

**Paradoxes and Contradictions:
A Contextual Framework for
"How I Learned to Suspect Recycling"***

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FALLACIES IN VIEWING RECYCLING AS "ENVIRONMENTALISM"

A recent mailing from one of the major national environmental movement organizations, The Environmental Defense Fund [EDF], grounds my recycling narrative:

Thanks to your support -- your "sponsorship" -- of EDF's recycling campaign, our theme "If You're Not Recycling, You're Throwing It All Away" has reached out with the power of \$80 million in donated advertising, and America is taking it to heart!

Our campaign was launched in 1988 with the Advertising Council...Since then:

- One-third of all American newspapers are being recycled!
- Convenient curbside recycling programs have skyrocketed in number from 600 to over 4,000!
- Over 200,000 Americans have contacted EDF for information on local recycling opportunities.....

Just imagine how much more progress we can make if we can convince a majority of Americans to "buy recycled" and build strong consumer demand for recycled products!

You see, the "BUY RECYCLED" message has just won the support of the Ad Council to become the next phase of our campaign....

Every time an American consumer purchases a pad of recycled paper or re-refined motor oil or another product made from recycled materials -- another vote of confidence is being cast for recycling... [Environmental Defense Fund, membership letter, 1993, pp.1-2; emphasis in the original]

The following *non-sequitur* appears in the same mailing:

It's true that America has made steady progress on recycling over the past five years...yet we're still losing ground as more and more millions of tons of waste are generated and disposed of each year. We need more recycling -- and far less waste being generated in the first place. We're on the right track, but we've got a long way to go. [Environmental Defense Fund, membership letter, 1993, p.2]

Just when municipalities have joined the recycling bandwagon, why have I, an environmental sociologist and former recycler of household trash, "fallen off the wagon?" I have done so despite pressures from peers, students, and even my own children and friends. The explanation for my intellectual and political suspicion of post-consumer waste recycling is analytically detailed below. I suspect recycling not *despite* my identity as an environmental sociologist, but precisely *because of it* ! To make understandable what must surely seem incomprehensible to most of my audience, I have tried here to reconstruct the intellectual path by which I came to this unconventional response to recycling. Moreover, I also include a post-script about reframing recycling in a different social structural conceptualization, in collaboration with some of my younger colleagues.

What is novel about my approach in this paper, in analysing the contemporary recycling policy and program? I have written a number of papers about recycling (Schnaiberg 1990, 1991, 1992a,b, 1994) and incorporated these analyses into other works (Schnaiberg & Gould 1994, Gould *et al.* 1993, Gould *et al.* 1996). However, in none of them do I so clearly reveal (1) the nature of recycling as deeply embedded in the social history of the last twenty years, and (2) the emotions and actions I was stirred to, in response to dealing with observations of everyday life that were dissonant with my own political and theoretical ideals, and (3) my occupational challenges of holding to an interpretation that is "unpopular" both among my colleagues and many of the social movements whose values I share.

On a methodological plane, this paper outlines a form of *contextual analysis* that I have utilized in my research on recycling over the past four years. To some extent, it is congruent with some recent work on post-modern methods, applied by critical social scientists and literary analysts (Weinberg 1994). However, it also reflects my unique synthesis of such approaches. To construct a narrative about modern recycling, I have coupled empirical observations from studies using conventional methods of social survey research, participant observation, and content analysis of archival materials (primarily mass media journalism), as well as my own everyday observations, to ground my interpretations¹.

My personal synthesis reflects the emergent school of *pragmatism*, which eschews reliance solely on more conventional methods of sampling and observation. Instead, I have expanded the empirical inputs from historical and other archival sources. In many ways, this synthesis is a revised form of Glaser and Strauss's (1967) techniques of *grounded theory* development, which had earlier been labelled as *analytic induction* (Robinson 1951; Lindesmith 1952; Denzin 1989:165-170). Analytic induction starts with an initial hypothesis, and continually refines and reinterprets the hypothesis, as new observations are encountered that challenge the initial formulation. Thus, traditional approaches to hypothesis-testing are supplemented by *hypothesis development*, creating a more open-ended analytic process (Denzin 1989: 165-170). In this process, the existing empirical literature, both inside and outside of environmental sociology and other areas of sociology, is used to shape new interpretations of this process. As well, following somewhat the pragmatic approach, this approach encourages the researcher to maintain a greater openness to observations from everyday life, as well as from diverse social-

¹To focus on the personal decision-making involved in the contextual narratives reported in this paper, I have deliberately avoided reporting most empirical details. Many of these are reported in Schnaiberg (1991, 1992), and in Schnaiberg and Gould (1994). A full summary of them is reported in Gould *et al.* (1996).

historical arenas. For me, the core of this analytic induction process is attending to **conflicting, contradictory, or paradoxical** observations of social reality.

The starting hypothesis for my recycling research was consistent with the argument of most environmental sociologists (e.g., Derksen & Gartrell 1993). *Recycling represents a new environmentalist logic, that unites previously-opposed social constituencies around a more ecologically-benign "materials policy."* My later critical analytic inductions, wherein "I learned to suspect recycling," were grounded in two observations I had made earlier, in other arenas of my environmental conflict research. These two narratives contradicted the logic of the above starting hypothesis:

- (1) A former student of mine, who worked in Evanston's energy-environmental planning department, casually informed me that the municipality routinely dumped truck-loads of "recyclable" newsprint into local landfills, under cover of darkness, because "the market for newsprint was glutted." That is, it was not profitable for production intermediaries to buy more recyclable newsprint from the city [at this point, the city was using a voluntary, central, recycling center, in the midst of the city yards], and I was a regular weekly recycler of newspapers, bottles, and cans. The city kept collecting newsprint, despite this reality, in order to keep citizens coming to the center, and bringing more valuable materials, such as aluminum and glass containers.

My emotional reactions to this observation:

*When I first heard of this reality, I was **angry**. I felt I had been betrayed on two levels: first, as a moral citizen concerned with environmental degradation (Derksen & Gartrell 1993), and second, as a "savvy person" who studied environmental policies as a large and growing part of my professional life. Because of my social identity around some of this "environmentalism," I continued to recycle for some time, however. But this began to approach ritualism, rather than true environmental passion. In later years, I*

have found other genuine environmentalists who have been critical of recycling, but who continue to recycle. Perhaps this shared ritualism reflects our need to "do something", in a period when environmental protection has been weakened.

To deal with my anger, I began to think more "objectively" about recycling programs, perhaps to achieve professional vengeance for being "duped" in my extraprofessional life. I believe that I set up a mental file, to "collect evidence" about the paradoxes and contradictions, immediately after I found out about this (approximately 1976 or 1977). I did this for a number of years, before recycling was transformed from a semi-voluntary and sporadic activity into a more routinized public-private policy system.

(2) In the late 1980s, while reflecting upon this initial dissonant observation (which goes back to at least 1977), I began to wonder why there was so much corporate support for more organized forms of recycling. I was especially puzzled by their support for the creation of mandated municipal curbside collection programs, given previous resistance by the container industry and other trade associations to other solid waste programs. Municipal curbside collection programs seemed likely to create greater pressures on industries to "deal with" recyclable materials, such as newsprint.

My emotional underpinnings for this observation:

I suppose that my sense of anger was really quite deep-rooted, approaching a sense of "betrayal." Like other middle-class sociologists, I had some naive faith that "suburban government" served many of my interests, unlike the corruption of "big cities" and the ineptitude of "rural idiocy." To salvage some of my faith and self-esteem, I actively sought evidence that "my progressive suburb" of Evanston had itself been duped

by industrial interests. When Evanston began curbside recycling (which I did not participate in, now living in an apartment, rather than a house, as a result of a divorce and remarriage), I was spurred to new efforts, because I saw an extension of the earlier betrayal in the broadened municipal commitment, and similar commitments in other communities. As far as I could find out, "recycled" newsprint was still being dumped in landfills. Now, as municipalities began to do curbside recycling, newspaper reporters from The Chicago Tribune were beginning to share my apprehensions. It was not their prime long-term environmental reporter, Casey Bukro (cf. 1991a,b), who first revealed this, but other younger staffers (e.g. Swanson 1990). This only deepened my concern that treadmill actors were manipulating my consciousness through the media's as well as the municipal government's.

Two more detailed historical observations, which I had uncovered in my previous environmental research, deepened these challenges to the initial hypothesis that recycling was primarily a new environmental policy. These were the two observations:

(a) Many of the leading "recycling" bottlers and container manufacturers were at the core of the *cosmetological* movement I examined in my very first environmental sociology paper drafted in **1971** (and published in 1973), most notably the coalition organized as *Keep American Beautiful, Inc.*. In the 1960s, this coalition moved to create an **anti-litter** campaign at the municipal, regional and national level. Their effort was designed to forestall any **municipal** efforts to deal with the rising local costs associated with the rapid replacement of returnable containers by disposable containers (accomplished by limiting the production and distribution of such containers). The cities were then being pressured by **neighborhood** group, who saw the problem as "littered streets."

(b) During the 1970s, these same container and beverage industries spent substantial amounts of money to defeat **environmentalist** coalitions. These movement organizations sought to move beyond the anti-litter policy to impose **re-use** policies for containers, using regulatory mechanisms such as substantial container deposits. This coalition believed such "deposit bills" would shift the economic and social pressures against disposal and towards re-usability. Some observers have estimated that the beverage-container industrial coalition spent upwards of \$50 million dollars during the 1970s, and defeated most of these state bills and citizen referendum initiatives.

My reactions to this material:

These were the beginnings of a narrative which would document a "smoking gun," that would in effect label recycling proponents as naive tools of elites from the treadmill of production. This is a system of social production which incorporates inequality principles into an institutional network which supports growth of capital-intensified forms of domestic and increasingly, global production (Schnaiberg 1980, 1993; Schnaiberg & Gould 1994; Gould et al. 1996). I imagined that once I strung these social facts together, most "reasonable people" would concur with my analysis. How wrong I was: suspicion or dismissal of this argument made me even angrier, and determined to stick with this analysis, despite lack of professional rewards.

Such social and political historical realities led me to wonder whether recycling of post-consumer waste was in fact correctly labelled as an **environmental** policy. Environmental movement organizations have indeed been passive, if not leading, proponents of recycling, as evidenced by the Environmental Defense Fund extract above. And yet my resesarch fragments above argue that recycling may be, first and foremost, an **economic** policy. My second analytically-induced hypothesis was that recycling

represents the success of the industrial coalition that is at the core of the modern *treadmill of production*.

How did I come to this conclusion? What were the social narratives that induced me to consider this alternative hypothesis? I reviewed the media and social science literature of the late 1970s and early 1980s. During this period, industrialists had to confront rising community and environmental movement anxieties about toxic waste *hazards* and non-toxic waste *nuisances*. Many local citizen and national environmental groups pressured industries and governments to "do something" about "garbage and waste." Much of the opposition had arisen following episodes of *local toxic* wastes, which have been publicized nationally, such as Love Canal. This had alarmed local citizens about **health** hazards from **all** types of waste dumps. Rising NIMBY (not in *my* back yard) and NANBY (not in *anyone's* back yard) local movements transformed landfills and incinerators, designed to accomodate increasing disposability (ironically, of paper more than other containers and post-consumer products), into LULUs (locally-unwanted land-uses).

Paradoxically, the recycling coalition of the 1980s built upon environmentalist movement pressures to recycle toxic **producer** wastes under RCRA (Resource Conservation and Recovery Act) in the 1970s. These had little success. But trade associations and industries have deflected this pressure laterally, to legitimize recycling non-toxic **consumer** wastes in the 1980s.

The role of the contextual narrative approach in supporting my dissonant position:

During the period in which I began to draw together my ideas and observations, I realized that my critique of recycling differed from the enthusiasm of both my environmental sociology colleagues and my friends and students in the environmental movement. While I sometimes megalomaniacally fantasize that I'm the only "smart person" in either set, I did know that this was not the case. This created a need for a

more complex explanation of why I was "odd person out" when it came to evaluating recycling. I have had similar professional experiences throughout in my environmental analytic career, and almost invariably my interpretations have been validated by later analysts. Thus, while I was uncomfortable being a political and analytic deviant on recycling, I resolved to persevere, since my past insights had eventually proven correct.

Nonetheless, I struggled to understand why virtually no one else saw the biases in recycling as clearly as I did. To trace the possible roots of difference between my position and that of my colleagues, I began to construct more self-consciously a detailed historical narrative, "the real history of American recycling." The pieces of the argument fell together better, with each successive paper, as I traced the historical process by which pressures for producer recycling became deflected by treadmill elites into post-consumer recycling. The underlying conflict about the benefits to producer versus consumers in using landfills only became apparent in this historical narrative.

Each time I presented a version of this at the ASA meetings, though, I found that my position was sweepingly dismissed by most of my colleagues. And none of the papers I had been writing found an outlet in journals (after much frustration, I decided to work up some of this in book form, collaborating with my former student Ken Gould and my current student, Adam Weinberg. It was Weinberg's own research, using "post-modernism" and "pragmatism," that introduced me to the literature on narratives. His work emboldened me to present this paper, as well as to extend some of the contextualized narratives I had already been working on (like the bear in Pogo, I was "speaking prose" well before I had a label for it, and Weinberg gave me the label and the legitimacy). In these narratives, most typically a paradox or contradiction usually revealed a deeper structure in a narrative format. It was precisely this deeper structure which explained the differences in environmentalists' and environmental sociologists' enthusiasm for recycling, and my increasing suspicion of recycling as a viable socioenvironmental policy.

One of the great intellectual paradoxes of this research is that my evaluation of recycling changed precisely when I examined it in the modern history of environmental policies and environmental conflicts . Moreover, given the work I have done since the late 1970s, my approach has been at a systemic level. This contrasts with the work of many environmental sociologists who operate on a non-systemic (and therefore non-contextualized) episodic level , or others who operate on an atomized individualistic level, using social surveys (again, typically non-contextualized). Each of these styles of research has its role, but the role is constricted when taken out of socio-historical context. Perhaps nowhere is this contrast more evident than in a footnote in Derksen and Gartrell (1993:440; cf. Schnaiberg 1994):

"One of the richest and most sophisticated 'theoretical' works on environmental sociology (Schnaiberg 1980) has had little influence on empirical research in environmental sociology, but has apparently spurred research on the political economy of the environment (Buttel 1987)."

This seems to suggest that "environmental sociology" is something which is quite disparate from "the political economy of the environment": the latter deals with the structure of interests in natural resources, and how these interest-groupings struggle over access to such resources, through conflict in environmental policymaking and materials policies.

Throughout the course of my research, a number of other social realities added to my inventory of paradoxes. First, despite my arguments over past years most *most social scientists* [e.g., Derksen and Gartrell (1993)] have continued to view recycling as a sound environmental policy. Many mass surveys note that recycling is the most common "environmental behavior". Second, few environmental sociologists have examined the remanufacturing component of recycling, and have instead focused on post-consumer municipal waste collection procedures. Third, my search of our library holdings indicates that the only "social" research on recycling that has been done by *consumer*

media and consumer groups. Fourth, exaggerated media claims of "recyclers" and other "green marketers" have been attacked, although more typically by legal organizers and consumer groups than by environmental movement organizations or environmental sociologists.

Thus, the central paradox of this work, which aims at "realistic" hypothesis-building is that a superficially environmental policy is actually a carefully orchestrated economic strategy. Moreover, this strategy has been so successful that it has subverted much criticism by both environmental movement organizations and by environmental sociologists.

Adding to this is the paradox that municipal resistance to recycling, which has risen as costs vastly exceed anticipated materials revenues, has generally not led to an attack on the industrial coalition promoting recycling. Rather, it has often undermined the claims of local environmental and other citizen-worker movements (Gould et al. 1996).

Finally, the ultimate paradox is that recycling has also soaked up much of the potential political mobilization of citizens around other ecological hazards that are more threatening than landfills. These including local and regional depositories of toxic wastes, global warming and ozone depletion. Thus, recyclers may "feel good," under the illusion that they are doing "ecological good" by putting their trash into curbside or voluntary recycling bins. Conversely, recyclers may simply not find any other environmental activity feasible, given their increasing struggles to maintain a middle class existence. In either case, their recycling activity deflects them from other "environmental" activities. From this perspective, there are high social and political opportunity costs of politically investing so heavily in recycling, as the "environmental" strategy of the 1980s and 1990s.

The paper indicates how a more contextualized perspective, constantly struggling with contradictory and paradoxical features of social, political, and economic organization, leads to conclusions quite different from those of other social scientists.

A TALE OF BUSINESS PERSPECTIVES ON RECYCLING

While the Environmental Defense Fund and other environmental movement organizations support the *ecological* view of recycling, here is a different tale of an *economic* view of it:

"I love the garbage business," says Jane Witheridge, vice-president of recycling and strategic affairs for Waste Management of North America Inc.....Since she joined Waste Management [in 1976], it has grown from a \$180 million garbage-hauling firm to a \$10 billion environmental-services conglomerate. And recycling played a key role in that growth. "It's one of the most important services we provide to our customers," Witheridge says...I was asked to come here [in 1989] and make heads or tails of recycling. I think I am doing that."

Despite its popularity, waste recycling...has always been an economic riddle. Unexpectedly, the recycling symbol of three chasing arrows also has come to portray a national program going in circles without clear objectives.... Twenty-nine states have mandated recycling 25 percent to 60 percent of solid wastes, but none of them mandate uses for material collected. Waste Management has been in the recycling business since the mid-1970s, operating 125 materials-recovery facilities across the country. It finds that:

- Despite public expectations, recycling does not pay for itself.
- On average, collecting and sorting a ton of trash costs \$175. Revenue from selling recyclable material covers 25 percent of that cost.
- The average price paid for recyclable material dropped to \$44 a ton in 1992 from \$97 a ton in 1988.

Actually, says Witheridge, Waste Management doesn't really expect recycling to pay for itself...In 1992 recycling accounted for \$250 million in revenue for Waste

Management, though only a fourth of that was from reselling material. The rest, which made the operation "marginally profitable," came from municipalities for collection and sorting services....

The next big step in recycling "is to see where recycling fits in the overall, integrated waste services in a manner that focuses on customer needs," she predicts....recycling must operate in the waste-management schemes that include treatment, composting, waste-to-energy incineration and landfilling... [Bukro, 1993]

My reaction to this:

By the time I encountered this and some of the other quotations I use in this paper, I had largely completed my narrative analysis. The use of these quotes is twofold: (1) it affirms me and my arguments over the past three years, and I want to shout "I told you so!", and (2) it provides persuasive contextual evidence that should persuade more colleagues to understand the ecological and social biases inherent in the modern recycling-remanufacturing program.

I am frustrated in my vision that it is private sector profitability that is shaping public policy around waste disposal strategies. There's little questioning of the process, and the program costs are shifted from the initial producer and profit-maker, and externalized to a broader tax-paying public (with additional high levels of private profits from the "alchemists" all along the path of material treatment).

DO WE CREATE "ECOLOGICAL CONSCIOUSNESS" BY RECYCLING?

While viewing recycling at the city and national level, I have also followed with interest the growth of recycling in my own university. This program was initially spurred by a student environmental organization. When one of my senior sociology students analysed the decision of this group to invest so heavily in recycling, the general response

was that recycling was "the way of doing something quickly." Environmentally-oriented students could then feel that they had acted responsibly. Paradoxically, when I had another junior sociology student simulate paper-napkin "recycling" containers at the student center, he observed the following relationship. The more accessible and convenient the containers [benign buckets] were, the greater was the portion of the collection that was made unusable by food and other wastes casually dumped in these bins (Moorhead 1991).

A recent report by the Recycling Coordinator at Northwestern University, my "home bin," notes:

Initiated on the Evanston campus in February 1990, the University's Recycling Program is now at work in all 86 buildings, including more than 200 academic and administrative departments....To keep up with the increase in recycling needs, two part-time employees have been hired.... But [Kimberly] Huber [Northwestern's recycling coordinator and a former member of the campus environmental organization] estimates that only 45 percent of the available recyclable paper is making it into the appropriate bins...[and] is most concerned about unnecessary contamination in the items that are collected. **"We've found everything from umbrellas to food wrappers to microfiche in the paper recycling bins. One load was 28 percent unrecyclable material,"** said Huber.

Beginning in January, the University's Recycling Office is offering an incentive to eliminate contamination...**The incentive program will allot free cases of Pepsi to an academic or administrative department when that department's collection bins ...are free of contamination, and its trash bins contain no materials that are recycled in the University's program.** Unannounced departmental "spot checks" will be conducted by members of the Recycling Office. The incentive project, which is made possible through the University's Vending Program, will...continue as long as the Pepsi supply lasts. [Kroc, 1992: 1, 3. Emphasis is mine]

I might note that Northwestern University has had ongoing economic ties to Pepsico for many years, and so this recycling reward policy accentuates yet another economic linkage.

My reactions to this:

For severak years, I been bombarded with pro-recycling publicity in my own University 'home" (for I am a 'prophet without honor' both at home and away!), from students and the administration. In turn, I have been encouraging some of my own students to investigate recycling policies and supports on campus -- perhaps to even the score! Their findings replicated the above, well before this report came out. Once more, I was encouraged to persist, and tempted to say "I told you so!"

From these observations, taken together, recycling behavior seems to **absorb** environmental concerns of students and university employees, rather than **stimulate** them. Once recycling becomes a familiar part of the organizational landscape, it ceases to enhance most lower-level participants' consciousness of ecological principles. Using Merton's (1957) categories of response to anomie, what gets produced after the initial enthusiasm to "do something" may actually be a form of *ritualism* . This is the only interpretation I could come to in the face of these new observations. Moreover, when student-activists discovered that "recycling doesn't work too well," they became disillusioned "environmentalists" and turned to other forms of social problems. My senior student discovered this, a form of *retreatism* in Merton's scheme (Windon 1993).

WHAT MIGHT A TRUE ECOLOGICALLY-ORIENTED MATERIALS POLICY LOOK LIKE?

The distinction between shaping economic policy to reflect environmental concerns, and shaping environmental regulation to reflect economic interests, is eloquently stated in the following federal document:

Policymakers should be concerned with product design for two reasons. One is to improve U.S. competitiveness...The second reason is that product design is a unique point of leverage from which to address environmental problems. Design is the stage where decisions are made regarding the types of resources and manufacturing processes to be used, and these decisions ultimately determine the characteristics of waste streams... The two design goals ...can be consistent...many companies are already using the environmental attributes of their products in their marketing strategies, and polls suggest that consumer demand for "green" products is likely to grow....Therefore, integrating an environmental component into policies to improve U.S. design capabilities is an important policy objective. But policymakers should be careful in how they attempt to achieve this objective. Inappropriate regulation of the environmental attributes of products could perversely lead to more wastes being generated, and could also adversely affect competitiveness.

These findings are particularly relevant in the light of congressional debate concerning the reauthorization of the Resource Conservation and Recovery Act (RCRA) of 1976, the major Federal statute concerning solid waste. The reauthorization debate involves many issues that could affect the design of products, including mandatory recycled content...[Congress] can enact additional environmental regulations - for example, requiring that manufacturers incorporate recycled materials into new products or take back discarded products from consumers. [U.S. Congress, Office of Technology Assessment, 1993: 3]

I reflected here on the parable of *The Lamb and the Lion Lay Down Together* , noting that "the Lion sleeps a heckuva lot better!"

If the dominant treadmill coalition, with its criterion of profitability, and the environmental coalition, with its criterion of sustainability, are to lie down together in public policy generation, then the keepers of the treadmill will surely sleep more soundly. For the treadmill is not only the dominant game in the modern world economy -- it is practically the only game, and most constituencies today are bound to play. Environmentalists need to build a much broader coalition of those whose discontent with the treadmill has risen before they can be equally sound sleepers. For recycling has lulled them into a false sense of security, from which the awakening is quite painful.

CONCEPTUALIZING A SOCIALLY-ORIENTED MATERIALS POLICY

A political-economic sociologist like myself has always framed issues of materials and environmental policies in a *social-distributive context*. Over my career, I have variously labelled this a political economic view (Schnaiberg 1994), a stratification perspective (Schnaiberg 1975), or a more economic benefit-cost distributional issue (Schnaiberg *et al.* 1986). In 1980, I published a synthesis of this perspective, now labelled as the "treadmill of production". This is a system of social production which incorporates inequality principles into an institutional network which supports growth of capital-intensified forms of domestic and increasingly, global production (Schnaiberg 1980, 1993; Schnaiberg & Gould 1994).

With the framework of the treadmill of production, how does the current recycling policy withstand distributive scrutiny? Are there alternatives that might fare better, i.e., be somewhat more socially progressive in dealing with access to material resources? I have argued that the core of contemporary recycling is its **remanufacturing** element, which accelerates the growth of the treadmill of production. Large-scale centralized remanufacturing is far more energy and capital-intensive, and far less labor-intensive, than is the **re-use** of materials, without remanufacturing. In the latter route, materials are collected and re-used with substantial amounts of human labor (e.g., in flea markets), and

far lower levels of capital. Even when compared with earlier remanufacturing systems involving "scrap" or "waste" dealers, modern remanufacturing has become more centralized, rationalized, and capital intensive. Labor and small-scale entrepreneurs have been everywhere displaced in this transformation from *voluntary* and smaller-scale recycling to *mandated municipal recycling*.

As noted earlier in this narrative, concomitant with this procedure has been a fall in "waste material" prices, which has meant that municipalities have been spending more and making less than they anticipated when they initiated curbside recycling. Conversely, major waste collection firms and remanufacturing facilities have benefitted, as their costs of production have decreased. The net effects of these practices, relative to historical recycling systems, or to alternative re-use materials policies (such as were proposed by the Resource Conservation and Recovery Act of 1976), are very socially regressive, I believe. This becomes accentuated when we trace the **costs** of curbside collection, which are largely supported by local real estate taxes. Historically, local real estate taxes have been among the most regressive ways to generate government revenue (exceeded only in regressivity by sales taxes).

A more progressive policy would benefit labor-intensive modes of materials re-use. One simple illustration of this would be a waiver of sales and other taxes on used goods. Recent proposals for a broad-based energy tax, based on BTU content of fuels or on carbon-bases of fuels (Lutzenhiser & Hackett 1993), would have mixed effects. They would impact on both low-income worker-consumers, and on higher-income capital owners, managers, and professional users of high-energy forms of production equipment. Current revisions of this Clinton proposal to restrict the energy taxes to auto-truck uses of gasoline, which have been supported by many industrial and agricultural trade associations, would generally be more regressive still (Schnaiberg 1975). Indeed, a socially progressive (and ecologically-protective) materials policy would explicitly impede the capital, energy, and chemical-intensive forms of much modern production --

generated by many of these organized interests that have recently attacked current BTU tax proposals!

Finally, even within this contemporary ill-suited recycling policy, there are internal differences in social distributional features. For example, curbside recyclable collection involves more labor intensity, and lower-skilled labor. While this labor is supported by local property taxes, it is supported to some extent. Conversely, at the remanufacturing end of the process, there is more capital and energy-intensification of processes, and less labor is supported by each dollar of value added. Finally, at the distribution of remanufactured [= "recycled"] products, there is a wider array of labor employed, with varying levels of skill and pay. Depending on who the consumers are, this form of labor support (employment creation) may be more regressive or progressive. For example, consider a political mandate to have the federal government purchase only recycled goods, with a premium paid for them over and above prices for "virgin" produced goods. The federal income tax is somewhat more progressive than local property tax, though the federal tax is less progressive than it was in the 1970s (Barlett & Steele 1991; Phillips 1989, 1993). Following this route of demand generation for recycled products is somewhat progressive. Conversely, forcing low-income work-consumers to pay more for recycled goods by imposing a tax on non-recycled goods may be far more regressive than current policies.

REFRAMING RECYCLING AS SUSTAINABLE DEVELOPMENT

I found that very little discussion of any of these distributive issues had been generated by environmental sociologists, sociologists in general, or social scientists, through much of the 1990s. Yet this should be one of our primary mandates in looking at this materials policy or any other materials policy designed to address environmental problems. Our skills do not lie in ecological impacts, but in social impacts. This is part

of our uncritical and unreflexive stance in regard to recycling, which literally occurs in our front yard or at our front door. It is puzzling how little attention we have paid to this.

When discussing this issue with my current and former students, we decided to explore recycling from another perspective. Taking into account both the ecological and social claims made for curbside recycling programs, Adam Weinberg and David Pellow and I began to move beyond how recycling "only" reproduced the economic relations of the treadmill of production (Schnaiberg & Gould 1994: 230). We wanted to examine how it also "fully" explored new facets of the interaction of state agencies, private producers, and citizen-worker movements. Our exploration suggested that recycling had already produced some empirical examples of how the social struggle for "sustainable development" (World Commission 1987) might actually fare within industrial societies like the U.S. One step in this reframing of recycling as a form of sustainable development was to closely examine the criteria for a future sustainable development. I contrasted recycling with past examples of largely-failed policies derived from the theory of "appropriate technology", as well as the social naivete of "industrial ecology", in which recycling has recently been theoretically embedded (Schnaiberg 1997).

A second approach was to empirically examine the comparative-historical dimensions of recycling programs in the Chicago area over the previous decade. In addition, we reviewed the trade association literature for the recycling industry, examining how choices were made and rationalized, in terms of both materials to be recycled and the uses of labor. From the empirical work, we discovered some recycling programs that offered new approaches to labor utilization (Pellow *et al.* 1995), as one form of community development (Harrison *et al.* 1995). But in reviewing the literature of the recycling industry, we also saw many cautionary notes about future social and ecological gains from projected recycling policies and organizations.

Even with the recent reconsideration of the potential social benefits that have been derived from some community-based recycling programs, we have noted the continued

influence of exchange values or market criteria on state programs. For example, the period in which we did our empirical studies was characterized by rising prices for recycled paper, due to expanded demand for most types of paper (Holusha 1994). More recently, there appears to be a renewal of a surplus of paper on the market, suggesting that prices for recycled paper will decrease. This will produce both the paper "gluts" noted earlier in the paper, and decrease the degrees of freedom of progressive recycling organizations to offer new labor opportunities for workers, such as we have recently described. This market-driven cycling of recycling practices is quite deviant from the hopes for attaining and sustaining new forms of "sustainable development" (Schnaiberg 1997).

Thus, continued suspicion of the practices involved in recycling remains high on our sociological agenda. Socially-progressive words about recycling continue to mask socially-regressive deeds, alas.

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