

# Current socio-environmental transitions and disadvantaged consumers

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## Abstract

This essay broaches the topic of people who are fully consumers for their daily provisioning, yet are disadvantaged by being poor, non-white, immigrant, women, and so forth; and it asks how they are experiencing and acting on the supposed "transitions" that are taking place in response to global climate change. Such people will be impacted by powerful changes largely beyond their control, yet their situation is largely neglected, with exceptions, in the "just transitions" literature. The article lays out a series of considerations for studying and acting on these processes. It begins with a vision of consumption as extended reproduction, a demanding household labor process of daily provisioning and longer-term persistence or change, done with commoditized technologies and resource streams, mainly but not entirely by unpaid women. Technologies, resource flows, and labor processes, then, provide ways to think about stresses, risks, and responses by disadvantaged peoples.

**Keywords:** Transition, consumption, inequality, poverty, race, gender

## Résumé

Cet article aborde le sujet des personnes qui sont des consommateurs à part entière pour leur approvisionnement quotidien, mais qui sont désavantagées par le fait qu'elles sont pauvres, non blanches, immigrées, femmes, etc. Il s'interroge sur la manière dont ils vivent et agissent sur les supposées « transitions » qui ont lieu en réponse au changement climatique mondial. Ces personnes seront touchées par des changements puissants qui échappent en grande partie à leur contrôle, et pourtant leur situation est largement négligée, à quelques exceptions près, dans la littérature sur les « transitions justes ». L'article présente une série de considérations pour étudier et agir sur ces processus. Il commence par une vision de la consommation en tant que reproduction élargie, un processus de travail domestique exigeant d'approvisionnement quotidien et de persistance ou de changement à plus long terme, réalisé avec des technologies et des flux de ressources banalisés, principalement, mais pas entièrement, par des femmes non rémunérées. Les technologies, les flux de ressources et les processus de travail permettent donc de réfléchir aux tensions, aux risques et aux réponses apportées par les populations défavorisées.

**Mots-clés:** Transition, consommation, inégalité, pauvreté, race, genre

## Resumen

Este ensayo aborda el tema de las personas que son plenamente consumidoras de sus provisiones diarias, pero que están en desventaja por ser pobres, no blancos, inmigrantes, mujeres, etc.; y se pregunta cómo están experimentando y actuando sobre las supuestas "transiciones" que están teniendo lugar en respuesta al cambio climático global. Estas personas se verán afectadas por cambios poderosos que escapan en gran medida a su control, pero su situación se pasa por alto, con excepciones, en la literatura sobre transiciones justas. El artículo plantea una serie de consideraciones para estudiar y actuar sobre estos procesos. Comienza con una visión del consumo como reproducción ampliada, un exigente proceso de trabajo doméstico de aprovisionamiento diario y persistencia o cambio a largo plazo, realizado con tecnologías y flujos de recursos mercantilizados, principalmente, pero no exclusivamente, por mujeres no remuneradas. Las tecnologías, los flujos de recursos y

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los procesos laborales, entonces, brindan formas de pensar sobre las tensiones, los riesgos y las respuestas de los pueblos desfavorecidos.

**Palabras clave:** Transición, consumo, desigualdad, pobreza, raza, género

## 1. Introduction

The term "transition" has been used to capture various changes (actual and advocated) in the socio-environmental<sup>2</sup> components and processes used to provision daily life, that supposedly<sup>3</sup> respond to global climate change. One example among many is the increased electrification of devices of daily existence (e.g., vehicles) and the generation of that electricity without producing greenhouse gases. Transition is envisioned as a complex organizational rearrangement, not just an incremental alteration of technology or practices. "Just transition," in turn, raises a concern with social justice in the ramifying systems changes in such transitions.

My concern here is with the participation in and the effects of transitions on people who are consumers of commoditized goods (e.g., purchasing electric vehicles plus utility electricity or commoditized alternatives like residential solar) but also who are poor in terms of purchasing power and/or who are also disadvantaged in other social ways (e.g., women, immigrants, members of racialized groups, dwellers in poorly served areas, etc.).<sup>4</sup> These people as fully commoditized consumers are both deeply inside the changing systems but also significantly disadvantaged as they change. Obviously, this presents important questions of justice and how to further it. Yet the relevant literature is sparse, recent, and limited to specific topics, with few broader syntheses. With exceptions, it manifests little concern with the whole life-world of poor commodity consumers. This article offers a series of key observations, constituting a guiding framework, for research and action with disadvantaged commodity consumers as the climate-driven transition unfolds. Of course, other field researchers, analysts, and activists will have more to add.

My approach comes from political ecology (within an enormous literature, a useful overview is Paulson, Gezon, & Watts, 2004). The transitions are not just isolated technological improvements, a point shared by political ecology and transition theory. But also, the political ecology perspective considers that consumption/provisioning changes occur to people living inside highly unequal social fields. Hence, we expect different capacities to participate and different effects. These fields themselves are generated by dynamic webs of relations, in most cases saturated with unequal power. An example is a large resource providing water or electric utility, which is undeniably an act of state power, sometimes allied with or devolved to private corporations. A political ecology emphasis on inequality and power can be seen in other lines of work on transitions, such as effects on declining/abandoned resource producing zones and rapid moves to capture resources from new providing sites. But a political ecology of consumption applicable to transition is little developed (but see Heyman, 2004).

A few cautions are needed. I am bracketing the question of whether the current moment really is in transition, or is mainly postponement of problems. There are objections to concept of transition on the grounds that this term implies a reformist vision of making incremental changes to escape our environmental dilemmas and lets powerful people and organizations off the hook, one that diverts us from needed radical change. That may well be needed, but a broader evaluation of those matters goes beyond this task; I am focused on the kinds of socioenvironmental changes that generally are labeled transition, adequate or not. The present essay offers a more modest but still meaningful criticism, asking that as a matter of equity we pay greater attention to the

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<sup>2</sup> To write clearly, I use socio-environmental but this implies other components of complex systems changes, especially technological.

<sup>3</sup> "Supposedly" is used to set aside questions of whether these consumption changes would meaningfully affect climate change, a topic that goes beyond the present inquiry.

<sup>4</sup> I will at times call such people working class. Using that term, it is important to shed the old male Marxist productionist bias of thinking of work and thus class as existing outside the home, erasing the corresponding unpaid reproductive work around the home, mainly but not entirely done by women (Federici, 2012). Consumption substantially using commodities also characterizes working classes (Heyman, 1994). Rather than consumption bringing in an implication of possessing wealth and discretion (Carrier & Heyman, 1997), it is as much a condition of life for the working class as it is for better-off social groups. Working class may not always cover all the relevant people, and no one term is fully adequate.

experiences of the poor and disadvantaged during erstwhile transitions (Sovacool *et al.*, 2019; Carley & Konisky, 2020; Biswas, 2022).

Also, the present essay reflects my current ethnography with poor, Mexican-origin households (many of them immigrants) in El Paso, Texas, USA. Different settings will undoubtedly inflect the analyses and empirics. But I do contend that poor consumers in vast numbers live all over the world, including the Global South as well as the Global North. I actually began my career in substantial part doing ethnography of urban, working class, poor consumers in northern border Mexico (Heyman, 1991). Likewise, very low income, peripheral areas of metropolitan Mexico City (Furszyfer Del Rio & Sovacool, 2023) and poor people in urban South Africa (Mohlakoana & Wolpe, 2021) use resource flows like electricity and petrochemical fuel that are or may be in the future altered by transition processes. In the Mexico City region study, for example, 28% of households owned motorized vehicles and even three households (4.4%) had solar energy devices. The relevant point is to break the discourse of consumption as an exclusive characteristic of the global wealthy; commoditized household provisioning, even by the poor, is important and widespread, and thus deeply involved in transition processes.

## 2. Gaps in the "transitions" concept

The concept of transitions has been put forward to understand the combined social, economic, and technological rearrangement of society. Though projected into historical changes, the word and concept have been deployed most often in the context of major transitions caused by climate change and resource depletion/replacement (Parris & Kates, 2003; Walker *et al.*, 2004; Kates, Travis, & Wilbanks, 2012; Gleick, 2018). The core of the transition literature attends to overall processes of technological change within society, and policies to manage and encourage them (e.g., Geels, 2002, 2010). This favors assessing the uptake rate of transitions across society as a whole (e.g., Hesselink & Chappin, 2019; Sanguinetti *et al.*, 2022). But in a political ecological perspective, societies are not undifferentiated wholes, but rather are socially unequal distributions, best considered as webs of unequal relations. This is a fundamental element missing from the classic systems statements of "transition."

"Just transitions" (Stevis & Felli, 2016) has been an important step toward viewing transitions as socially unequal and uneven. Considerable attention has been paid to transitions affecting workers and communities based on older technologies and resource flows, with the valued producers of the past now marginalized (e.g., Stevis & Felli, 2015, 2016; Just Transition Research Collaborative, 2018). Another, often related, concern is the effect of transition resource extraction (e.g., carbon-offset tree planting and reservations) on populations that occupy strategic resource zones, especially those who are only partially commoditized in terms of production and reproduction (peasants, indigenous peoples, women, etc.). A substantial part of that is done in the framework of political ecology (for a sense of this enormous literature, see relevant articles published in the *Journal of Political Ecology* from January to August 2023: Alena Saleth & Varov, 2023; Tornel, 2023; Ulloa, 2023; Venes, Barca, & Navas, 2023). Transitions involving the consumption end of the unequal power terrain of society has been understudied, both conceptually and empirically.

The experience of consumer transitions is dominated by studies of undifferentiated whole societies. The issue of uptake in systems models of change touches on unequal access but not on its causes or consequences. Still, important work has been done concerning unequal distributions of various transition technologies, practices, and infrastructures (see the one paragraph review in Carley & Konisky, 2020; and even shorter, Stark, Gale, & Murphy-Gregory, 2023). Several studies involving large, cross-societal data sets reveal distributional inequalities. For example, in the United States African-Americans have fewer energy-efficient technologies even though they use less energy per dwelling overall (Goldstein, Reames, & Newell, 2022). Kumar *et al.* (2023; also see Chen *et al.*, 2022 for the United States) likewise find for the European Union that higher income households possess more energy efficient technologies but reduced energy use (which may affect climate change more, depending on the energy source) is more complicated and often poor consumers curtail energy use more than wealthy ones do. Hanke, Grossmann, & Sandmann (2023) drill down into these phenomena, finding reasons (discussed below) why "green" energy technologies such as solar panels are often difficult for disadvantaged consumers to utilize. Following their lead, this essay will explore diverse ways disadvantaged communities now or in the near future might interact with transition processes and technologies.

### 3. Beyond acquisition, possession, and disposal: Consumption as reproductive labor

Our starting point is the fundamental observation that consumption is not simply getting and possessing. Rather, it is the flow of technologies, goods, and resources through the activities of producing and reproducing daily life (Carrier & Heyman, 1997; McMeekin & Southerton, 2012). This perspective is necessary to analyze transitions clearly. It points to the resource producing/providing stage (e.g., electric generation) and the household level. The production of consumables (farms, cars, energy, etc.) produces enormous environmental effects, without question. But here we focus on households, always remembering their backward and forward linkages to those provisioning systems. Consumables are produced because there is demand from households (not saying, of course, consumers have autonomy or priority in demand—as we will see, households are often dominated by what is supplied, especially poor ones). And household reproduction processes themselves have environmental consequences (e.g., using water for urban irrigation, from whence it largely evaporates). Hence, consumption as an entire process is a very important component of what might be involved in transition, and what is hoped for in schemes promoting transition. But not everyone faces this equally.

The acquisition/possession-driven vision of consumption fails to recognize the activities done within households (which are part of a production process). Consumption can be considered the flows of inputs/outputs (resources) and the tools within that production process. The labor in the process may not be compensated, but there are fundamental relations of production involved anyway—often organized through gender and generation (Federici, 2012). This commonly is labeled extended reproduction. To understand anyone's consumption, but especially the poor and otherwise disadvantaged, who have reduced ability to substitute in purchased goods for housework, we must attend closely to the work process and social relations of reproduction. Of course, uncompensated reproduction (in the situation essayed here) is fully plugged into the commodity economy, which is the source of inputs and technologies, so that market prices and relations do matter—very much so, to poor people—and a discussion of transition for such people must attend both to market relations and non-market relations. Approaches to transitions in consumption that treat it only as a matter of market elements (e.g., prices, purchases) miss half the process.

People who are fully commodity consumers inherit (analytically and sometimes literally) numerous household technologies and reproductive labors from the recent past (Heyman, 1994, 2004). An example is preserving food by using compressor-driven refrigerators, which have overtaken ice and reduced the role of chemical/physical preservation (e.g., salting). That technology (refrigerators) has become a near necessity. It is not just a physical inheritance, but a knowledge inheritance and a daily habit inheritance. There are exceptions to this conceptual point (the historical inertia of standard household equipment), but they are rare. Much of the point of "transitions" involves changing such inheritances. But disadvantaged people are, well, disadvantaged in making such changes, just as they often are disadvantaged in reproducing this household equipment—if an appliance breaks down, that really impacts their reproduction rather than just causing them to whip out a credit card (later, I cite such information as now exists on the impact of income versus cost on consumer transition, but no one that I know of has done work on credit-access barriers and borrowing aversion affecting household transitions).

To add to this reframing of consumption, another point needs to be considered. Transition-centered discourse focuses on the relation of masses of humans to large dimensions of the biophysical world. Such matters are without question of fundamental importance (setting aside the specific analysis and advocacy being put forth). But a reproduction perspective reminds us that people are constantly working to renew daily life in local human terms, including renewing vital biological and social placements and processes, and that disadvantaged populations face frequent and really serious challenges with that renewal. A difficult choice badly made, and family and children might be dying from a heat wave, or cut off from neighbors and family. It is not that they are unaware or unconcerned with wider environmental issues, which may well concern them greatly (Hanke, Grossmann, & Sandmann, 2023). Also, such environmental changes may underlie their most concerning, most immediate reproductive challenges. Here I am making a point about peoples' own motivated action within their lifeworld. People in general, but especially disadvantaged ones regularly confront renewal at the personal scale, without the privilege to act safely and securely on more abstract visions (again, see Hanke, Grossmann, & Sandmann, 2023). Hence, their experience of transition involves choices more or less of necessity (an imperfect word, to be sure), and not of privileged safety.

#### 4. Disadvantaged consumers facing transitions

The drivers of transitions in household technologies and resource flows might be conceptualized, roughly, in two categories. Some transitions impinge on the household economy from outside production or supply organizations (e.g., utilities). Prices may rise, may be restructured, or usage rules may be modified. Such transition actions are beyond the control of specific households (indeed, they may be unchecked by whole communities). Policies (either publicly chosen or the directions taken by private corporations) may impose increased usage costs or rearrangements of household production on weaker consumers. Alternatives to transitioning may go out of existence, become more expensive, or decline in quality; transition may, in a nutshell, be imposed. Poor or otherwise disadvantaged households have fewer resources to resist or adapt, e.g. by acquiring more efficient technologies or structures, as discussed below. Ingrained reproductive habits may be challenged by externally imposed transition changes (Axon & Morrissey, 2020). Hence, there is an accumulation of vulnerability within transitions on those least able to cope with them.

For example, for El Paso in the USA we modeled the impact of the future cost of water according to the regional utility on poor people: in some census tracts, in the next 50 years, the poorest 20% will pay over 10% of their income just for the water supply, leaving aside many other fees on the bill. The driver is utility adaptations to climate change, which decreases snowpack-driven river supply, depletion of inexpensive fresh groundwater, and modest economic-demographic growth. The adaptive transitions include much more expensive desalination and direct potable reuse of wastewater (Heyman, Mayer, & Alger, 2022). To cushion the impact on the poor would take an aggressive policy of public subsidy or redistribution (billing richer and/or bigger users to subsidize poorer and/or smaller ones). This is a specific case, albeit exemplary of many dry-region water situations, but the broader point is that powerful public, quasi-public, and private organizations push the pain of transition onto weaker, fragmented households without conscious politics and policies for justice.

The prosperous can more easily absorb these new costs—the upfront costs of replacing technologies or adding new technologies, or the incremental increases in resource prices. Purchase prices may be significant, but as mentioned, prosperous people have more access to credit or loans, and on less exploitative terms. Changes in utility bills—often paid automatically these days—might attract their attention, but they are unlikely to be so large as to affect resource use behavior. Hence, supposed consumer transitions may depend on a kind of voluntaristic environmental consciousness (a self-important culture of progress then ensues). On the other hand, transition costs imposed by outside power organizations ricochet into the already stressed lives of the poor and disadvantaged. Their household budgets are finely balanced; indeed, they often are behind. A large bill or purchase is likely to cause a crisis; in some cases, it is a repeated monthly crisis. We need to know more about responses in these transitional times—scrimping, at least; perhaps pushing older children out of education and into the labor force (perhaps a voluntary, but overdetermined choice on their part); even cutoffs by utilities; and sacrifices in a material and emotional sense at their most profound.

Another kind of transition challenge involves decisions to acquire technologies and flows that are ostensibly within the control of households. While not imposed by supply organizations, these decisions may still be caught in a web of constraints that render consumer sovereignty partially or completely misleading (Carrier & Heyman, 1997). First, they are likely to lack monetary resources to purchase the newest technologies—especially those needing bigger investments (Liu, Judd, & Santamouris, 2017; Sovacool *et al.*, 2019; Biswas *et al.*, 2022). Someone with significant household savings might be able to pay upfront all of the cost of, say, rooftop solar panels, while a household with limited savings would need to borrow money to do that—not an impossibility, but certainly a disincentive. More prosperous households might get such loans, while disadvantaged ones might be denied, and they themselves might be reluctant even to seek them. Such an action is more of a risky leap than it would be for someone who can afford mistakes and hard lessons.

Second, disadvantaged consumers may not be able to make changes due to constraints such as being dwelling renters rather than owners (Mee *et al.*, 2010; Liu, Judd, & Santamouris, 2017; Sovacool *et al.*, 2019; Hanke, Grossman, & Sandmann, 2023). Landlords, in turn, are often uninterested in transition technologies and infrastructure, especially if their market niche pays low rents. Also, physical structures of various kinds (lack of roofs for solar panels, absence of charging stations around apartment buildings, etc.) may preclude some

technologies. It is not only important to list these barriers—and certainly they do matter—but attending to them also helps us realize that consumption is not only a matter of individual, voluntaristic choice, but is a domain saturated with physical and social power channels and constraints.

Third, disadvantaged households often have values, perspectives, and habits that subtly but pervasively conserve on short term costs, even if there are longer term payoffs, even payoffs for those consumers let alone the wider society (Carley & Konisky, 2020). Hanke, Grossmann, and Sandmann (2023) point to the figure of the rational but also self-limiting "saving consumer." Poor consumers have performed a different relationship to the time value of money than do the rich and even modestly prosperous. In the contemporary consumer economy, purchases can be divided into an upfront cost, which can be the full expense or only part of it, and a stream of future payments, whether to the seller, to a lender, or on a credit card (a kind of expensive loan). The upfront payment may constitute a complete barrier or a significant disincentive. But shifting more into time payments may exacerbate stress in budget balancing and may be more exploitative, in terms of interest or repossession. Credit-worthiness, in turn, is an intricate expression of social inequality (Williams, 2005); its role in rendering transitions unequal remains to be studied. Novel technologies and practices may have a financial payoff to households, or they may not—in such cases adoption is a sacrifice individuals or households make to ameliorate externalities in the wider socio-environmental system. But the would-be future payoff of the transition is harder to wait for, for people who have fewer resources and reserves, and may have a less predictable income stream. That may contribute to slower adoption rates. Lagging adoption, overall, is not just a matter of conservatism or ignorance. Under the time value of money conditions of capitalism, transition is harder and may in instances be more exploitative of disadvantaged consumers.

Fourth, needing standard commoditized household technologies but being poor (and/or geographically isolated) means that to fill the role of the standard household technology, people are likely to seek less expensive options—cheaper new goods which may not fit the transition model (Liu, Judd, & Santamouris, 2017), or used goods. But used goods means older, less "transitioned" versions of technologies (maybe also functioning more poorly, an empirical question). "Used in the past" is precisely the opposite direction of the environmentally wished-for transition to new technologies. So, disadvantaged people may tend to be late adopters, a point hinted at in the literature on their lower possession rates of energy-efficient technology (Chen *et al.*, 2022; Goldstein, Reames, & Newell, 2022; Kumar *et al.*, 2023), but not yet explored in depth with regard to the various constraints and processes I delineate in this essay.

Fifth, such communities are likely to have access to funds of knowledge (about sources, evaluations, prices) based around acquiring, using, maintaining, and repairing older items and technologies. Indeed, a common business in poor commoditized communities is repairing and reselling old vehicles, appliances, plumbing, etc. (Heyman, 1991, 1994). Acquisition and maintenance of new technologies may thus be a multi-dimensional burden on disadvantaged communities: a cost that they can ill afford, a lack of funds to casually replace failed items, and a loss of a set of once-valuable (and sellable) skills. Transitions thus may, in a nutshell, rob the disadvantaged of one of their key coping mechanisms. They may be suddenly deprived.

Finally, poor and disadvantaged people may not have as much formal numeracy and literacy (Liu, Judd, & Santamouris, 2017) while many among them have considerable learned-in-practice household consumption/reproduction skills and related job skills (construction, electricity, etc. [Heyman, 1991]). In established household production processes, formal literacy and numeracy may not be as important as hands-on experience; but in the processes of transition, they may become more important. For example, my current fieldwork indicates that figuring out the cost of and payout for solar panels is quite intricate for consumers. The two households in my ethnographic sample with solar panels do not fully understand issues such as grid-linked pricing structures or the cost of financing panels versus energy savings. To be honest, these calculations are tremendously difficult both inherently and because the electric utility and solar panel salespeople inexcusably mystify the matter. Hoping to save money on bills, they have both come away bitterly frustrated. While in periods of rapid change, scams and simple bad deals may impact both rich and poor, the disadvantaged have fewer resources to recover from them.

In summary, poor and disadvantaged consumers are not, as such, ignorant and backward. Often, they perpetuate the past for good reasons. In their immediate situation, they experience such logic as a "necessity." This brings on contradictions in specific domains, sites, and times of transition, and may cause new forms of loss, suffering, and exclusion.

## 5. Kinds of disadvantage

Across this essay, I have not explored different kinds of disadvantage, except I have tended to focus on people being poor. That choice is deliberate, because income affects so many of the processes I describe here. But it is insufficient. Income overlaps significantly but is not coterminous with a number of other disadvantages that may come into play but often are not well understood. Hence, more finely grained social generalizations are needed. First, women do more reproductive labor than men, though both may do it. That means that while income from both women and men may fund transition-driven consumption, women almost certainly do more of the uncompensated labor that enacts it (Petrova & Simcock, 2021). Transitions as specific experiences for women certainly deserves more attention.

Second, race and comparable group inequalities (ethnicity, national origin) may shape barriers to access sources and knowledge about transition processes, as well as substantially affecting resources (income, home ownership, urban location, credit, etc.) (Sunter, Castellanos, & Kammen, 2019; Goldstein, Reames, & Newell, 2022). A telling example is unequal geographic access to energy-efficient lighting (Reames, Reiner, & Stacey, 2018). Various kinds of racial inequality are relevant, but worthy of specific attention is the colonial past and present of indigenous peoples. Work has been done on new patterns of resource seizure from indigenous people, but indigenous people are also householders and consumers, often very financially disadvantaged.

Third, immigration status and citizenship may (depending on the program) limit access to government pro-transition programs (author's fieldwork) as well as having indirect effects on income, geographic location, etc. Fourth, knowledge of and access to consumption purchase sites (including stores, and possibly online) for transition products may require mobility, which is constrained by a number of factors (immigration enforcement, other consumer possessions like light trucks, etc.). Mobility considerations, fifth, suggest the important characteristic of spatial location. Spatial locations, whether urban or rural (Conor & Welton, 2023), or the outcomes of urban segmentation (Reames, Reiner, & Stacey, 2018), may have inequitable socio-environmental effects (e.g., prosperous urban zones or sprawling suburbs, rich or poor, may weigh more heavily on the environment). An important subset of disadvantaged communities are not serviced by and/or are distant from sources of transition technologies, resources, and services. Overall, transition needs to be considered within a wide, intersectional concept of social inequality.

## 6. Paths to improved justice

Injustices in the consumer transition have garnered some useful recommendations, along the lines of tinkering with a flawed but actually-existing system. As a comfortable first world academic, I think, indeed, we should take measures that can improve the lives of people impacted by disadvantages. After all, disadvantaged communities often are most impacted by worsening heat, urban air pollution, and so forth. Policy and practice options include subsidies for technology and infrastructure installation, targeted geographies for implementation, incentives for key intermediaries (e.g., landlords), and provision of new practical bodies of knowledge (also see Liu, Judd, & Santamouris, 2017; Brown *et al.*, 2020). A Melbourne, Australia solar panel program with extended, interest-free repayment was modestly successful in reaching beyond privileged consumers (albeit with gaps, such as weak impact on tenants) but importantly, such effects as it had came from active targeting by a trusted local government (Tice & Batterbury, 2023).

Systemic criticisms of contemporary human-environment processes can be usefully informed by speaking with disadvantaged consumers and thinking carefully about their lives. Degrowth, a vision of reconstructing society and the economy around serving human needs directly, rather than swamping them (often ineffectively) with expansion (Hickel, 2020), provides a frame for examining consumption transitions critically. Would getting such transition goods and processes to more disadvantaged people just be another version of growth systems? Sufficiency (Spangenberg & Lorek, 2019; Lage, 2022), a vision that draws on degrowth,

speaks concretely to just transition. Sufficiency is the philosophy that we need only sufficient consumption, and not excess, to supply ourselves with well-being and capabilities. It is an important thrust in the critique of overconsumption by advantaged consumers. But what of disadvantaged consumers? What of the agenda of widening and deepening consumption implied by examinations of lags, inequalities, and gaps in just consumer transition analysis?

Disadvantaged people actually occupy an important but unstable position along the sufficiency continuum (Büchs *et al.*, 2023). Such consumers use considerably fewer resources per person or household (e.g., Goldstein, Reames, & Newell, 2022) and they often carefully watch their bills and other forms of consumption (Hanke, Grossmann, & Sandmann, 2023). Indeed, in some instances they may be in a situation of insufficiency, as indicated by the term “energy poverty” (e.g., being uncomfortably cold due to inability to pay heating bills), rather than using much more than necessary energy resources (Bouzarovski & Petrova, 2015). Ironically, their use of resources also maybe inefficient, in this way above sufficient, due to inability to afford cutting-edge technology and infrastructure. Facing the barriers and inequalities to transitions I have elucidated here, they may be incapable of obtaining new kinds of consumer goods and infrastructures that both make for greater individual/household well-being and broader socio-environmental positive outcomes. But at the same time, solving transition justice problems by adding more and more expensive possessions (e.g., evening up the distribution across households of energy efficient appliances) challenges the vision of sufficiency.<sup>5</sup> My current fieldwork suggests that disadvantaged households previously on the edge of insufficiency given the right circumstances might surge into oversufficiency (e.g., one family I know well has turned their compressor-driven air conditioning to maximum in conjunction with the acquisition of solar panels). Much more needs to be understood about simultaneous insufficiency and oversufficiency in the consumer economy of disadvantaged people, including in situations of emerging transitions.

Intentional movements to rework consumption aim at a number of social-cultural and environmental goals (e.g., Fiscella, 2022). Just consumer transitions do not inherently imply acquisitions of new goods and infrastructures as the goal. The real goals are enhanced human well-being and capabilities, living on a viable adaptive path in the biophysical world. Some of that may take new items, and the just transition inquiry points us to that concern; but other dimensions of this challenge may require new ways of life that are outside commoditized consumption. Dunlap & Tornel (2024: 177) suggest small-scale, community energy systems. But community solar within current social relations of inequality may reproduce existing inequalities (Chan *et al.*, 2017). Always, we need a working-class based, critical lens on transition propositions. In this vein, we should understand that disadvantaged consumers face profound challenges in changing course; in my earlier historical work (Heyman, 1994, 1997, 2004) on how people became consumers in the U.S.-Mexico borderlands (including some stunningly poor people in urban border Mexico), I found that consumption was strongly determined by different combinations of loss of regional resources, levels of urban concentration, and the availability of standard global consumer technologies and devices as solutions to life challenges. Reorganization of time and space also determined levels of commodity consumption. I called this the organizational logic of capitalist consumption (1994). And it would be unfair to expect disadvantaged people distinctly to reverse this weight of history; it is an agenda that all of us face in common.

## 7. Conclusion

The literature on transitions at the household level reflects the social inequality biases in the construction of knowledge and policy. Either society is taken as a whole, uniform entity with factors, levels, and rates of change, or consumption as a sustainability/transition matter is framed as a concern about overly-prosperous households. Both a legitimate matters, but as so often happens with the presence of the poor, disadvantaged people are rendered invisible. The present essay offers an initial series of key points that can guide much-needed research. They may need modification, or even to be discarded and replaced, and other considerations may need

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<sup>5</sup> It bears remarking that individual or household possession of some new items may be unnecessary or even counterproductive from the perspective of sufficiency. Shared tools and collective production of consumer services (e.g., effective public transport, shared heat) may work as well or better for disadvantaged consumers.

to be raised, but there is a political-ethical imperative to understand the lives of poor consumers, who globally almost certainly number in the billions.<sup>6</sup>

We need broadly to consider transitions as both external changes that come unwanted to disadvantaged people, and how they might be affected, and also how such people as individuals, households, and communities actively make decisions and carry out actions in conditions affected by various transitional changes. These are important considerations for poor people carefully balancing income and outgoings under any circumstances, but are particularly important to understand since a main concern of the transition literature is how rapidly various transition technologies spread across households. They are likewise important for revealing the impact of transitions on people who already are disadvantaged—addressing negative impacts and enabling the positive agency of people whose agency often is neglected. This points in policy and community-oriented application research to how we might make consumer transitions more accessible, realistic, understandable, and just.

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<sup>6</sup> I am not aware of aggregate estimates of people who are substantially included in the consumer economy (not absolutely poor) but nonetheless are poor consumers. One hint, income-based rather than consumer needs and services-based, is the World Bank's estimate that "nearly half the world—over 3 billion people—lives on less than US\$6.85 per day, which is the average of the national poverty lines of upper-middle-income countries" (World Bank 2022: xii) minus those in extreme poverty (which they estimate 7 percent of the world population). Furthermore, it is reasonable to suppose that many millions more are just above the higher line. That would include the people with whom I worked.

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