Inventing Eco-Cycle

A Social Enterprise Approach to Sustainability Education

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ABSTRACT: This article discusses lessons learned from a social enterprise project supporting sustainability education in central North Carolina (U.S.A.). Since 2011, Eco-Cycle,¹ a retail shop featuring creative-reuse has provided support for a community meeting space that offers weekly environmental education workshops. Many approaches to social justice-oriented green initiatives in the United States emulate urban agriculture models and tend to be grant-dependent in early years, only achieving economic sustainability with difficulty. In contrast, our non-profit co-op of upcycler crafters and vintage vendors grew out of production and marketing of upcycled rain barrels, based on a social enterprise approach rather than a traditional model. I discuss the stepping-stones to this venture, which originated through a neighbourhood energy conservation initiative, followed by alliance-building with non-profits to promote green job creation. I relate the complications and surprising forms of synergism emerging from the social enterprise approach to social theory on cooperatives and community-based development models.

KEYWORDS: community development, cooperatives, economic sustainability, environmental activism, green jobs, social enterprise

In June 2011 several colleagues and I opened a nonprofit creative-reuse retail shop that houses a community centre for sustainability education in a bungalow near downtown Rushton,² a small city near Raleigh, NC. The idea was for income from the shop (called Eco-Cycle) to subsidise costs for a meeting space and weekly educational events. We incorporated as a federal-registered non-profit, and to date we have sponsored over 250 educational workshops, films, talks and panel discussions, fieldtrips or cultural events, mostly on topics related to environmental sustainability, community economics/social justice or practical 'skill-shares' (how-to) workshops. Since 2013 we have partnered closely with Research Triangle Transition,³ a grassroots group working to promote a shift to a low-carbon future.

Given my academic background (researcher and part-time university teacher), I think of Eco-Cycle as an engaged community-university project. As the founder and volunteer coordinator, I am hardly in a neutral or objective position to evaluate the venture, but no one else involved can offer a history of its origins. I undertook the project in the hopes of establishing a model that could be emulated, and I am too familiar with the fragility of our day-to-day budget to declare our experiment a success to date. Nonetheless, a period of community-building and fund-raising to buy our building in the last year, coupled with new initiatives, makes me optimistic we are on the right track. So I offer this ethnographic 'memoir' in the hope it assists advocates in other places that need community institutions for grassroots/alternative education.

My Path to Sustainable Community: Crossing Disciplinary and Social Divides

I began this path out of a deep curiosity and alarm about the future that emerged from my job as an assistant professor of anthropology at Elon University

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in the early 2000s. I assigned my students a (now classic) reading titled 'The End of Cheap Oil' (Campbell and Laherrère 1998) which they (and I) found alarming and hard to believe. I also led several student groups to visit an off-the-grid ecovillage whose residents had radically changed their lives to learn to be sustainable without fossil fuels. To evaluate these ideas I joined a new meet-up group in late 2005 called NC Powerdown focused on 'peak oil', renewable technologies and climate change.

In retrospect, theoretical assumptions from my background shaped my responses to the new findings. I had done engaged research on social activism, initially on health work during civil conflict in El Salvador, and later on labour organising among immigrant farm labourers. Both movements were influenced by Marxist understandings of capitalist exploitation and by Christian liberation theology, which championed a morality guided by needs of the poor (Smith 1991). Both were also shaped by radical critiques of development that emphasised communitybased democracy and a pedagogy of reflexive engagement and hands-on learning (Chambers 1983; Freire 1982; Giroux 1988). I had internalised these concepts but also had observed the variety of forms of leadership and constant experimentation that characterises successful movements as they adapt to new situations (Smith-Nonini 2009, 2010).

My premises about sustainable development fit best with the perspective of political ecology which Byrne and Glover (2002) contrast with more liberal moderate reformist approaches to capitalist development or ecological economics, which fails to take a stand on the breach between price and values. As an anthropologist who teaches economic globalisation, I had been influenced by Harvey's (2005) analysis of late capitalism, and was receptive to the idea that access to fossil fuels had helped enable British and later U.S. hegemony. Since I had prior training in biology, I found it curious that most accounts of globalisation had little to say about energy. In our meet-up group I was also struck by the dissonance between the scientists or technocrats in the room and the social-change activists – who brought different assumptions to the table and often talked past each other. Likewise, I found widely separated discourses on ecology in the social science literature, with little cross-fertilisation.

In 2005 I decided to downshift from full to parttime teaching to enable more writing and communitybased work than was possible working fulltime at a liberal arts college with a high teaching load. I had built a small property renovation and management business since 1992 which gave me the financial security to make the shift. Also, I won a year's grant support to write a book that year which gave me more time flexibility to become involved in local sustainability initiatives.

The first of these was Clean Energy Triangle (CET⁴), a network of energy committees based in neighbourhood associations led by a dynamic woman with former non-profit experience. CET's focus was reducing the carbon footprint of buildings. Participants engaged in demonstration projects to learn about and teach their neighbours how to save energy, with a focus on weatherisation, efficient lightbulbs, appliances and solar hot water - all of which could be shown to save money, as well as energy for homeowners. Initially CET's focus was middle-class homeowners, but several committees were formed in poorer African-American neighbourhoods, and gradually CET engaged with local officials.

Meanwhile, I teamed up with UNC physicist Gerald Cecil (another meet-up member), and other friends, to carry out a 'sustainable enterprise project' funded by a \$6,000 (U.S.) grant from the UNC Business School to study efficiencies of solar hot water for homes. This led to a joint project with our neighbourhood CET committee and two high-school classes to survey our area for houses with sufficiently sunny roofs for solar. The solar roof survey led me to seek funds for green projects for teens. I sought feedback from students, and we dubbed the fledgling effort 'YIKES!' for Youth Involved in Keeping Earth Sustainable. High-school teachers convinced me that the crowded public-school curriculum left little room for topics like climate change and renewable energy. YIKES! joined another UNC-funded project to teach teens about climate change and how to lobby on public policy. Due to a recent drought, rain barrels were newly popular, so we designed kick-off events in two towns for students to paint rain barrels with fun designs to attract them to the workshops. This turned into a lesson on the importance of hands-on approaches, as the rain barrel painting was far more heavily attended than the climate sessions that followed! For months I received invitations to bring our painted rain barrels to sustainability and science fairs. This planted the seeds for Eco-Cycle.

I withdrew from the CET activism partly because of its focus at that time on (relatively privileged) homeowners, and because CET did not prioritise work with youth. In fall 2007, a biodiesel company with a non-profit educational affiliate offered us warehouse space for YIKES! activities, and I worked with their tiny staff on joint proposals for grants to fund environmental education, most of which were not suc-



cessful. But in partnership with others we received small grants to assist an African American church to build a community garden, and for projects with the N. C. School of Science and Mathematics to build a solar space heater and do research on oil seed crops. Students painted nature murals on our warehouse walls, and a church group built us a stage. We hosted monthly educational events in the warehouse space that we dubbed 'The EcoLounge', using the NC Powerdown meet-up site to spread the word.

We continued to experiment with rain barrels, which appealed from multiple perspectives – they were made of recycled materials, they could be used to teach water conservation, painting them was a great hands-on activity to engage new people, and they could be sold for revenue. In 2009 I read a book by Tom Szaky called 'Revolution in a Bottle' about how he built a company called Teracycle that got its start recycling food waste and marketing worm 'poop' plant food in used soda bottles. Terracycle went on to market hundreds of products made from waste 'upcycled' into new products. The potential for upcycling as a creative, educational and potentially revenuegenerating activity lit a fire for me.

Our area has long been home to a creative-reuse non-profit called the Scrap Exchange, which collects and recycles industrial waste to benefit artists and school projects. So I organised a meeting at the Scrap Exchange to form an upcycling club which we named Eco-Cycle. This group of crafty people (mostly adults) with green inclinations began meeting weekly in our warehouse space to make and paint rain barrels. We experimented with upcycling worn surfaces of frames and pots with broken ceramic mosaic and rebuilding broken lamps in innovative ways. Many in our group were underemployed. Some were trained artists but lacked opportunities to use their talents in day-to-day working life. Others were more interested in environmental issues. Most were not as interested in sustainability education as I was, but they joined me in hosting rain barrel painting water conservation events for community groups, and we were hired by the city to do a series of workshops at a new Parks and Recreation facility in a marginalised neighbourhood.

Goodwork, a local community development nonprofit organisation, assisted us to organise ourselves better as a cooperative. We paid Henry Wills, an unemployed member, a piece rate to convert industrial food-grade polyethylene barrels into rain barrels. Everyone else was a volunteer. Earnings from sales or events went towards rent, gas, supplies and components of a booth for craft fairs.

Where Do Sustainability and Social Justice Meet? – Promoting Green-collar Jobs

Eco-Cycle's early days overlapped with my involvement in new political activism in Rushton to create green jobs. Many observers have noted the conservative trend among large environmental organisations which found their base among middle-class whites and neglected to develop programming relevant to people of colour. An exception was the Environmental Justice Movement which focused on pollution and landfills disproportionately affecting poor and black neighbourhoods (Adamson et al. 2002). The Green Job movement was spurred by new interest in urban gardens and by Van Jones' book *The Green Collar Economy* (2008), published just as the mortgage crisis landed us in a prolonged recession. Jones advocated solving two problems at once – our fossil fuel dependence and minority unemployment - through creating new jobs in sustainable industries.

North Carolina Central University (NCCU), a nearby historically black college, held a green jobs conference out of which grew a new initiative called the 'Black, Brown, Green Alliance (BBGA)'. The group was supported by NCCU and three Triangle-area social justice non-profits. The BBGA seemed well-positioned to address the challenges of grounding activism for sustainability in the grassroots reality of a profoundly unequal society, and I joined with enthusiasm. From 2008 to 2010 we held regular meetings designed to build an environmentalist rainbow coalition around green jobs. The BBGA was blessed with experienced community leaders who kept us democratic and committed to a long-term process of building trust across racial and class boundaries. As someone who is typically allergic to endless meetings and eager to get on with projects, I learned a great deal from submitting to this process.

Our focus on green jobs brought many social entrepreneurs to meetings who sought help to start initiatives, from community garden projects to house deconstruction businesses. We looked for a central project around which we could work together. This quest led to conflicts as backers of potential projects sparred with each other for attention, with some members dropping out. President Barack Obama's stimulus funding became the golden ring, and I took on a major role chairing a group to develop a grant proposal for a green-job training programme that would draw on strengths of several non-profit organisations in the group. We benefited from advice from Majora Carter, founder of the Sustainable South Bronx, but unfortunately because we had to apply

through a municipal agency, the proposal became watered down by city grant writers who sought to divert funding to existing town services. The project was not funded. But before we even knew the outcome, a wellloved black leader who had helped hold the BBGA together died unexpectedly from health problems. In her absence, tensions erupted between other activists in the project, one of whom had taken on debt to support her community work and had been counting on the grant. Gradually the BBGA began to splinter.

I dwell on the BBGA experience here because of how formative it was in shaping my thinking. I am reminded of Alfred O. Hirschman's essay, 'Principle of Conservation and Mutation of Social Energy' (1983) where he observed how political consciousness forged in activists tends to continue even when a given movement loses energy. One positive outcome from the BBGA was that an African American woman leader (who I had recruited into the group) revised our grant proposal and gained funding for a smaller 'green tracks' training project as part of a non-profit programme she ran for unemployed people. The two-week green tracks trainings continued with different cohorts of adult students for roughly five years, taught by instructors from Eco-Cycle and other non-profit groups that came together through the BBGA.

I also came away from the BBGA somewhat wary about dependence on grant projects, and a more realistic sense about prospects for green jobs as an answer to unemployment. Most projects Van Jones featured in his book were grant supported, raising questions about long-term economic sustainability. Many local food projects have sprung up in our region, but they tend to have low profit margins and limited hiring potential.⁵ Meeting other green entrepreneurs, however, and my personal experience running a small business renovating and managing rental houses, led me to consider social entrepreneurship to support environmental education. Bornstein (2004) describes social entrepreneurs as agents of change that draw on skills and models of business to solve social problems. Most of the projects he discusses draw on premises and values that closely resemble non-profit-oriented approaches to community development.

The Shift from Informal Community Group to Place-based Non-Profit

Eco-Cycle's planning for events in our warehouse space was constrained by extremes of the weather due to limitations of the building, which was sweltering in

the summer and frigid in the winter (despite our weatherisation upgrades). Our workshop was hidden away in a high-crime, post-industrial landscape which, while a good location for organising in the black community, presented problems for rain barrel customers and event participants who had trouble finding us, if they were brave enough to try. To solve this problem I often did deliveries myself with my Acura Integra hatchback.

In spring 2010, with support from Goodwork, I attended the annual conference of the Business Alliance for Local Living Economies (BALLE) in Charleston, SC. BALLE is a network of green entrepreneurs and non-profits, and one of the conference challenges was a 'back of the napkin' contest in which participants outlined a social enterprise idea. I did not win the modest cash award, but my design for a site-based project with a retail shop supporting educational activities was the prototype for the hybrid business/ non-profit that Eco-Cycle grew into.

This idea took shape later that year when I met a fabric crafter who was organising venues for herself and other artisans to exhibit their goods. I began to attend and collect their business cards. That fall I taught an environmental class at UNC with a service-learning component. Ten of the thirty-five students opted to do a project with Eco-Cycle and came up with a plan to hold a competition for upcyclers – who would submit products to be judged. An anonymous donor offered us funding that we used to cater for the event and offer cash prizes. Thus was born the 'Re-Hashed Trash Bash' held at UNC in December 2010. Other students in the class did a project with an African American neighbourhood group opposing expansion of the Chapel Hill landfill, so we invited their leader, along with a municipal solid waste expert, and the head of the UNC sustainability office to speak. The judges included waste specialists, green activists and artists, and our prizes reflected both environmental and artistic criteria, plus a best product for green job creation award (which happily went to an artistically painted Eco-Cycle rain barrel!). We filled the room with exhibits of upcycler crafters and local green businesses.

This event led me to consider a place-based venture to serve crafters' needs for both a market and place for educational and how-to workshops. For a while I had had my eye on a boarded up bungalow on a busy road near our neighbourhood that was once an antique store. I took the owner out to lunch, and after a presentation of our plan she agreed to rent it to us at a very reasonable cost, given the location and the building's commercial zoning. A bonus was a small apartment



in the rear that we could rent out for steady income to supplement the shop's earnings.

My husband Don Nonini, an anthropology professor, and Anthony Watts, a long-time environmentalist friend, joined me to form a board and we applied for federal non-profit status for the educational wing of our enterprise. We invested in a computer, a point-ofsale programme, a website and tasked our compatriots with helping us source furniture and displays. I later calculated that our spending on the project came to roughly \$13,000 (U.S.) in the first two years. Eco-Cycle opened in June 2011, with two rooms used only for retail, one for an upcycling workshop and one that we dubbed the 'EcoLounge' which doubled as retail for books and a meeting space. In addition to upcycled crafts and small furniture, the shop carries vintage, free trade items, sustainability products, educational toys, books and an eclectic selection of thrift and donated items. We started with one event a month, but realising the synergy between educational workshops and promotions of the shop, we moved rapidly to two and then four a month promoted by a weekly email newsletter. Promotion on list serves, meet-up sites and online calendars has helped populate events and bring people to the shop. We built a 'friends list' from customers and events participants who receive the newsletter (over 900 people at present) which goes out each Tuesday, leading with the event of the week at the top.

Our events take place either Friday evenings (for films, talks, etc.) or Saturday afternoons (for how-to workshops). A survey of 219 events we have held since January 2012 revealed that roughly half were films, talks or discussions, and the other half were how-to workshops or cultural/social events. Thematically, 31 per cent were on environmental or sustainability themes and 23 per cent were on community economics (including critiques of mainstream economics). Another 36 per cent were 'how-to' events (most with sustainability aspects), and 10 per cent were cultural or social events. Since mid-2013 we have collaborated with Research Triangle Transition to do five to six events a year in larger venues that seat 50–100 people. We pass the hat at all events and our suggested donation is \$5 (U.S.), although a few how-to workshops cost more if we need to pay an instructor. We decided our initial EcoLounge room was too small, so in mid-2013 our rear tenant, a former Greenpeace staffer who had construction skills, removed a wall to expand the EcoLounge. The larger room can seat around twenty-five, and gave us space to develop a coffee/tea bar and to expand the shop's book inventory.

Slouching Towards a Cooperative Venture

There are trade-offs in the shift from a grassroots group to a place-based non-profit. It is common for a non-profit organisation to turn inward and focus on programming and grant-seeking rather than outreach and community-based projects. Also, we are at risk for founder's effect – when a community project struggles to build enough support and capacity to survive even if its founders withdraw. I also knew that as an intellectual acclimatised to writing and research, my personality was not the ideal type for nurturing social consciousness. I drew cautious optimism from readings and past research on social movements which argued that effective leadership can come in a variety of packages.

Much like good private entrepreneurship, I feel that social enterprise for community development must be adaptive, always watching for potential synergy with allies and ways to grow through experimentation. Before we opened, Eco-Cycle volunteers and some of our new upcycling crafter friends held meetings to brainstorm. The initial idea, based on a women's craft cooperative in nearby Chapel Hill, was to offer attractive terms for vendors to sell their wares in the shop in return for them putting in four volunteer hours each month running the shop, doing promotions and other tasks. Our crafters who volunteered split sales with the shop 70:30, in the crafter's favour.

This plan did not work all that well, mainly for lack of enough reliable volunteers. We held many meetings in the first eighteen months aimed at sharing ideas and responsibilities for cooperative management. Some crafters were intent on developing a reputation as an artist, leading them to insist on higher prices. But the higher-priced products did not sell well, and the bottom line for many crafters was that they did not earn enough in the shop to justify the volunteer time. One vintage vendor (employed fulltime elsewhere) has routinely earned \$60–100 (U.S.) per month with us and has remained a steady volunteer for four years; likewise other retired crafters and supporters have lent their time generously. Others have been active during bouts of unemployment. Overall, vendors showed little interest in a cooperative structure, which most doubted would work well. Their preference, as several said outright, was for a direct one-on-one relationship with management (which meant me by default), although I initially resisted the role.

Most vendors had only a vague or loose identity with environmentalism, despite a preference for working with recycled/reused materials – a practice that had become fashionable. I understand this, and I

had to admit myself that what we were doing was symbolic, in that we were drawing on an aesthetic to draw people to the shop and our events. We noted that few crafters attended the Friday night events, with one exception – a crafter unhappily employed in a science lab, who joined our board and took a leadership role managing our volunteers for most of a year but then pulled back when she found a new job teaching for a green non-profit organisation.

About nine months after we opened I gave up trying to run the shop with volunteers and hired a parttime person. Since June 2012 that position has been held by Max Rice, a UNC graduate who studied anthropology and sustainability, and helped coordinate the 2010 Re-Hashed Trash Bash. He also manages our friends list and some promotions. Henry, our Eco-Cycle rain barrel maker, continued with us, earning \$18 (U.S.) per converted rain barrel. One limitation has been our inability to keep the store open full-time on weekdays due to costs of staff. Our sales and event donations in 2014 averaged \$1,100 (U.S.)/month (with much seasonal variation), of which 18–20 per cent is paid out to vendors. Over time we grew a new pool of volunteers, most of whom are motivated by our environmental education work.

The newsletter production and much of the programming became my responsibility, with occasional assistance from the board, and, after 2012, from members of Research Triangle Transition. We rely on volunteers to staff booths at outdoor sustainability fairs and an annual alternative gift fair. Through a new collaborative grant effort with the Rushton Public Library we have a contract to teach summer sustainability workshops to minority teens. In winter/spring 2015 we hosted two small courses that met weekly – one on watersheds taught by another organisation, and a 'reading group' class discussing J. K. Gibson-Graham's book Take Back the Economy. We also advised a university class of students who did studies and write-ups on local green projects to produce educational materials.

Our location on a busy artery near a bohemian shopping district close to a university campus is not bad for retail. But for purposes of building a diverse community it was a far cry from the poor, mostly black neighbourhood of Eco-Cycle's former warehouse. Thus we feel we always need more outreach to people of colour. Research Triangle Transition's work on hunger (see below) and our community economics events have helped cross that divide. We have a popular African-American radio host and crafter/sustainability advocate on our board, and we have had several instructors from minority communities give workshops, which often bring in new people.

Our partnership with Research Triangle Transition has helped tie Eco-Cycle more tightly to social needs of the community. The group's initial work was outreach to link up social justice groups working on hunger with sustainable food advocates. During summer 2015 the Transition Food Committee put together a series of well-attended events on how to end hunger in Rushton. In the last year our Energy Committee held a series of events on renewable energy (especially solar) and controversies over state energy policy, collaborating closely with NC WARN, a renewable energy advocacy non-profit. In fall 2015 I have been leading a climate change reading group studying Naomi Klein's new book This Changes Everything. The group just sponsored an area premier screening of the new film by the same title which sold out a 200-seat theatre in Chapel Hill, providing a venue for a panel discussion by activists. Our third focus has been community economics, with dozens of events so far on issues of debt, cooperatives, alternative currencies, participatory budgeting and social justice topics.

In recent weeks we held a popular 'Creating a Food Forest' workshop, showed 'The Fierce Green Fire', a film on the history of environmental movements, and sponsored a panel on the risks of the Trans-Pacific Partnership trade agreement – which spawned ongoing activism on that topic. Most Friday nights, participants in the week's event gather afterwards at a nearby café for drinks or a late meal.

A recent challenge tested the concreteness of the sociality implied by 'community building'. In late 2014 our landlord told us she needed to sell the house, and offered us a good price, given the location and the area's current rapid gentrification. But investigating costs of a loan and the high down payment needed for a commercial purchase made me nervous about our chances. Tours of rental properties ended in sticker shock, but a new student volunteer helped us put together a video for an Indiegogo online fundraising campaign, and we held meetings with board members, Research Triangle Transition and our wider circle of friends, asking them how to move forward and soliciting input on what they wanted Eco-Cycle to become.

It turned out we had a wider circle of supporters than we thought. In roughly three months, with donations or peer-to-peer loans from twenty-eight individuals and one unsolicited \$1,000 (U.S.) grant (from the Triangle Community Foundation), we raised over \$33,300 (U.S.) towards the down payment. Also, several people offered volunteer help, including one who loaned her time helping run the store and our small EcoLounge Café for eight months, and two who joined



our board. To meet our mortgage payments we made the difficult decision to rent out our workshop room – currently used as a natural personal products shop – where we had done repair and upcycling projects and stored supplies. We built new outdoor storage space, and are currently constructing a greenhouse from used windows on the rear of the building which will enable us to raise organic starter plants for the shop and to engage in new educational projects.

Last winter I hesitated about writing this article, not knowing whether Eco-Cycle would survive the challenge of moving or buying the house. I still do not know if our shop strategy will work out, as the economy is a rocky uphill trail for small retail operations. But after nearly ten years collaboration with eco-activists, our experiments with building a non-profit and the recent purchase of the property, our motley coterie of volunteers and collaborators is beginning to feel a lot like community. We have survived for five years, and we have a twenty-year mortgage, so we are 'all in' now.

Can this model work somewhere else? I think it can. The challenge we all face is how to create hybrid models that form a bridge between the economy we are in and the one we want to build. Getting there requires some good sense, some donated time (all entrepreneurship does) and some capital (not necessarily a lot); but if you want to build community the most important piece of advice I can give is spend a lot of time studying groups you admire and listening to leaders and colleagues. Think about synergies – between your talents/skills and a service that is in demand; and between your ideas for social change and practices that inspire others. Look for points of commonality that a small group can cohere around. Once you have a social nucleus and an idea, try a project. If it does not work, sit down with others and try to figure out why. Then try again.

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Notes

- 1. Eco-Cycle is a pseudonym.
- 2. Rushton is a pseudonym.
- 3. Research Triangle Transition is a pseudonym.
- 4. Clean Energy Triangle is a pseudonym.
- 5. In contrast, thanks to attractive state tax incentives and a requirement that our major electric utility company purchase solar power at a higher than market rate, solar jobs have grown rapidly in North Carolina. The downside is the field favours jobseekers moving horizontally from other technical fields, over minority jobseekers. Weatherisation seemed a promising green job creator, but we found that most middle-class homeowners are unlikely to invest heavily in weatherisation in the current economy, and public funds to retrofit low-income homes are very limited. Deconstruction and specialised recycling (supplementing municipal services) may hold the most potential for job creation.
- 6. Examples include crocheting with plastic bag strips, building solar ovens, lamp repair, sewing, terrarium building, home energy saving, grey water projects, rain barrel making and painting, fireplace inserts, composting, raising chickens and beekeeping.

References

Adamson, J., M. Evans and R. Stein (eds.) (2002), *The Environmental Justice Reader: Politics, Poetics, and Pedagogy* (Tucson: University of Arizona Press).

Bornstein, D. (2004), *How to Change the World: Social Entrepreneurs and the Power of New Ideas* (New York: Oxford University Press).

Byrne, J. and L. Glover (2002), 'A Common Future or Towards a Future Commons: Globalization and Sustainable Development since UNCED', International Review for Environmental Strategies 3, no. 1: 5–25.

Campbell, C. and J. Laherrère (1998), 'The End of Cheap Oil', *Scientific American* March: 78–83.

Chambers, R. (1983), Rural Development: Putting the Last First (New York: John Wiley and Sons).

Freire, P. (1982), *Pedagogy of the Oppressed* (New York: Continuum).

Giroux, H. (1988), *Teachers as Intellectuals: Toward a Critical Pedagogy of Learning* (Portsmouth, NH: Greenwood Publishing Group).

Harvey, D. (2005), *A Brief History of Neoliberalism* (Oxford: Oxford University Press).

Hirschman, A. O. (1983), 'The Principle of Conservation and Mutation of Social Energy', *Grassroots Development Journal* 7, no. 2: 2.



- Jones, V. (2008), A Green Collar Economy: How One Solution Can Fix Our Two Biggest Problems (New York: Harper One).
- Smith, C. (1991), The Emergence of Liberation Theology: Radical Religion and Social Movement Theory (Chicago: University of Chicago Press).
- Smith-Nonini, S. (2009), 'Inventing a Public Anthropology with Latino Farm Labor Organisers in North Carolina', NAPA Bulletin 31: 114-28.
- Smith-Nonini, S. (2010), Healing the Body Politic: El Salvador's Struggle for Health Rights: From Civil War to Neoliberal Peace (Rutgers, NJ: Rutgers University
- Szaky, T. (2009), Revolution in a Bottle: How TerraCycle is Eliminating the Idea of Waste (New York: Penguin Group).



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