socio-spatial conjunctures and trajectories.

The geographical unevenness of responses to closure was understood as the specific articulations between wider webs of spatialised social relations and particular circumstances. The geographical political economy approach
explained the spatial differentiation of responses to closure by using
generalised concepts (e.g. workforce and community politics, militant
particularisms) to analyse the specific characteristics rooted in particular
places (e.g. alignment of limited elements of workplace and community
politics to contest the closure, moderate traditions of militant particularism)
and the differential potential for social agency and collective action across and
between moments unfolding in the particular social process of R&DCo’s
closure (e.g. the stress analysis team’s refusal to relocate to Derby, the
narrow diagnosis and constrained response of regional institutions, corporate
adaptation of initial proposals). Thinking through spatialised social relations
and an unfolding social process reveal how spaces of collective action may
open up and/or contract during a closure.

One of the greatest challenges in formulating Yorkshire’s regional
policy is to see whether the coalfield can *close in a different way* from
the way in which coalfields closed in Yorkshire and throughout the
country in the 1980s and 1990s (John Grogan, Labour MP, Selby,
Hansard, Col. 35WH, 7 January, 2003; Author’s emphasis).
Building a geographical political economy of closure demands a political and
policy response. What should, can or might be done about closures?
Interpreting the bounded indeterminacy of closures as constituted by
spatialised social relations and characterised by an unfolding social process
marked by moments with differential potential for intervention and collective
action connects with *praxis*. Opportunities may emerge to render the closure
process open to social agency by individuals, collectives and organisations —
workforces, trade unions, local management, local, regional and national state institutions, civil society, communities — to attempt to shape the unfolding process to produce particular outcomes. As R&DCo’s experience revealed, closure proposals and decisions do not set in train inevitable, predetermined processions of events. The structural imperatives and social power of globalising forms of capitalism are enacted and mediated through social relations and socio-institutional formations over time, across space and in place. This is not to imply that closures can easily be stopped nor transformed into unqualified positive outcomes within the geographical political economy of contemporary capitalism — indeterminacy is bounded. However, history suggests the narrow repertoire of political tactics and social practices used by anti-closure campaigns during the 1970s and 1980s were consistent failures but revealed: “evidence that workers, their families and communities were not passively accepting the negative local impacts of corporate and state strategies” (Beynon and Hudson, 1993: 178).

The geographical political economy approach opens up a range of possibilities for responses to closures. There is more than one ‘moment’ and possible agency through which to intervene in a closure process. These may include challenging corporate authority (e.g. through shareholder activism against short-termism and under-investment); prompting and supporting public debate and a more accountable politics of economic development able to question why closures are happening and consider alternative strategies; and, developing innovative public interventions to salvage the fragments and reintegrate discarded assets back into regional economies as part of building
institutional capacity to deal with increased cases of closures. Closures remain hugely costly to capital, including direct and indirect financial costs, disruption and absorption of managerial effort, adverse publicity, emotional costs, damage to managerial careers and potential irreversibility (Clark and Wrigley, 1997). Applying leverage to critical moments in the closure process may offer some possibilities to ameliorate and/or challenge potentially damaging effects through a politics based upon progressive collective action and social agency.

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