

## 1 Introduction

Much of the academic debate on globalisation and resistance has centred around an orthodox opposition between neo-liberal market ideology and Keynesian welfare economics, with a view to examining what scope may remain for the state to resist globalised market forces. This approach is restrictive because it examines too narrow a set of factors and obscures alternative avenues of resistance, which may not originate at the state level (Paterson 1999). It is also a somewhat misleading approach because globalisation was brought about largely as the result of deliberate action by both states and transnational business actors (Helleiner 1996; Korten 1995: 133–40). This article has emerged from a study in which local exchange trading systems (LETSsystems, LETS) were postulated as a community-based, local and largely spontaneous form of resistance to globalisation through which the members of local communities attempted to address a number of socio-economic and environmental problems (Glover 1997). In this article I offer an analysis of local alternative currency systems which examines their significance from a specifically environmental perspective. I will discuss the ways in which Green consciousness and political thought inform the actions of LETS members and consider the role of LETSsystems as a vehicle of environmental resistance. I will conclude by considering the potential contribution of LETS to local sustainability and discuss some pointers for future development.

## 2 Globalisation and Environmental Resistance

Frequently, globalisation is conceived in almost exclusively macro-economic terms and is measured using a narrow set of quantitative and economic indicators, neglecting the complex cultural and sociological aspects which many understand to be important signifiers of globalisation (Hirst and Thompson 1996; Paterson 1997, 1999). In fact 'globalisation is not just an abstraction, but a felt experience by millions of individual people' (Gills 1997: 13). It directly affects the social lives as well as the economic livelihoods of individuals and communities at the micro level. Individuals

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<sup>1</sup> I would like to thank Peter Newell for his insightful remarks on earlier drafts of this article.

# Defending Communities

## *Local Exchange Trading Systems From an Environmental Perspective<sup>1</sup>*

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and communities experience globalisation as a series of threats to a number of key interests which are not exclusively economic. Among these is the threat posed to ecological sustainability (Glover 1997).

The damaging consequences of globalisation have been described as a 'global threefold human crisis' in which environmental destruction is ranged alongside deepening poverty and the disintegration of community structures (Korten 1995: 21; cf. Dauncey 1988: 1). The harm caused to the environment cannot be neatly separated from the damage inflicted on economic welfare or community vitality. All three derive from the inherent, expansionary logic of capital accumulation applied on a global scale (Paterson 1999; Shiva 1993). For example, the growth of long-distance trade increases pollution and resource use at the same time as it increases the competitive pressures on local businesses and workers. Specialisation on a global scale produces both monocultural ecosystems and homogeneous workforces at the local level, diminishing the diversity, flexibility and self-reliance of the human community as well as the local environment (Helleiner 1999: 7–8). The narrow economic definition of development within neo-liberal ideology consistently undervalues social norms and harms traditional, non-economic social structures (Ekins 1992; Sachs 1993).

Under conditions of globalisation businesses have an increased capacity to externalise costs, especially non-economic ones such as environmental damage. Managers are accountable to their shareholders and investors rather than the people who live in the localities where they carry out their business. Their decisions are guided almost exclusively by the necessity of returning a financial profit. Local communities have little effective control or scrutiny over decisions which may have a direct and profound impact on their local environment or economic welfare (see Stopford and Strange 1991; Strange 1994; Cox with Sinclair 1996: 298). Equally, just as the costs of production may be externalised onto the local community, the benefits (such as profits) may be exported out of the area.

These changes reflect the deliberate restructuring of economic space to suit the interests of transnational capital. The transaction costs involved in doing business across borders have been systematically reduced in order to bring about Kenichi Ohmae's 'borderless world' (Helleiner 1999; see also Jackson 1997). The cumulative effect is to diminish the self-sufficiency of local communities, making them increasingly sensitive and vulnerable to developments elsewhere in the world economy (Douthwaite 1996; Dauncey 1988). From a local environmental point of view, they tend to distance consumers from the source and method of production, obscuring the environmental costs of consumption (Paterson 1999: 136).

As Paterson (1999) has suggested, resistance to these threats is emerging in a form that would not be anticipated by the orthodox literature on globalisation and state power. It is appearing in the form of social movements at the local level such as local currency systems, community-supported agriculture, car-sharing schemes and community self-build housing projects (New Economics Foundation n.d.). To a large extent this resistance is being driven by the spontaneous behaviour of ordinary people who often are not informed by theoretical insights or pursuing a coherent political strategy. In this respect the response can be interpreted as an incipient Polanyian countermovement against the process of globalisation (Polanyi 1944; Glover 1997; Mittelman 1998).<sup>2</sup> Just as the threat posed by globalisation comprises a bundle of economic, social and environmental dangers, the countermovement is characterised by an 'emerging and varying consciousness of resistance' across a number of spheres which 'merge and interpenetrate' (Mittelman 1998: 848). Among these, environmental concerns are prominent. The multi-faceted character of the resistance is aimed at 're-embedding' the economy in both society and nature and hence can be seen as explicitly environmental in its character (Mittelman 1998). Insofar as the resistance has a political or ideological foundation it is drawn primarily from Green political thought rather than traditional Marxian or social-democratic critiques (Helleiner 1999: 4).

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<sup>2</sup> Mittelman suggests the use of the term 'move' rather than movement to describe similar 'micro-counter-globalising tendencies' to recognise the proto forms of

such activities before the transformative potential of a true Polanyian countermovement can be ascribed to them (Mittelman 1998: 867).

The politically distinctive character of the response can be seen in the way that local initiatives may receive support from various parts of the political spectrum. It is significant that some of the advocates for local currencies draw support both from Friedrich Hayek's work on the denationalisation of currency (Helleiner 1999: 29; Dauncey 1988: 285; Linton *et al.* 1986: 197) and from traditionally left-wing ideas about social justice. Johan Galtung has remarked that 'in self-reliance there is both an element of enlightened egoism (don't give away the positive externalities) and enlightened altruism (don't damage others by exporting negative externalities)' (Galtung 1986: 101). Similarly, Paul Ekins has noted that politicians of all persuasions feel able to endorse cooperative businesses: "Socialists regard them as a form of "social ownership", whereas Conservatives think of them more in terms of "partnership" (Ekins 1986: 284). Grassroots initiatives like local currency systems can be interpreted as supporting ideas of free enterprise and personal responsibility as well as community welfare and social inclusion. For activists, this presents the intriguing possibility of forming coalitions with both economic liberals and social democrats.

### 3 Time Dollars and LETSsystems

Given the pervasiveness of the contemporary global market and neo-liberal norms, any community initiative to establish independent control over its economic and social affairs must inevitably entail an effort to disconnect the local economy from the international one. As individuals perceive the effects of their sensitivity and vulnerability to external economic shocks, they are likely to develop strategies to insulate themselves from the world economy and substitute their dependence on it as far as possible. To be effective, the disconnection is likely to require the development of distinct alternatives to the prevailing liberal economic orthodoxy (Douthwaite 1996). Hettne (1995) has suggested that such an alternative can be found in Polanyi's concept of a socio-economy based on reciprocity. Local currency systems may represent a concrete effort to build such a system.

There are two basic forms of local currency system currently operating in different parts of the world. In the United States 'time dollar' systems predominate, of which the best-known is the Ithaca Hours system developed by Paul Glover in Ithaca, New York State. Time dollar systems issue real currency notes in denominations of time (for example, quarter-hours) which may be used to buy goods and services from businesses and individuals in the local area. Businesses willing to accept time dollars advertise in a special magazine distributed around the locality. Regular meetings take place to decide whether new notes should be issued. Otherwise the system requires relatively little formal management (Douthwaite 1996; North 1998).

In Canada, the United Kingdom, the Republic of Ireland, Australia and New Zealand, as well as some other European countries, LETSsystems predominate. The first LETSsystem was established by Michael Linton in Canada in 1983 (Seyfang 1994: 7). In August 1997 a website which aimed to collect information about all the existing systems worldwide suggested that there were in excess of 950 LETSsystems throughout Western and Northern Europe, Northern and Central America, as well as Australia and New Zealand (Project LETSlist 1997). Since LETSsystems are not coordinated centrally it is difficult to verify any such claim, but it is unlikely to be a grossly inflated figure.<sup>3</sup> In Britain the number of schemes grew dramatically from just five schemes in early 1992 to an estimated 350 in May 1995 (Williams 1995a: 214) and later levelled off at around 450 (Project LETSlist 1997; LETSlink UK 1997a). Impressionistic evidence suggests that whereas the growth in the number of systems has peaked, the number of people involved is still increasing. Research by Colin Williams found that the volume of trade taking place in LETSsystems increased steadily during the first five years of their existence (Williams 1996).

Although LETS is often referred to as a type of bartering system it is more properly regarded as a local currency system (Boyle 1993; LETSgo Manchester 1997; New Economics Foundation n.d). Systems

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<sup>3</sup> Figures on LETS activity are prone to be unreliable. Project LETSlist did not give figures for Australia, Spain or Holland; Seyfang and Urban Ecology Australia (UEA) suggest that Australia has 200 LETSsystems. For New Zealand, Project LETSlist gives a figure of 47 systems

whereas UEA gives 60 and Seyfang gives 80. UEA believes that there are 500–600 LETSsystems worldwide (Project LETSlist 1997; Seyfang 1994: 7; Urban Ecology Australia 1997).

are autonomous and hence there is variation in the way they are run, but certain features are standard. Members are able to trade their goods and services with one another using a local currency which is merely a notional unit of account. The value of the unit will sometimes be linked to the national currency or to a unit of time, but there are potential problems with both approaches and therefore the onus is often placed on traders themselves to agree a satisfactory exchange. All trades and account balances are recorded centrally. A directory of offers and requests for goods and services is distributed periodically to all the members. Any member is entitled to see a statement of account for any other member. All new accounts begin with a zero balance, and the quantum of trading for the entire system should normally balance at zero because the total debt should be balanced by an equivalent credit. No interest is charged on a debit balance (known as a commitment) or accrued on a credit balance. Indeed, LETS members are encouraged to go into debt because by doing so they facilitate trade. The administration of the system will normally itself have an account, and most systems operate some form of membership fee or subscription charge, which may be in the national currency, to cover administration costs. Many systems place an emphasis on the organisation of social events in order to introduce members to one another and facilitate trading (Seyfang 1994: 7–8; Douthwaite 1996: 64–73; Sallnow 1994; Williams 1995b: 329; Boyle 1993: 90; Warwick and Leamington LETS Directory, March 1997; LETSlink UK 1997a).

LETS systems are claimed to fulfil a number of needs. According to a national survey of LETS systems carried out in Britain in May 1995, three major reasons for establishing a new LETS were often cited: rebuilding an independent localised economy; developing a sense of local community; and helping to build self-esteem and improve the quality of life of those excluded from the money economy (Williams 1995b: 329). In a later survey, Williams concluded that the primary motivation behind the development of LETS systems was to enable the unemployed to engage in productive work in the depths of an economic recession. Other goals such as rebuilding a sense of community and creating a more localised economy assumed secondary importance (Williams 1996). Among activists, the most commonly cited benefits are often the economic

ones. LETS systems can help the poor to buy goods and services for which they have insufficient cash; they can also enable the unemployed to practise their skills, contribute services to their community and avoid the isolation that redundancy often brings (Sallnow 1994: 33; Williams 1995a). In common with other local currency systems, a LETS system can also help to stimulate local businesses because a LETS unit 'cannot leak out of the local economy' (Steven Gorelick, quoted in *Economist* 28 June 1997: 65). 'Wealth created by LETS stays local. In that sense, it is a counterweight to the galloping globalisation of the economy, dominated by transnational corporations, global financial institutions and the stock markets' (Sallnow 1994: 33).

However, broader social and ethical considerations often assume importance too. Much emphasis is placed on the fact that a LETS currency is 'a measure – not a commodity, that can be monopolised by a few' (LETSlink UK 1997a). A LETS unit has value only as a unit of exchange which facilitates and records trade in real goods and services. It is freely available to all members because the currency is created by the very act of trading (*ibid.*). Many of the early LETS systems were established by members of the Green Party, and the schemes reflect a Green political agenda of local empowerment and participatory democracy (Sallnow 1994: 33; Williams 1995b: 330–1; LETSlink UK 1997b). From a specifically environmental point of view, LETS economies are claimed to facilitate the repair and recycling of goods rather than consumption of new goods (LETSlink UK 1997b; LETSgo Manchester 1997). LETS systems are also claimed to contribute to sustainability by localising the economy:

the LETS system ... helps to ground a local economy in its own resources, encouraging local production for local need, and strengthening the resource base and the ecological stability of the area (Dauncey 1988: 63).

It has been noted elsewhere that the claims made by prominent activists and practitioners should be treated with caution because they are frequently normative and predisposed in favour of LETS (Helleiner 1999: 4). It is important to try and evaluate the extent to which evidence supports these claims. In an effort to do this, in July and August 1997 I carried out a small case study of a

LETSystem in Warwickshire, England, in which I assessed the degree to which its members appeared to see their participation in LETS as a vehicle of resistance against globalisation (Glover 1997). The central finding of the study was that whereas the political or economic awareness and commitment among the members varied quite widely, a clear majority of the participants displayed obvious signs that their involvement in the LETSystem reflected a desire to resist the unwelcome consequences of global economic change. The substance of the evidence is summarised briefly below.

Participants in the survey regarded the LETSystem as an important community-building tool which combated the damage inflicted by globalisation on the local community. It was complained that the prevailing economic circumstances in the cash economy had eroded community structures, putting pressure equally on workers and the unemployed. LETS was seen to 'give people outside of the cash economy the opportunity to ... use their talents [and] skills' (interview, 20 August 1997) and to 'serve, ... take part, ... contribute, ... be valued and ... be trusted by' their neighbours (interview, 30 July 1997). In this way LETS succeeded in uniting the social and economic factors of economic life, which the mainstream economy failed to. In particular, it enabled people to encounter one another in ways which were more rewarding than the anonymity of doing business in the money economy. Many of the respondents used the language of favours and sharing to describe the operation of the LETSystem, some individuals remarking that after a while they became inclined to overlook the matter of formal payment on the assumption that in time a favour would be returned. One interviewee concluded: 'LETS creates community, because it creates trust' (interview, 30 July 1997).

The system was also seen to have economic advantages over the cash economy. Although the majority of the interview subjects had done only a small amount of trading, for some individuals LETS had had a major impact on their quality of life and enabled them to achieve goals that the mainstream economy would otherwise have ruled out. LETS provided access to freely available interest-free credit and enabled individuals to participate in productive economic activity where previously a shortage of cash had made this impossible. Economic

participation had tremendous benefits in terms of self-esteem because individuals became aware that they had a contribution to make to their community and could provide help to others.

Finally LETS was seen to have the potential to restore a degree of control and accountability to the members of the local community. As well as being an economic system, the LETSystem was an exercise in participatory democracy which combated the alienation prevailing in the global economy. Significantly, one interviewee related LETS to 'a Green agenda of living' which he understood explicitly to mean resistance to globalisation (interview, 1 August 1997). In this respect LETS was seen as a vehicle for exploring the potential of 'social change, social engineering perhaps' (interview, 31 July 1997), because it encouraged participants to confront the implicit value judgements routinely made in the money economy. LETS had a transformative potential because it helped people to 'imagine how they could do things otherwise' (interview, 30 July 1997).

#### **4 LETS and Environmental Resistance to Globalisation**

Intriguingly this series of interviews did not yield explicit remarks to suggest that members saw the LETSystem in specifically environmental terms. However, it was clear that many of the interviewees were concerned about environmental issues. Some acknowledged the prominent role played by Green activists in establishing the LETSystem, and a number of the interviewees had been introduced to the system through contacts with Greens or as a result of visiting the local environmental and health-food shop which acts as an informal centre for Warwick and Leamington LETS. The system was also seen as an effective mechanism for recycling and re-using goods. Meanwhile an examination of the accounts shows that a number of people buy and sell organic fruit, vegetables and compost using the local currency, which suggests that the system is used to promote and access positive environmental practice.

One possible reason why members themselves did not give greater prominence to the environmental importance of LETS is that they may apply a narrow understanding of environmentalism which encompasses prominent global problems such as deforestation, global warming and the hole in the ozone layer, but

engages with the local environment in a different way. As environmental harm is inextricably intertwined with other problems caused by globalisation it is not easy to distinguish the specifically environmental threats. This is neatly illustrated by a remark made recently by a prominent member of Warwick and Leamington LETS who is also involved with the Local Agenda 21 initiative in the district. He said that he did not regard LETS as having a particular environmental significance, but felt that it had a lot to do with building sustainability (conversation, 31 March 1999). His perception of sustainability focused on concepts like social inclusion, job creation and economic welfare, rather than environmental issues. However, if the environmental harm is perceived to be linked to the prevailing economic system, it can be seen that alternative economic models such as LETS are likely to have more positive implications for the environment.

In assessing the potential and effectiveness of LETS systems as a vehicle of environmental resistance to globalisation, it is important to recognise the limitations of the LETS concept. Although the LETS model may be judged to have significant potential, it is unlikely to replace the functions of the cash economy. Unless the number of members in a system reaches a critical mass, the opportunities for trading are likely to remain limited (Williams 1996). There are a number of obstacles which make it hard for LETS systems to make this breakthrough. Impressionistic evidence from the UK suggests that some LETS systems have been significantly more successful than others in sustaining the necessary momentum. A key obstacle for LETS system growth is the difficulty of achieving the necessary size and diversity without the involvement of businesses. Unfortunately, certain limitations inherent in the LETS model tend to discourage businesses participation. For example, the administration required to manage the accounting system which lies at the heart of the LETS system gives rise to transaction costs which do not affect the cash economy or time-based currency systems. Meanwhile the absence of an effective enforcement mechanism to discourage defection, combined with the limited size and scope of most LETS systems, makes them an unsuitable tool for commercial businesses (North 1998).

However, these limitations should be seen in an appropriate context. LETS was designed primarily not to boost business but to empower individuals at the margins of the mainstream economy and to

develop communities: 'LETS ... is essentially a tool to create freer economic relations between traders – not to facilitate business competitiveness' (North 1998: 123). 'The LETS system is not meant to replace ordinary money – it is meant to be used alongside it' (Dauncey 1988: 59). Mainstream businesses may choose to participate for reasons not directly connected with competitiveness; but they are perhaps unlikely ever to do large amounts of business in LETS units. The benefit of a LETS currency lies in the fact that it is a collective resource designed to facilitate trade among its members in a limited local area, rather than a species of private property which can be bought and sold in its own right on international exchanges. By localising the economy and reconnecting local consumers with local producers LETS systems can make an important contribution to environmental sustainability. In facilitating economic activity which would otherwise be stifled for lack of cash, they supplement the failures of the mainstream economy by including those who are marginalised by unemployment or poverty, or who, like lone parents, are otherwise unable to go out to work in a traditional job.

LETS systems represent an important variety of what Stephen Young has called 'third force organisations' (TFOs) in civil society (Young 1997). As Young has shown, the capacity for TFOs like LETS to promote socio-economic benefits and sustainable development has been recognised by many local authorities, which increasingly are commissioning such groups and organisations to work towards these goals on their behalf. This development reflects the way in which local authorities are challenged by spontaneous community initiatives, and feel required to respond with encouragement and financial assistance:

TFOs have been developing in range and scope in spheres that have been neglected by the state and the market. They have been expanding at a time when the local state's role as a direct provider has been contracting ... The flexibility of the TFO model and its capacity to mobilize resources suggest that it [helps to] fill gaps left by the public and market sectors (Young 1997: 224).

Local authorities may find that working in partnerships with grassroots TFOs such as LETS proves to be a more effective strategy for securing sustainable development than the top-down methods which

are otherwise available to them. TFOs represent an opportunity as well as a challenge because they enable local authorities to stretch resources which have been severely limited by financial pressures and legislative changes, in the pursuit of local development goals which might otherwise not be practicable. This is a suitable point to recall the remarks made earlier about the potential for LETS activists to forge coalitions with allies from both wings of the political spectrum in pursuit of local community development.

Other factors currently inhibit the development of LETS systems. One of the most frequently noted

issues among practitioners as well as academic observers is the structure of tax and benefits legislation, which in the UK tends to discourage the very people who might benefit most from LETS, from participating in it (Tickell 1998; North 1998: 125). Clearly these obstacles need to be addressed if LETS is to grow further. However as this discussion has shown, the LETS model of sustainable local development may offer a platform on which to build a coalition encompassing environmentalists, community-development workers, and local government bodies to overcome these obstacles and promote positive environmental practice.

## References

- Boyle, David (1993) 'Practical theoretical money', *Town and Country Planning*, No. 62, pp. 90–1.
- Cox, Robert W. with Timothy J. Sinclair. (1996), *Approaches to World Order*, Cambridge: Cambridge University Press.
- Dauncey, Guy (1988) *After the Crash: The Emergence of the Rainbow Economy*, Basingstoke: Green Print.
- Douthwaite, Richard (1996) *Short Circuit: Strengthening Local Economies for Security in an Unstable World*, Totnes, Devon: Green Books.
- Ekins, Paul (1986). 'Co-operation: where the social meets the economic' in Paul Ekins (ed.) *The Living Economy: A New Economics in the Making*, London: Routledge, pp. 282–8.
- (1992) *A New World Order: Grassroots Movements for Global Change*, London: Routledge.
- Galtung, Johan (1986) 'Towards a new economics: on the theory and practice of self-reliance' in Paul Ekins (ed.) *The Living Economy: A New Economics in the Making*, London: Routledge, pp. 97–109.
- Gills, Barry K (1997) "'Globalisation' and the 'Politics of Resistance'" (Editorial), *New Political Economy*, Vol. 2, No. 1, pp. 11–15.
- Glover, Dominic (1997) 'Globalisation at the micro level: small-scale and community-based responses to global change', paper presented at the first annual post-graduate conference organised by the Centre for the Study of Globalisation and Regionalisation, Warwick University, December 1997. Available from the author at 13 Newbold Place, Leamington Spa, Warwickshire CV32 4HR, United Kingdom.
- Helleiner, Eric (1996) 'Polanyi and financial globalization: an alternative 'Austrian' perspective?', paper prepared for Workshop on Capital Mobility, Princeton University, March 1996.
- (1999) 'Think globally, transact locally: green political economy and the local currency movement', paper presented at the 1999 conference of the International Studies Association.
- Hettne, Björn (1995) 'Introduction: the international political economy of transformation', in Björn Hettne (ed.) *International Political Economy*, London: Zed Books, pp. 1–30.
- Hirst, Paul and Grahame Thompson (1996) *Globalization in Question*, Cambridge: Polity Press.
- Jackson, Mark (1997) 'Economic speciality, social justice and sustainability' (online), available from: <http://LUFELatrobe.edu.au/~LSSMOJ/proposal.html> (accessed 19 August 1997)
- Korten, David C. (1995) *When Corporations Rule the World*, London: Earthscan.
- LETSGO Manchester (1997) 'Frequently asked questions about LETS systems' (online), available from: <http://www.u-net.com/gmlets/faq.html#section> (accessed 20 August 1997)
- LETSLINK UK. (1997a) 'LETS is not like money ...' (online) available from: <http://www.communities.org.uk/lets/lets8.htm> (accessed 18 August 1997)
- (1997b) 'The benefits of LETS ...' (online) available from: <http://www.communities.org.uk/lets/lets6.htm> (accessed 18 August 1997)
- Linton, Michael, Shann Turnbull and David Weston (1986) 'Financial Futures' in Paul Ekins (ed.) *The Living Economy*, London: Routledge, pp. 194–203.
- Mittelman, James H. (1998) 'Globalisation and environmental resistance politics', *Third World Quarterly*, Vol. 19, No. 5, pp. 847–72.

- New Economics Foundation (n.d.). *Community Works! A Guide to Community Economic Action*, pamphlet.
- North, Peter (1998) 'LETS, "hours" and the Swiss "business ring": alternative currency systems and business development programmes', *Local Economy*, Vol.13, No.2, pp. 114–32.
- Paterson, Matthew (1997) 'Globalisation, ecology and resistance', draft paper for 'putting the "P" back in "IPE"', conference at Birmingham University, 26–7 September 1997.
- (1999) 'Globalisation, ecology and resistance', *New Political Economy*, Vol.4, No.1, pp. 129–45.
- Polanyi, Karl (1944 [1957]) *The Great Transformation*, Boston: Beacon Press.
- Project LETSlist (1997) 'Table of known local currency systems' (online), available from: <http://www.pip-com.com/~sparky/letslist.html> (accessed 20 August 1997)
- Sachs, Wolfgang (1993) 'Introduction' in Wolfgang Sachs (ed.) *Global Ecology: A New Arena of Political Conflict*, London: Zed Books, pp. xv–xvii.
- Sallnow, John (1994) 'LETS go to work', *Geographical*, Vol.66, No.5, pp. 33–5.
- Seyfang, G. J. (1994) 'The local exchange trading system: political economy and social audit', M.Sc. thesis, School of Environmental Sciences, University of East Anglia.
- Shiva, Vandana (1993) 'The greening of the global reach' in Wolfgang Sachs (ed.) *Global Ecology: A New Arena of Political Conflict*, London: Zed Books, pp. 149–56.
- Sinclair, Timothy J. (1997) 'Global governance and the international political economy of the common-place', paper presented at the annual meeting of the International Political Studies Association, Toronto, Canada, March 1997.
- Stopford, John and Susan Strange (1991) *Rival States, Rival Firms: Competition for World Market Shares*, Cambridge: Cambridge University Press.
- Strange, Susan (1994) *States and Markets*, 2nd ed., London: Pinter.
- Tickell, Oliver (1998) 'LETS on a Leash', *Green Futures*, Vol.12, September/October 1998, pp. 44–5.
- Urban Ecology Australia (1997) 'LETS: Local Exchange Trading System' (online) available from: <http://www.eastend.com.au/~ecology/ecocity/people/lets.html> (accessed 20 August 1997)
- Warwick and Leamington LETS Directory, March 1997.
- Williams, Colin C. (1995a) 'Trading favours in Calderdale', *Town and Country Planning*, Vol.64, pp. 214–5.
- (1995b) 'The emergence of local currencies', *Town and Country Planning*, Vol.64, pp. 329–32.
- (1996) 'Local currencies and community development: An evaluation of green dollar exchanges in New Zealand', *Community Development Journal*, Vol. 31, No.4, pp. 319–29.
- Young, Stephen (1997) 'Community-based partnerships and sustainable development' in Susan Baker, Maria Kousis, Dick Richardson and Stephen Young (eds) *The Politics of Sustainable Development*, London: Routledge, pp.217–36.