

Maine's Culture of Reuse and Its Potential to Advance Environmental and Economic Policy Objectives

by Cindy Isenhour, Andrew Crawley, Brienne Berry, and Jennifer Bonnet

Abstract

Policies designed to extend the lifetime of products—by encouraging reuse rather than disposal—are proliferating. Research suggests that reuse can ease pressure on natural resources and improve economic efficiency, all while preventing waste. In Maine, there are clear signs of a tradition of reuse that might be used to advance these goals. But beyond discrete observations, proverbs, and anecdotal stories, little data have been collected upon which to estimate the potential of Maine's reuse economy. This paper draws upon findings generated during the first year of a five-year interdisciplinary, mixed-methods research project designed to explore the environmental, social, and economic dimensions of reuse in Maine. Our preliminary findings suggest that Maine does, indeed, have a vibrant but underestimated reuse economy. Less expected are findings that suggest reuse has promise to enhance economic resilience and contribute to culturally appropriate economic development.

A DRIVE DOWN MAINE'S COAST

Throughout the state of Maine, it is difficult to miss the markers of a robust reuse economy. Yard sale signs are abundant from early spring until the winter weather arrives. Even in the dead of winter, stacks of *Uncle Henry's* sit near cash registers in local shops from Portland to Fort Kent. Swap groups abound on social media, and numerous websites facilitate secondhand sales such as the Mama Swap of Maine or the Maine Buy Swap and Sell, whose tagline states, "Got Clutter? Don't Wait Until Yard Sale Season." The popular treasure-hunting program *American Pickers* has filmed several episodes in Maine and an entire reality TV show, *Downeast Dickering*, focuses on reuse bargain hunters and their use of *Uncle Henry's* in Maine.

Reuse and secondhand markets are certainly nothing new. In fact, they are the overwhelming historical precedent. Prior to mass production, the advent of the marketing industry, planned obsolescence, and the development of robust waste management systems in

the United States, reuse was both a practical and economic necessity (Glickman 1999; Cohen 2003). While the reuse tradition has gradually been replaced by increased access to affordable mass-produced and -marketed goods across much of the United States, particularly as the cost of new consumer goods fell relative to income over the last several generations (US DOL and US BLS 2006), signs of reuse remain apparent in New England.

BACKGROUND

Over the last century, global materials use has increased at more than twice the rate of population (US EPA 2013), in large part due to significant growth in the consumer goods sector. Today, the stuff we buy, use, and throw out accounts for 35 percent of material inputs in the global economy and constitutes nearly 75 percent of the municipal solid waste stream (MacArthur 2013). These are only a few of the statistics that have led



Photo: Ben Isenhour

some to suggest consumption is “the mother of all environmental issues” (EEA 2012: 1). With growing awareness of resource depletion and climate change, increased attention has been directed at efforts to create more circular economies. In such economies, goods are designed for durability and to minimize materials use. Product lifetimes are extended until goods are no longer useful or repairable, and discarded materials are cycled back into the economic system to reduce waste and offset demand for virgin resource extraction, production, and the associated energy and emissions.

Although often conflated with recycling, reuse is a radically different concept. While recycling is important for recovering materials with remaining value after disposal, it takes a lot of energy and water to convert packaging back into component materials. Recycling has contributed to reduced materials use, but these gains have not kept pace with increased production, resulting in net growth in materials use. Reuse, on the other hand, has much greater potential to reduce material use because it involves the recirculation of goods in their original form and thus does not require additional inputs. Reuse is focused on “object durability, so that repeated usage can take place” potentially offsetting, in many cases, demand for new production (Vaughan, Cook, and Trawick 2007: 128). We define reuse exchanges as the redistribution of previously owned material goods, in their original form, from one agent to another through a transfer of ownership (sale, swap, barter, gift) or temporary use agreement (borrow, rental, lease, share, loan). The reuse economy encompasses a diverse range of exchanges, from free *take-it* shops at waste transfer stations to high-end antique stores, architectural or auto salvage, and peer-to-peer exchanges. Practices that extend product lifetimes such as restoration and repair are considered *prepare for reuse* and are also included in the set of reuse activities.

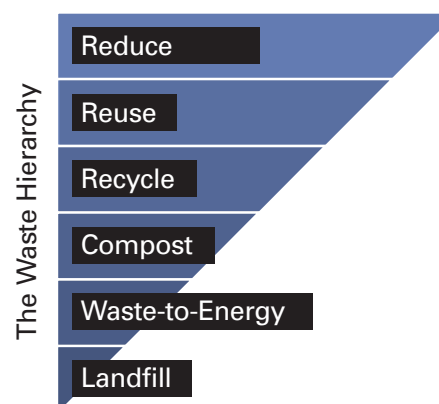
The environmental benefits of reuse, while uneven from one product category to another, are well documented. Researchers have found significant net environmental benefits associated with the purchase of secondhand (rather than new) clothing, books, and electronics (Farrant, Olsen, and Wangel 2010; Thomas 2010; Castellani, Sala, and Mirabella 2015). While researchers have rarely attempted to document savings associated with reuse across multiple sectors, one study conducted in the United Kingdom conservatively estimated that formal sector reuse (not including peer-to-peer exchanges) reduced carbon dioxide (CO₂) equivalent

emissions by 1 million tons per year—the same as taking 300,000 cars off the road (WRAP 2011). Similarly, MacBride’s study of US EPA waste data estimated that reuse has the potential to reduce landfilled municipal waste in the United States by 25 percent (2011).

Based on these and similar findings, many governmental agencies, on multiple scales, have adopted policies that prioritize reuse above recycling and disposal (Schmidt et al. 2007). At the international level, the United Nations Environment Program’s 10-year framework on sustainable consumption and production encourages “the promotion of repair and maintenance work as an alternative to new products” (United Nations 2012: 5). In the United States, Oregon recently released a progressive strategic plan to extend product lifetimes and encourage repair and reuse (ODEQ 2016). The trend toward reuse is even more pronounced at the local level. Austin, Seattle, Chicago, Philadelphia, New York, and Detroit are only a handful of the cities that have set up programs to facilitate and support reuse by sponsoring community swaps, repair events, industrial symbiosis projects, and materials exchanges (US EPA 2015).

Here in New England, the regional office of the US Environmental Protection Agency (EPA) emphasized reuse, publishing a guide that directs readers to sites where businesses, local governments, and municipal residents can donate used goods. This effort was seen as part of the EPA’s mission to “promote reuse over traditional solid waste disposal of materials that still have ‘use’” (US EPA 2000: 2). In Maine, the legislature formally adopted a waste hierarchy (38 MRSA §2101) (Figure 1) that prioritizes reuse above all other waste management options except source reduction. The Maine Department of Environmental Protection

FIGURE 1: **Maine’s Waste Hierarchy**



(MDEP) has articulated the value of reuse as a waste-reduction strategy, writing that “reusing items can save energy and money, and prolong the item’s useful life” (<https://www1.maine.gov/dep/sustainability/sw-hierarchy.html>).

While Maine has not yet implemented any policies to support reuse in the waste hierarchy, some evidence suggests that many local communities are already contributing to waste-reduction and sustainability goals through reuse. More than 90 transfer and recycling stations throughout the state offer opportunities for reuse. Through transfer station take-it shops or community donation drives, 65 programs collected nearly 3,000 tons of reusable materials in 2014 (MDEP 2015). Maine also has some of the consistently lowest per capita waste-generation rates in the nation (van Haaren, Themelis, and Goldstein 2010; MDEP 2016) perhaps due, in part, to strong reuse activity.

Many advocates have urged the creation of a new culture of reuse, one that is pleasurable and contributes to environmental benefits, cost savings for consumers, reduced waste tipping fees for municipalities, and even improved community economic resilience. Unfortunately, however, reuse economies and cultures are significantly understudied, and empirical research that might be used to foster a culture of reuse is scarce (Schor 2014; Stokes et al. 2014; Cooper and Timmer 2015). Although the environmental benefits of reuse are well documented, there have been few studies that explore the conditions that give rise to reuse economies or that examine the forms of reuse relative to their social and economic implications (Schor 2014; McLaren and Geyman 2015).

RESEARCH DESIGN

We suspected that Maine had a particularly vibrant reuse economy relative to other states, as well as a strong shared culture that supports these practices. Scholars specializing in development studies have long recognized that policies and programs are more likely to be successful if they are consistent with and responsive to existing cultural institutions and norms (Adams 2001; Shore, Wright, and Pero 2011). We wondered if, indeed, Maine has a particularly vibrant reuse economy, could it be used to support, or create incentives for, the advancement of economic, social, or environmental public policy objectives?

To explore this question and others, we began to plan for a multiyear interdisciplinary research project in

the fall of 2015. The project was designed to describe the history, development, and contemporary form of Maine’s reuse economy with particular intent to describe its economic, social, and environmental character and analyze its potential in the context of sustainability and community resilience. The research was designed to unfold across multiple scales over time, beginning with national level spatial and economic analysis, proceeding with state-level surveys (first on the formal reuse sector and later on the peer-to-peer exchange economy), and concluding with case-study research at the community and household level.

In this article, we detail the first three completed stages of our research, which sought to determine whether Maine’s reuse economy is exceptional relative to other states and to empirically explore the strength of the reuse sector across the nation and in Maine relative to a range of potential explanatory factors. The methodology in these first three stages of research included (a) national level spatial analysis of the reuse sector based on Bureau of Labor Statistics (BLS) data between 2005 and 2015; (b) an initial review of original and historical primary sources to explore the cultural moorings of Maine’s tradition of reuse, and (c) a survey and follow-up interviews with reuse-establishment owners and managers in Maine. We will briefly detail each of these methods before discussing our findings.

National-Level Spatial Analysis

To begin our analysis of the reuse sector at the national level, we used the American Community and County Business Patterns surveys. Both of these instruments classify industries using the North American Industry Classification System (NAICS). This approach illustrated that our society’s methods of accounting for economic activity are not particularly well suited to understanding reuse.

The NAICS code most appropriate for our investigation is 453310 for used merchandise stores, but unlike other six-digit-level classifications, there are no subcodes or layers of disaggregation. Therefore, this single code captures everything from used bookstores and antiques dealers to consignment shops, making it quite difficult to study the differences between various forms of reuse. Further, it seems that the classification system produces a limited and conservative view of reuse. For example, if a bike shop sells both new and used bicycles, it is not listed under the used merchandise classification. Also, many reuse establishments are

nonprofit entities including church thrift shops or charity consignment stores that are often not classified independently as used merchandise stores. Flea markets, which are ubiquitous in Maine, are classified as “other direct selling establishments.” Pawn shops, rental businesses, and repair shops, all parts of the reuse economy, are also listed under various service categories.

As a means of further defining the reuse sector, we searched the Dun & Bradstreet business directory using derivatives of the NAICS code along with individual searches for thrift and antiques. Once these data were cleaned, we found that the number of establishments increased by nearly four times. Therefore, it seems safe to assume that the formal reuse sector indicated by the NAICS codes constitutes a limited and conservative estimation of the industry.

These formal sector data on reuse also do not account for a significant portion of reuse activity, including all the peer-to-peer exchanges that take place directly between buyers and sellers at yard sales, community swaps, or even those mediated by Craigslist, *Uncle Henry's*, or Facebook swap groups. We plan to estimate the value of mediated exchanges using the listed selling prices on platforms like *Uncle Henry's* and Craigslist, but have no good indication of the household savings or income associated with participation in direct peer-to-peer exchange—such as yard sales and community swaps—without additional research. We plan to investigate informal exchanges in year three of our project.

For our initial spatial analyses, we used the used merchandise retail classification code even though it provides only a conservative picture of the scope and value of the reuse sector. Using BLS data from 2005 to 2015, we calculated location quotients (LQ), which provide a means of assessing the relative specialization of a particular characteristic within a population. Effectively, the LQ is a ratio of a ratio allowing for the comparison of characteristics across areas of varying size. The value of an LQ at a regional level indicates how intensive a characteristic is in one place compared to the country as a whole.

Textual Analysis of Primary Sources

Through an analysis of contemporary and historical cultural artifacts, documents, and media, we aimed to thoroughly explore and understand reuse behaviors in Maine. All signs suggest that Maine has a vibrant culture of reuse, but what are the historical and contextual roots of any shared ideologies or behaviors that support

contemporary reuse markets? And what evidence do we have that clearly suggests the presence of a culture of reuse? Working with collections at the University of Maine's Fogler Library, the Maine Folklife Center, and historical archives, we identified sources with references to Maine and at least one key term referencing the reuse economy (thrift, reuse, frugality, and used goods). We identified nearly 70 sources originally published between the late eighteenth century and the present and ranging from personal diaries and nonfiction books to blog posts and electronic journalism. While this work is still in process, we have analyzed many of these texts for evidence of a long-standing culture of reuse and for historical context that might help explain contemporary reuse behaviors in Maine.

Surveys and Interviews with Reuse Establishment Owners and Managers

Using the 2015 Maine Business Directory, the research team compiled a database of approximately 600 formal sector reuse businesses in the state of Maine. We cross-checked the list against publicly available data on each business to capture email addresses. Once again, the process itself provided valuable insight. We found through the cross-check and postal service address checks that many establishments were no longer in business. Our database was reduced from over 640 establishments to approximately 450 still in business with viable addresses. This suggested to us that some reuse businesses may be transient or short lived, a point to which we will return. We sent surveys designed to gather information about reuse exchanges and motivation for participation in reuse via email and the postal service. To date, 72 surveys have been returned. We have also conducted interviews with five reuse-establishment owners and managers to further explore the social, economic, and environmental dimensions of these organizations and their contributions to Maine's reuse economies.

PRELIMINARY RESEARCH FINDINGS

Our analysis of primary texts corroborates what seems to be a tacit and shared understanding that Maine is home to a deeply rooted culture of reuse. *Antiqueman's Diary* (Tuck and Fales 2000) details the experiences of Maine's first full-time antiques dealer upon his arrival in Kennebunkport in 1893. It was during the nineteenth century that the term antique entered into English texts as something “applied to old

furniture, pictures, china, and other articles of vertu, esp. as sought for and collected by amateurs” (Oxford English Dictionary 2017).¹ During this time, even visiting treasure hunters recognized a penchant for reuse in Maine, and they visited to hunt for valuable collectibles in the far reaches of rural Maine (*New York Times*, July 23, 1894). In later Depression-era texts, the proverb, “Use it up, wear it out, make do, or do without” emerged as an ethos of thrift commonly associated with New England (Doyle, Mieder, and Shapiro 2012). Indeed many of these historical sources and ethnographies identify Maine culture as one of “independence, ingenuity, thriftiness, and taciturnity” (Mieder 2008: 164).

And these suggestions of a long-standing culture of thrift and reuse are still apparent today. Mainer and self-described “frugal zealot” Amy Dacyszyn began “promoting thrift as a viable alternative lifestyle” in a widely popular newsletter, the *Tightwad Gazette*, in the 1990s (Dacyszyn 1998). And since 2014, a four-part realistic-fiction series is set in a secondhand shop in “North Harbor, Maine” (Ryan 2014, 2015, 2016, 2017), exhibiting an enduring association of reuse with the Pine Tree State.

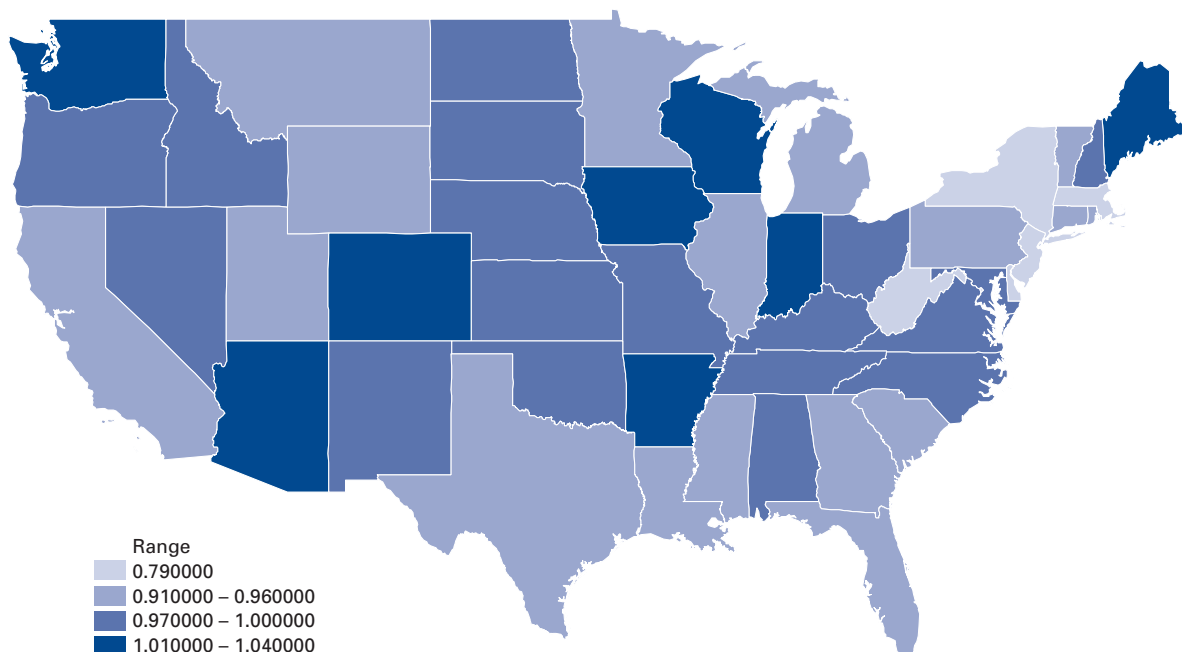
Our national-level spatial analysis of the reuse economy also validated our suspicion that Maine has an exceptional reuse economy. In 2015, for example, LQs

reveal that Maine ranked second in the nation in the number of reuse establishments relative to the total number of establishments in the state (Figure 2).

Measured either by number of reuse establishments or sector employment, Maine’s reuse economy between 2005 and 2015 was consistently more active than national averages and typically ranks among the top 10 in the nation. The consistency with which Maine ranks highly on these measures raises several interesting secondary questions about the cultural norms and economic conditions that have fostered reuse in Maine.

There are several potential explanations for Maine’s vibrant reuse economy that we will continue to explore as our research progresses. Frugality may be associated with an aging population reliant on fixed incomes, a remnant of an agricultural past, or a geographically isolated economy less infiltrated by national retail chains. But Judd’s work suggests that reuse has deeper cultural roots linked to an ethos of “intractable individualism” and a people of “singular persistence” focused on self-sufficiency and survival. He argues that these traits reflect the nature and reality of the “hinterland in which they live” (Judd and Beach 2003: 18). Similarly, Griswold argues that “Maine has always had a sharp sense of its distinctiveness” that “came from the state’s history as the

FIGURE 2: **2015 Establishment Location Quotient**



Massachusetts backwater—the state that didn't gain statehood until some thirty years after the rest of the East Coast" (Griswold 2002: 78). Indeed, Maine is a relatively geographically isolated state with a well-documented preference for local ownership and self-sufficiency. Even dating back to the New Deal, historians have noted Maine's preference for localized economic development rather than integration into "vast impersonal markets" (Judd and Beach 2003: 18).

The Potential for Improved Economic Resilience

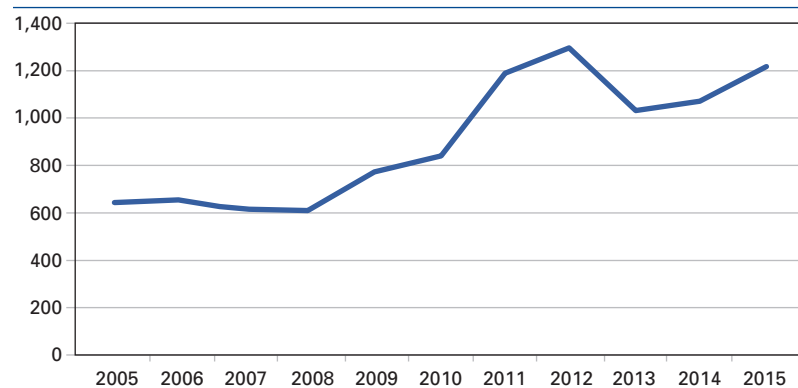
Our research also revealed some interesting trends that suggest that reuse has already made important contributions to economic resilience in Maine, particularly in depressed rural areas. The financial crisis of 2007–2008 and subsequent recession was one of the most severe economic shocks to hit the United States since the Great Depression of the 1930s (Temin 2013). Signs of the economic consequences of the recession are still evident in the United States today, particularly in the large geographical disparities of recovery (Hutton and Lee 2012). This heterogeneity in recovery has put significant emphasis on the concept of regional economic resilience and is becoming a defining element of spatial development analysis (see, for example, Christopherson, Michie, and Tyler 2010; Martin 2012; Martin and Sunley 2015). A further spatial aspect of resilience is the rural/urban divide, with rural areas found to be more vulnerable to economic shocks than urban areas (Murphy and Scott 2014).

Maine, a relatively rural state, has been particularly slow to recover from the recession, a trend exacerbated by economic pressures from paper mill closures. Over the past 15 years, employment in mills—once a linchpin of Maine's economy—has been cut in half (MDOL 2016). According to an article by Nick Sambides (*Bangor Daily News*, January 18, 2017), mill closures have been described as natural disasters because of the devastating impact they have had on Maine towns. These rural towns face the loss of their largest employers, with few other opportunities for livelihoods available. Not only are jobs difficult to come by since the recession and mill closures, but poverty persists, especially in rural counties (Acheson 2015), making it difficult for individuals to access the material goods they need.

According to Alexander and Stone (2009), 90 percent of households reduced their spending because of the recent recession and nearly a third of households made "significant" reductions in purchases. This is to be expected. Indeed, the notion of counter- and pro-cyclicality are well established in the economic literature (see, for example, Gavin and Hausmann 1998; Ilmakunnas and Maliranta 2003), illustrating that while most sectors cycle with economic health (procyclicality), others exhibit greater strength in times of economic decline (countercyclicality). Empirical evidence finds countercyclicality occurs in recessions with consumption switching towards less expensive "inferior substitutes" (Basker 2011). The work of McCutcheon (2001), Horne and Maddrell (2002), and Mitchell and Montgomery (2010), finds that reuse exhibits strong countercyclical movements.

Our analysis of the formal reuse sector in Maine indicates that the reuse sector experienced notable growth during the recession (Figure 3), suggesting that reuse might provide a valuable strategy for economic resilience and an alternative means of provisioning during difficult economic times. Our survey of the owners and managers of reuse establishments also seemed to support this conclusion. Several respondents, for example, noted that reuse had a "low cost of entry" and a "no-cost inventory" that allowed individuals to start businesses with few resources. As many Mainers enter retirement or are laid off from their work, reuse offers supplemental income and a low-stakes transition to new economic opportunities. Indeed, in the survey sent to reuse-store owners, nearly 80 percent cited self-sufficiency as their motivation for getting involved

FIGURE 3: **Maine Employment in NAICS 453310**



in the reuse economy. One survey respondent described how reuse was a transition strategy:

After I was downsized from my management position at a large health insurance company, I decided to go for it. I used my settlement monies for startup costs. Fortunately, the business took off and sales have increased every year since.

Other research participants talked about taking up reuse as a seasonal or supplementary occupation to make ends meet. Maine was third in the country in its rate of multiple job holding (8.2 percent) in 2015, fifth in 2014 (8.0 percent), and third in 2013 (8.6 percent). These numbers are well above the US average, which has hovered around 4.9 percent for some time now (Campolongo 2017). It seems, therefore, that reuse can provide an opportunity for economic resilience and necessity-based entrepreneurship in areas with limited economic opportunity. These ideas are also consistent with the survey data, which indicate that most reuse businesses are small, with 2.04 full-time employees on average, and the clear majority (81 percent) with annual gross sales revenues less than \$250,000. Further, it appears that nearly half of these establishments are in rural areas (approximately a quarter report locations in urban or semiurban contexts) where reuse might be an attractive resilience strategy in the absence of alternatives.

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The Potential for Culturally Consistent Economic Growth

Perhaps our most interesting and least anticipated finding is the potential for Maine's reuse economy to contribute not only to economic resilience, but also to economic growth. While reuse economies tend to demonstrate countercyclicality, our data indicate that Maine's reuse economy often defies a simple relationship.

Reuse is consistently strong in Maine and continues to grow even in the context of a gradual economic recovery. The sector shows significant variability year to year, but the overall trend reveals an increase in absolute numbers of establishments of 20 percent over the last decade. And while the average employment growth rate of all sectors in Maine is 1.1 percent, it is 6.5 percent per year for the reuse sector.

Taken together, these observations raise important questions about the potential for reuse markets to contribute to economic development and growth in rural American communities where external investments are unlikely and conventional routes to economic development are limited. Johnstone and Lionais (2004) provide several case studies that suggest that the concept of community, conceived as localized networks of social and exchange relations, can act as a powerful tool for place-based development. Similarly, Bristow and Healy (2014) argue that place- and context- based development (often referred to as amenity development) is increasingly important in postindustrial regional economic resilience. If strong social relations and a sense of place can be leveraged, these authors assert that development initiatives can be responsive to economic, social, and environmental goals. All this seems to suggest that the strength of the reuse sector can be explained relative to not only economic cycles, rural poverty, or geography, but also to community character and an existing culture that supports reuse.

Maine is already well known for its sense of place, unique character, and strong thrift and antiques tourism opportunities. Indeed the tourism industry sells the idea that Maine is a place of rugged beauty and thrifty, independent people who are deeply connected to the land (Lewis 1993). An important component of Maine's tourist appeal is its simplicity and rural charm (Lewis 1993). Tourism is big business with a larger economic impact than Maine's other top natural resource industries (forestry, agriculture, fishing, and aquaculture) combined (Munding and Daigle 2007). Several efforts have been made to promote tourism centered on reuse in Maine, including examples such as the Maine Antiques Trail (<http://www.maineantiquetrail.com/>) and Thrift Happy's Maine Resale Directory (<http://www.thrifthappy.com/maine.html>).

Our survey of reuse-establishment owners and managers also substantiates the idea that the reuse sector is closely linked with tourism, particularly during the summer months. In fact, nearly all the respondents (90

percent) reported that out-of-state visitors are “frequent” or “occasional” customers. Qualitative responses and interviews also point to the strong links between tourism and the reuse sector. In all, 17 respondents mentioned customers from away and the seasonality of many forms of reuse (particularly antiques and used books). One respondent, for example, mentioned that in promoting tourism, the state helps the reuse economy and noted that tourists are drawn to Maine by “the lure of the find.”

As our research progresses, we will continue to explore, quantify, and analyze the potential for economic growth associated with a robust reuse economy. While we are still in the process of gathering the data necessary to describe and estimate the potential of reuse in Maine, one existing study provides a preliminary indication of localized economic growth associated with reuse. The state of Minnesota estimated economic activity and employment generated by the formal reuse sector (resale, repair, and rental) in 2010 and reported that the sector generated \$4 billion in gross annual sales and directly employed 46,000 people. Perhaps more importantly, the study estimates that unlike corporate new-product retail, the economic benefits associated with the sector are distributed almost entirely locally (MPCA 2011). Empirical studies of economic localization provide examples of how shifts toward localized economic behaviors have not only reduced global materials use and the emissions associated with transport, but also fostered more equitable, economically sustainable, and socially engaged local economic development (De Young and Princen 2012; Lockyer and Veteto 2013; Litfin 2014).

CONCLUSION: MULTIPLE OBJECTIVES AND A SINGLE POLICY

Policies designed to encourage reuse are emerging on multiple scales. Some signs suggest that the relationship between new product and reuse markets has started to shift due to “nearly two decades of heavy acquisition of cheap imports,...the proliferation of unwanted items” (Schor 2014: 1) and increased awareness of the environmental benefits of reuse (Scott et al. 2009; Yan, Bae, and Xu 2015). New forms of reuse are also emerging with advances in virtual exchange platforms that reduce transaction costs (Yokoo 2009) and with new concepts such as collaborative consumption (e.g., community tool sheds) and the sharing economy (e.g., tiny libraries,

car sharing) (Botsman and Rogers 2010; Agyeman, McLaren, and Schaefer-Borrego 2013; Orsi et al. 2013).

In this context, advocates of reuse have urged communities and policymakers to adopt programs that can foster a culture of reuse that is enjoyable and provides environmental and economic benefits. We have provided preliminary research findings that suggest Maine already has a strong culture of reuse that is likely already contributing to reduced materials use, climate mitigation, and waste reduction. We have also provided preliminary evidence to suggest that Maine’s reuse economy has contributed to economic resilience and economic growth. These positive outcomes have all emerged from a local culture of reuse and in the absence of robust policies to support reuse and Maine’s waste management hierarchy.

Policies to encourage the extension of product lifetimes through repair and reuse do exist. Oregon, for example, has a strategic plan that includes programs for considering durability in public procurement, grants to support the development of reuse infrastructure, and programs to encourage deconstruction over demolition. Sweden has implemented a tax rebate for citizens who choose to repair a good, rather than replace it, and cities across the country are hosting materials exchanges, repair cafes, and community swaps. Here in Maine, where reuse is embedded in local culture and practices, we suggest there is potential to expand the economic and environmental benefits of reuse with programs and policies like these that can provide additional incentives and support.

Sustainable development is clearly not easy, but we have a large body of research to suggest that development programs and policies are more likely to result in positive and sustainable outcomes if they are consistent with local culture and institutions. While the environment-vs.-jobs rhetoric is pervasive, it seems to us that Maine’s existing culture of reuse could be used to help the state achieve progress on both environmental and economic policy objectives. 🐟

ENDNOTES

- 1 Similarly timed usage of the term in American contexts appeared in the *New York Times*. A search for the terms antique, antiques, antiquing, antique shop, and antique dealer reveal common usage with regards to the sale of collectibles in the mid- to latter 1800s. Previous iterations of the term antique typically refer to periodization or to high-end sales, such as art auctions.

REFERENCES

- Acheson, Ann W. 2015. *Poverty in Maine 2015*. Margaret Chase Smith Policy Center, University of Maine, Orono.
- Adams, William Mark. 2001. *Green Development: Environment and Sustainability in the Third World*. Routledge, New York.
- Agyeman, Julian, Duncan McLaren, and Adrienne Schaefer-Borrego. 2013. *Sharing Cities*. Friends of the Earth, London.
- Alexander, Whit, and Dorian Stone. 2009. "How US Consumer Spending Is Changing." McKinsey & Company (June). <http://www.mckinsey.com/industries/retail/our-insights/how-us-consumer-spending-is-changing>
- Botsman, Rachel, and Roo Rogers. 2010. *What's Mine Is Yours: How Collaborative Consumption Is Changing the Way We Live*. Harper Collins, New York.
- Bristow, Gillian, and Adrian Healy. 2014. "Regional Resilience: An Agency Perspective." *Regional Studies* 48(5): 923–935.
- Campolongo, Susan. 2017. Multiple Jobholding in States in 2015. *Monthly Labor Review*. Bureau of Labor Statistics. <https://www.bls.gov/opub/mlr/2017/article/multiple-jobholding-in-states-in-2015.htm>
- Castellani, Valentina, Serenella Sala, and Nadia Mirabella. 2015. "Beyond the Throwaway Society: A Life Cycle-Based Assessment of the Environmental Benefit of Reuse." *Integrated Environmental Assessment and Management* 11(3): 373–382. doi: 10.1002/ieam.1614
- Christopherson, Susan, Jonathan Michie, and Peter Tyler. 2010. "Regional Resilience: Theoretical and Empirical Perspectives." *Cambridge Journal of Regions, Economy and Society* 3 (1): 3–10. doi:10.1093/cjres/rsq004
- Cohen, Lisbeth. 2003. *A Consumer's Republic: The Politics of Mass Consumption in Postwar America*. Knopf Random House, New York.
- Cooper, Rosemary, and Vanessa Timmer. 2015. *Local Governments and the Sharing Economy*. One Earth, Vancouver.
- Dacyczyn, Amy. 1998. *The Complete Tightwad Gazette: Promoting Thrift as a Viable Alternative Lifestyle*. Villard Books, New York.
- De Young, Raymond, and Thomas Princen, eds. 2012. *The Localization Reader: Adapting to the Coming Downshift*. MIT Press, Cambridge, MA.
- DeMailly, Damien, and Anne-Sophie Novel. 2014. *The Sharing Economy: Make It Sustainable*. Institute for Sustainable Development and International Relations, Paris. <http://www.iddri.org/Publications/Economie-du-partage-enjeux-et-opportunités-pour-la-transition-écologique>
- Doyle, Charles Clay, Wolfgang Mieder, and Fred R. Shapiro. 2012. *The Dictionary of Modern Proverbs*. Yale University Press, New Haven, CT.
- EEA (European Environment Agency). 2012. *Unsustainable Consumption: The Mother of All Environmental Issues?* EEA, Copenhagen. <https://www.eea.europa.eu/highlights/unsustainable-consumption-2013-the-mother>
- Farrant, Laura, Stig Irving Olsen, and Arne Wangel. 2010. "Environmental Benefits from Reusing Clothes." *The International Journal of Life Cycle Assessment* 15(7): 726–736. doi:10.1007/s11367-010-0197-y
- Gavin, Michael, and Ricardo Hausmann. 1998. "Macroeconomic Volatility and Economic Development." In *The Political Dimension of Economic Growth*, 97–116. St. Martins Press, New York.
- Glickman, Lawrence B. 1999. *Consumer Society in American History: A Reader*. Cornell University Press, Ithaca, NY.
- Griswold, Wendy. 2002. "History + Resources = A Sense of Place." *Maine Policy Review* 11(1): 76–84.
- Horne, Suzanne, and Avril Maddrell. 2002. *Charity Shops: Retailing, Consumption and Society*. Routledge, New York.
- Hutton, Will, and Neil Lee. 2012. "The City and the Cities: Ownership, Finance and the Geography of Recovery." *Cambridge Journal of Regions, Economy and Society* 5(3): 325–337. doi:10.1093/cjres/rss018
- Johnstone, Harvey, and Doug Lionais. 2004. "Depleted Communities and Community Business Entrepreneurship: Revaluing Space through Place." *Entrepreneurship & Regional Development* 16(3): 217–233. doi:10.1080/0898562042000197117
- Judd, Richard W., and Christopher Beach. 2003. *Natural States: The Environmental Imagination in Maine, Oregon, and the Nation*. New Ed edition. Resources for the Future, Washington, DC.
- Lewis, George H. 1993. "The Maine That Never Was: The Construction of Popular Myth in Regional Culture." *Journal of American Culture* 16(2): 91–100.
- Litfin, Karen. 2014. *Ecovillages: Lessons for Sustainable Community*. Polity, Cambridge, UK.
- Lockyer, Joshua, and James R. Veteto. 2013. *Environmental Anthropology Engaging Ecotopia: Bioregionalism, Permaculture, and Ecovillages*. Berghahn Books, New York.
- MacArthur. 2013. *Towards the Circular Economy: Opportunities for the Consumer Goods Sector*. The Ellen MacArthur Foundation.
- MacBride, Samantha. 2011. *Recycling Reconsidered*. MIT Press, Cambridge, MA.

- MDEP (Maine Department of Environmental Protection). 2016. Maine Solid Waste Generation and Disposal Capacity Report: Calendar Year 2014. MDEP, Augusta.
- MDEP. 2015. "Maine Solid Waste Generation and Disposal Capacity Report: For Calendar Year 2013." MDEP, Augusta. <http://www.maine.gov/tools/whatsnew/attach.php?id=634519&an=1>
- MDOL (Maine Department of Labor). 2016. "Employment and Wages by Industry Sector, Monthly 2000–2015." Industry Employment and Wages. Center for Workforce Research & Information, MDOL, Augusta. <https://www1.maine.gov/labor/cwri/qcew.html>
- Martin, Ron. 2012. "Regional Economic Resilience, Hysteresis and Recessionary Shocks." *Journal of Economic Geography* 12(1): 1–32. doi:10.1093/jeg/lbr019
- Martin, Ron, and Peter Sunley. 2015. "On the Notion of Regional Economic Resilience: Conceptualization and Explanation." *Journal of Economic Geography* 15(1): 1–42. doi:10.1093/jeg/lbu015
- McCutcheon, Ron. 2001. "Thrift Stores Thriving in Recession." *Inside Tucson Business* (December 28): sec. 1.
- McLaren, Duncan, and Julian Agyeman. 2015. *Sharing Cities: A Case for Truly Smart and Sustainable Cities*. MIT Press, Cambridge, MA.
- Mieder, Wolfgang. 2008. "Proverbs Speak Louder Than Words": Folk Wisdom in Art, Culture, Folklore, History, Literature and Mass Media. Peter Lang Publishing Inc., New York.
- Mitchell, Mark, and Rob Montgomery. 2010. "An Examination of Thrift Store Shoppers." *The Marketing Management Journal* 20(2): 94–107.
- MPCA (Minnesota Pollution Control Agency). 2011. *A Study of the Economic Activity of Minnesota's Reuse, Repair and Rental Sectors*. Minnesota Management & Budget, St. Paul.
- Munding, Elizabeth, and John Daigle. 2007. "Nature-Based Tourism in Maine: The State's Role in Promoting a Strong Tourism Industry." *Maine Policy Review* 16(1): 66–77.
- Murphy, Enda, and Mark Scott. 2014. "Household Vulnerability in Rural Areas: Results of an Index Applied during a Housing Crash, Economic Crisis and under Austerity Conditions." *Geoforum* 51 (January): 75–86. doi:10.1016/j.geoforum.2013.10.001
- ODEQ (Oregon Department of Environmental Quality). 2016. *Strategic Plan for Reuse, Repair, and Extending the Lifespan of Products in Oregon*. ODEQ, Portland. <http://www.deq.state.or.us/lq/sw/prodstewardship/Strategicplan.pdf>
- Orsi, Janelle, Yassi Eskandari-Qajar, Eve Weissman, Molly Hall, Ali Mann, and Mira Luna. 2013. *Policies for Sharable Cities: A Sharing Economy Policy Primer for Urban Leaders*. Sharable and The Sustainable Economies Law Center. <http://www.shareable.net/>
- Ilmakunnas, Pekka, and Mika Maliranta. 2003. "The Turnover of Jobs and Workers in a Deep Recession: Evidence from the Finnish Business Sector." *International Journal of Manpower* 24(3): 216–246. doi:10.1108/01437720310479714
- Ryan, Sofie. 2014. *The Whole Cat and Caboodle*. Obsidian, New York.
- Ryan, Sofie. 2015. *Buy a Whisker*. Obsidian, New York.
- Ryan, Sofie. 2016. *A Whisker of Trouble*. Penguin Group USA, New York.
- Ryan, Sofie. 2017. *Telling Tails*. Berkley Prime Crime. New York.
- Schmidt, Jannick H., Peter Holm, Anne Merrild Hansen, and Per Christensen. 2007. "Life Cycle Assessment of the Waste Hierarchy—A Danish Case Study on Waste Paper." *Waste Management* 27(11): 1519–1530. doi:10.1016/j.wasman.2006.09.004
- Scott, Kate, John Barrett, Giovanni Baiocchi, and Jan Minx. 2009. *Meeting the UK Climate Challenge: The Contribution of Resource Efficiency*. WRAP Project EVA128, Waste & Resources Action Programme, Banbury, UK. <http://www.wrap.org.uk/content/meeting-uk-climate-change-challenge-0>
- Schor, Juliet. 2014. "Debating the Sharing Economy." The Great Transformation Initiative. http://www.tellus.org/pub/Schor_Debating_the_Sharing_Economy.pdf
- Shore, Chris, Susan Wright, and Davide Pero. 2011. *Policy Worlds: Anthropology and the Analysis of Contemporary Power*. Berghahn Books, London. <http://www.berghahnbooks.com/title/ShorePolicy>
- Stokes, Kathleen, Emma Clarence, Lauren Anderson, and April Rinne. 2014. *Making Sense of the UK Collaborative Economy*. NESTA & Collaborative Lab, London.
- Temin, G. Page. 2013. "Insights from the Great Depression." In *The Economic Crisis in Retrospect: Explanations by Great Economists*, 95–110. Edward Elgar Publisher, Northampton, MA.
- Thomas, Valerie M. 2010. "The Environmental Potential of Reuse: An Application to Used Books." *Sustainability Science* 6(1): 109–116. doi:10.1007/s11625-010-0115-z
- Tuck, Fred Bishop, and Dean Fales. 2000. *Antiqueman's Diary: The Memoirs of Fred Bishop Tuck*. Tilbury House, Gardiner, ME.
- United Nations. 2012. *A 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns*. Rio + 20 United Nations Conference on Sustainable Development, Rio de Janeiro.

US DOL and US BLS (US Department of Labor and US Bureau of Labor Statistics). 2006. 100 Years of U.S. Consumer Spending: Data for the Nation, New York City, and Boston. US DOL and US BLS, Washington, DC. <http://www.bls.gov/opub/uscs/report991.pdf>

US EPA (US Environmental Protection Agency). 2000. Reuse in New England: A Resource Guide to Donation Opportunities for Businesses, Local Governments, and Residents. US EPA, Region 1, New England EPA901-B-00-001

US EPA. 2013. Advancing Sustainable Materials Management: 2013 Fact Sheet. US EPA, Washington, DC. http://www3.epa.gov/epawaste/nonhaz/municipal/pubs/2013_advncng_smm_fs.pdf

US EPA. 2015. Managing and Transforming Waste Streams—A Tool for Communities. US EPA, Washington, DC. <http://www2.epa.gov/managing-and-transforming-waste-streams-tool-communities>

van Haaren, Rob, Nickolas Themelis, and Nora Goldstein. 2010. "17th Nationwide Survey of MSW Management in the US: The State of Garbage in America." *Biocycle* 51(10): 16.

Vaughan, Paul, Matthew Cook, and Paul Trawick. 2007. "A Sociology of Reuse: Deconstructing the Milk Bottle." *Sociologia Ruralis* 47 (2): 120–134. doi:10.1111/j.1467-9523.2007.00432.x

WRAP. 2011. Re-use—New Research Shows So-fa so Good, but so Many More Opportunities. <http://www.wrap.org.uk/content/re-use-new-research-shows-so-fa-so-good-so-many-more-opportunities>

Yan, Ruoh-Nan, Su Yun Bae, and Huimin Xu. 2015. "Second-Hand Clothing Shopping among College Students: The Role of Psychographic Characteristics." *Young Consumers* 16(1): 85–98.

Yokoo, Hide-Fumi. 2009. "An Economic Theory of Reuse." *Sustainability Science* 5(1): 143–150. doi:10.1007/s11625-009-0091-3



Cindy Isenhour is an assistant professor in the Department of Anthropology and the Climate Change Institute at the University of Maine. She is also a faculty associate with the School of Economics and the Senator George J. Mitchell Center for Sustainability Solutions.



Andrew Crawley is an assistant professor of regional economic development in the School of Economics at the University of Maine. He specializes in regional economic policy and economic modelling.



Brienne Berry is a PhD student in the Anthropology and Environmental Policy Program at the University of Maine. She is a research assistant at the Margaret Chase Smith Policy Center and the Senator George J. Mitchell Center for Sustainability Solutions, where her work focuses on consumption and waste.



Jennifer Bonnet is a social sciences and humanities librarian at the University of Maine's Fogler Library.