

Beyond Scarcity

Perspectives on Energy Transition

Robert-Jan Geerts

Wageningen University, Wageningen - Netherlands

DOI: <http://dx.doi.org/10.7358/rela-2018-001-geer> robertjangeerts@gmail.com

ABSTRACT

Two dominant lines of reasoning in the philosophical debate on energy transition can be described as boundless consumerism (we should find ways to keep growing) and eco-frugality (we should reduce our impact as much as possible). This paper problematizes both approaches via their implicit understanding of the good life, and proposes a third alternative: qualitative abundance. Society is not interested in any sustainable energy system, but in one that caters to our needs and enables us to flourish as human beings. Because the dominant lines in the current debate share a concern for scarcity, they fail to raise the question of a “good” energy system, and therefore the possibility of a positive energy ethics. Qualitative abundance initiates discourse around prosperity (with boundless consumerism) and simplicity (with eco-frugality), thus expanding and enriching debates on energy transition.

Keywords: energy transition; scarcity; abundance; energy ethics; prosperity; simplicity; good life; quality of life; energy discourse; energy debates.

1. INTRODUCTION

Energy transition, understood as the shift from a finite, polluting, climate change-inducing, fossil energy regime towards a sustainable, clean, climate neutral, renewable one, is a large, complex, and poorly delineated sociotechnological project. It is large because the energy basis of society is enormous – about one sixth of all economic activity revolves around energy (Shah 2006). Its complexity derives from its intertwinement with many aspects of modern life and the multiple problems needing resolution: anthropogenic climate change, peak oil, local environmental issues, national energy security, etc. The functioning of national economies, the shape of cities, and the choices individuals make all depend on the amounts and kinds of energy available to society. Finally, the energy transition is

poorly delineated because different routes imply different boundaries. An engineer working on solar fuels may think the thing to change is the production and refining of primary sources, whereas the sociologist studying relations between energy consumption and culture imagines an emergence of new practices. The problem, and thus the solution, is different and much narrower for the engineer than for the sociologist.

Debates on energy transition are complex because of these reasons, which makes clarifying distinctions both difficult and much needed. This article aims to sketch one such distinction around the issue of scarcity and to problematize the implicit understanding of aims of energy transition on both sides of this discourse. An alternative scarcity rejecting position is proposed, which leads to the emergence of two other discourses, on prosperity and simplicity.

It should be noted up front that the “positions” and their resulting lines of reasoning described here are not necessarily actual positions that are held by participants in debates. Rather, they are starting points: philosophical positions on the functioning of energy in society which underlie discussions on energy technologies, systems, policies, and practices. Argumentative routes originate at such starting points, and also have a direction: they are aimed at contesting arguments from other starting points. In extreme cases, in which debaters exclusively employ one of these routes to define their position, it may be said that they identify with that starting point, but I do not make any claims here that such people exist¹. Instead, argumentation from various starting points may be mixed and weighted through some kind of balancing mechanism.

Such balancing mechanisms may lead to nuanced positions, arguing for example that both sides have their merits and that truth must be somewhere in the middle. In such cases the distinction between various lines of reasoning is useful to get a better grip on how exactly this middle would be conceptualized: can we speak of a continuum, or is it actually not an opposition after all? In other cases, people may argue from a variety of positions to make a claim, but those arguments may be inconsistent. In such cases, describing the opposition in clear terms helps to understand exactly why such positions are inconsistent.

The article is structured as follows: section 2 outlines two positions or “camps” in the current debate, *boundless consumerism* and *eco-frugalism*,

¹ Indeed, when I give examples of “boundless consumerist thinkers” later on in this chapter, I do not expect that those thinkers would self-identify with my proposed concept. What I claim is that in their work, lines of reasoning are present that strongly align with my concept of boundless consumerism.

and briefly discusses their merits and demerits. This is followed in section 3 by an exploration of the notions of the good life implicit in these positions, and their shared perspective on energy and *scarcity*. Section 4 introduces another perspective, called *qualitative abundance*, and explores its roots and characteristics. Section 5 relates qualitative abundance with the other two perspectives, and briefly sketches the resulting discourses between them in terms of *prosperity* and *simplicity*. Section 6, finally, makes some concluding remarks.

2. DISCUSSIONS ON POSSIBILITY: BOUNDLESS CONSUMERISM AND ECO-FRUGALITY

A good amount of discussion on energy transition revolves around concerns of possibility: what kind of energy system is available, considering problems such as climate change and dependence on finite sources? What are the design options, which boundaries do we have to consider? Within this discussion on possibility, which is a sub-section of discussion on energy transition in general, a distinction can be discerned between those embracing growth of some sort, and those who reject it. These positions I name *boundless consumerism* and *eco-frugality* respectively. By distinguishing and characterizing these lines of reasoning, we gain insight in what is and is not discussed between them.

The *boundless consumerism* line of argument embraces high-energy practices that developed in the fossil-fuel era. It aims at finding sustainable sources and efficiency improvements to continue to power them. Simply put, it holds that smart management and novel technologies are all we need to plug into abundant sustainable energy sources that can keep powering our ever-increasing demands. Adherents to this position argue for “green growth”: the idea that economies can keep growing if only we made some changes in the direction of development. Examples are Julian Simon (1981) and more recently the “Ecomodernist” movement spearheaded by The Breakthrough Institute (Asafu-Adjaye et al. 2015).

Belief in the viability of this route can be based on a variety of arguments, which can be categorized as ecological, technological, and economical optimism. Ecological optimism holds that the (fossil or renewable) energy supply on which society is based is practically unlimited. This is often combined with technological optimism, which holds that technological developments will outpace depletion of the energy sources we are currently using. Economical optimism, finally, holds that the economy can keep growing on a declining energy footprint.

Note that although these positions are grouped under the banner of boundless consumerism, they do not necessarily argue for growth of consumption at any cost – they may accept a slower pace of growth in order for this growth to be sustainable. Also, they do not necessarily always agree with each other; there is plenty of debate between proponents of different technologies regarding how exactly to produce unlimited energy. But the central point shared by all these positions is that there is no absolute limit in sight: the energy basis (or technological development, or economic activity) is *boundless*. This means that an energy transition needs to ameliorate current problems of the depletion of specific resources, or specific forms of pollution (e.g. smog or CO₂), but not much more than that. It is therefore a rather modest project that may be solvable by a dedicated group of technologists or technocrats, out of the way of the consumer who can keep expanding their consumptive interests. This is exactly what eco-frugalism problematizes.

Eco-frugalism can be described as being concerned that one or more of the optimisms described above is not warranted by our present situation: resources are limited; alternatives are not being developed quickly enough, and/or (fossil) energy is too central in our economic system to be drastically rejected without giving up growth. It may be argued, then, that eco-frugalism is based on one or more pessimisms that mirror the optimisms described above.

Such pessimisms are not new. One early version of them can be found in Malthus' (1999) population dynamics: he argued that a society cannot continue growing indefinitely because of a limited carrying capacity of the land. In the 1970s the industrial version of this argument was put forward by the Club of Rome in their seminal report entitled *Limits to Growth* (1972). More recently, peak oil and climate change have spawned a myriad of pessimist commentators. See, for example, the work of Heinberg (2004) and Greer (2017) on peak oil, and the Stern review (Stern 2006) and *This Changes Everything* by Naomi Klein (2014) on climate change. These authors typically debunk one or more of the optimisms mentioned above with a number of empirical claims, after which a proposal is made on what to do to avert the crisis.

The eco-frugalist conclusion is that boundless consumerism is impossible, and that therefore we must minimize our energy consumption whenever we see the opportunity. This is no trivial task, as energy consumption is not usually on our minds. This means we need to be constantly reminded of the efficiency of our cars, to turn off the lights when we leave a room, and to simply stop doing whatever can be understood as wasteful expenditure of energy. Eco-frugalism is a conscious reduction of energy consumption:

we need to be aware of what we are doing in order to change our routines, and (the abstention from) energy consumption must be on our minds at all times. It is a negative message: although we may want to indulge in certain polluting or depleting activities, we are not allowed to, because it would lead to negative consequences.

Although some eco-frugal efforts may appear to be very similar to the ones which improve efficiency in order to allow continued economic growth, the aim is rather different. In the case of eco-frugality, a car displaying its current fuel consumption in order to inspire more efficient driving is aimed at reducing the energy expenditure of a specific trip, whereas the same car would allow more and longer trips to boundless consumers.

Discussions between boundless consumerism and eco-frugality thus revolve around competing and incommensurable empirical claims about e.g. the amount of available fossil resources (and therefore the time available for a transition), and competing theories with regards to technological development, economic principles, climate science, etc. These discussions clarify and sharpen argumentation from both lines of reasoning and help explore and explicate potential issues, but they fail to reflect on the playing field, the (implicit) rules of engagement, shared fundamentals, and blind spots. Indeed, sometimes the lack of attention to an issue is more telling than the discussion itself. In the next section I propose to raise the level of comparison to such an issue: the conceptions of the good life implicit in the proposed futures. It turns out these are poorly developed, and it is suggested that this is due to the centrality of scarcity in the discourse between these two positions. This insight allows me to introduce an alternative perspective that enables a richer discussion.

3. THE DESIRABILITY OF THE POSSIBLE: IMPLICIT UNDERSTANDINGS OF A GOOD ENERGY SYSTEM

Before we dive into the substantive conceptions of the good life implicit in discussions on energy transition, it must be argued why such a shift in the discussion is permissible. The central point here is that the reason society pays so much attention to energy systems at all is that these are supposed to provide for our well-being. Not only are we interested in a sustainable energy system, but it should also (and perhaps primarily) cater to our needs and enable us to flourish as human beings.

Although it is common to assume that technologies are neutral tools that simply offer humans ways to provide for their needs, philosophers of technology (e.g. Latour 1992; Verbeek 2005, 2011) have convincingly

argued that technological artifacts play a much more complex role in human behavior. At the very least, the availability and particular configuration of technologies “nudges” (Thaler and Sunstein 2008) people to behave in particular ways. Energy technologies do this for example when the easy availability of gasoline makes the automobile a viable option for transportation, while the ubiquity of cars in the streets makes cycling or walking less appealing. Central heating makes every room in our houses comfortable, and so discourages a family to gather to share warmth. Simply put, the kind of energy system we design will have a big influence on the lives we will be living.

Energy transition is therefore an opportunity to reflect on the current system and reorganize it such that it caters better to diverse human needs while also becoming sustainable. This shift in the discussion means broadening it from the possible to the desirable. Although it is tempting to try and keep the debate on energy transition “factual” and leave the morality to individual users, that simply is not possible: societal choices (the layout of infrastructure) will constrain individual choices (how to get around). A discussion on energy transition can either engage with or ignore the moral issues, but it cannot circumvent them.

The development of an “energy ethics” is to explicate the implicit ethical notions and concerns that relate to the energy system. Examples would be concerns of justice (what is a fair distribution of energy in society?), risk (what kind of risks can the energy system acceptably cause?), and the environment (what burden can we place on the non-human environment?). Although these all warrant attention, they do not really provide an alternative perspective on energy transition. Rather, they provide (negative) boundary conditions: the energy system should not be unjust, it should not involve risks greater than this-or-that, and should not burden the environment excessively. Focusing on the good life, on the other hand, offers a positive direction: this is what the energy system *should* do. This offers a stronger guidance to the project of energy transition.

So how do the two positions introduced above conceptualize a *good* energy system? Boundless consumerism revolves around the idea that consuming goods and services importantly constitutes the good life. Individuals, or perhaps more accurately consumers, ideally find themselves in a free market, and are expected to make consumption choices that ultimately add up to a good life as conceived by this consumer: they are supposed to “design their own lives”. As long as the free market is plentiful and consumers are wealthy enough to pursue their goals, this will automatically result in people living the best lives they can. The goal of energy transition must therefore be nothing else than ensuring there is no lack that inhibits

anyone to pursue their goals. Allan Stoekl describes the resulting stance of the consumer as “I spend, or waste, so that I will ultimately be saved” (Stoekl 2007, xv) – the religion of the credit card. This approach to the good life is based upon a crude economism: any good that is available in the market comes at a certain price, and the individual consumer is to make the assessment whether the purchasing of a specific good would be worth the price, or indeed the best way to spend their limited amount of funds. Growth, then, is always good, as it increases the amount of purchases we can make.

Two routes of critique are common to point out that this position is problematic. The first is to claim that it may be a dead end. Even if boundless consumerism would provide for the best possible lives in theory, it will not work on a finite planet: it is bound to lead to resource wars, many losers, and disillusionment; the outcome will not reflect the utopian vision we set out to reach (Heinberg 2004). The weakness of this critique is that it is partly based on empirical claims that counter one or more of the optimisms mentioned above. As long as there is controversy about these empirical claims, this argument is not likely to win many sceptics over ².

The second route of critique is to argue that it does not seem to work. Above a certain threshold, there is little to no correlation between (energy) consumption and happiness: in the United States between 1950 and 2005 per capita GDP tripled, but the percentage of people considering themselves “very happy” has remained largely stable (Speth 2009, 132). Green economists (e.g. Jackson 2011) therefore argue for a new economic approach that caters to well-being relying on growth. Although this route questions not just the practical but also the theoretical wisdom of boundless consumerism, it is still susceptible to discussions on the empirical basis of the critique. Is it really the case that consumption and happiness are not related above certain threshold, or have other causes (e.g. environmental, social, or geo-political concerns) offset the benefits of consumption?

In addition to these relatively common routes, Ivan Illich (1973; 1974) offers a radical critique of modern technology that makes it more plausible that it is indeed high energy consumption itself that is problematic. Central to his critique is the idea that narrow goals end up counterproductive if given enough time. Illich identifies two watersheds through which every modern institution will pass: the first when this institution becomes more efficient than the practices it replaces, the second when increasing develop-

² Whether such a controversy is actual or staged does not matter much for people to feel reassured in their position, as becomes clear by how little climate change deniers give in to the scientific evidence stacking up against their position (Klein 2014).

ment only increases the effort needed to support the institution. Motorized transport, for example, already passed both watersheds: the first when railways made travel faster than what used to be possible on foot, and the second more recently when automobile culture became dominant (Illich 1973, 7-8). The automobile may have a higher top speed than the bicycle, but at the cost of spending a substantial amount of our income on the car itself, its maintenance, fuel, road tax, etc., and at the cost of spending more time waiting in traffic, looking for parking spots, and going to the gym to get exercise. All in all, Illich calculated, the net velocity of the average car in 1970 in the US was close to 5 mph (Illich 1974, 18-19).

Such counterproductivities are hard to break through because of the development of *radical monopolies*: monopolies of one kind of means to reach certain ends. The automobile has a certain degree of radical monopoly for transportation in some geographical areas, for example through the (re)design of cities with shopping malls away from the city center (accessible only through freeways), sprawling suburbs, and underdeveloped public transport options. By tailoring the transportation system to favor automobiles, walking, cycling, and mass transit are discouraged or impossible (Illich 1974, 43-49). This means that although we as consumers find ourselves in a “free market” with plenty of options regarding which car to purchase, all of these choices are within a narrow spectrum, meaning that the system is characterized by a combination of affluent choices on commodities and very limited choices on different societal trajectories.

The general point to take away from this is that we may be consuming ourselves into a corner: we work more and more to achieve something that becomes increasingly hard to reach, while obstructing the possibility of alternatives. Illich therefore suggests we should be wary of such developments, and refrain from “optimizing” our institutions beyond the second watershed. In other words, we need to keep checking whether we consume to satisfy our needs and wants, or whether we consume to be able to consume more.

Whereas boundless consumerism is built around a problematic understanding of well-being, eco-frugality is concerned even less with a developed understanding of the good life. It is based on a negative message: yes, we may like the lives we are currently living, but if we do not stop doing these things we like, we will suffer the consequences. We do not really want frugality, but it is our only option: we have to give up part of our freedom (wealth, purchasing power) in order to prolong life (society, the earth). The eco-frugalist conception of the good life is therefore not central to its argument: instead of thinking about how to live a good life, we should be concerned with living life at all. But this does not mean that there is no reason

to assess the kind of life being envisioned by eco-frugalists. Is the price to be paid worth it? Are there perhaps positive aspects to life as promised by eco-frugalism? Is it at all desirable?

A good place to start is Allan Stoekl's assessment: "An ecoreligion, one that would defy the 'comfortable' or 'free' (and nonnegotiable) lifestyle of consumerist humanism [...] through a religiously inspired cult of austerity, simplicity, and personal virtue. Such a cult refuses certain basic human urges to consume or destroy, and in the process involves the affirmation of yet another humanism (the self as virtuous in its austerity) and, after consumer profligacy, yet another model of nature as a standing reserve to be protected largely for its value to Man" (Stoekl 2007, xv). The core of the good life according to eco-frugalism is "virtue in austerity": the satisfaction that is found in "making do" and "doing without". However, Stoekl is very critical of its appeal. Historically, virtue in austerity has been strongly promoted by protestantism, but unlike it, eco-frugalism does not offer the promise of an afterlife of abundance - just the grey life on earth. Stoekl simply cannot believe that austerity has any appeal beyond a small minority which gets their satisfaction mostly from feeling smug about being more sustainable than the majority.

One may wonder whether Stoekl is fair in his assessment. Perhaps describing eco-frugalism as promoting a bland life of being cold and eating potatoes into eternity is erecting a strawperson only to then knock it down. There is more to it than just feeling smug about an austere lifestyle. One may feel independent and self-sustaining when repairing one's clothes or bicycle, and there is a certain satisfaction to being able to cook a great tasting meal from humble ingredients. Being successful in decreasing one's own energy footprint by ten percent every year gives a feeling of accomplishment perhaps not unlike that of a manager who has reduced the operating costs of a company by the same amount. Being able to competently deal with limits promotes a general feeling of competence, and a sense of adulthood, as compared to being a big baby who always wants and needs "more".

But at least when eco-frugalism is taken seriously, its negative message is not so easily bent around into a positive can-do atmosphere. When it comes to depletable resources like fossil energy or rare earth metals (rather than income-limited resources like solar energy), no reduction in use is strict enough for the true eco-frugalist, because any further reduction would still extend the date of depletion. This means any activity that is not essential to life is problematic: if we get rid of those frivolous spices in our food, it would be cheaper still. Ten percent energy reduction is nice, but why not twenty? Any success can be put into perspective by the daunting

scale of the real goal of sustainability. Pushed to its limit, even life itself becomes questionable: if the aim is to sustain life on earth, do we really need so many people to do this? When the only goal is to reduce our footprint by as much as possible, suicide reaches the goal 100 percent³. The aspects of eco-frugal practices that add to our perceived quality of life (feeling independent, the satisfaction that comes with creation, etc.) may be real, but they do not come from the gospel of eco-frugalism itself; they are additional benefits that are not central to the aims of eco-frugalism. Indeed, these “side-effects” cannot be properly defended from the perspective of eco-frugalism itself, such appeals must come from elsewhere - we will get to their source in the next section.

Although boundless consumerism and eco-frugality appear to be each other’s opposites, they do share an important notion of how to understand the relation between energy and society. Stoekl (2007) emphasizes that they are both based on efficiency improvements and the organization of “measurable” energy; they both affirm the importance of energy (or resources in general) to the good life; they share the idea that the ultimate question is how to deal with *scarcity*. Boundless consumerism embraces the ceaseless production and squandering of these resources for hedonistic enjoyment; eco-frugalism intends to hoard them in order for them to last forever. In this, they both understand our environment as the “standing reserve” central in Martin Heidegger’s understanding of modern technology (Heidegger 1977): we cannot see our environment other than as a stock of consumable resources, and through this, ourselves as both the managers of this stock, and as a stock (of human resources) in ourselves⁴.

This shared focus on the question of scarcity allows boundless consumerism and eco-frugalism to develop their disagreements: they both see the problem of energy transition as an issue of allocating scarce resources, but disagree on the ways to do this. However, a focus on scarcity is not unproblematic – it leaves out a number of other concerns, such as questions regarding the best use of these resources, whether scarce or not.

³ This sounds harsh, but there are people who make similar claims for the sake of sustainability. Dutch environmental blogger “Green Evelien” at one point states that “the most ecological is not living, but that may be exaggerating it” (Matthijssen 2014). On a more positive note, people can also have positive impact, for example by restoring forests, so at least in theory there are better choices than the “zero-option” of suicide.

⁴ Many advocates for eco-frugality may dismiss this analysis, because they consider themselves to have a more appreciative view of the world and humanity. My claim is that such views are not (purely) eco-frugalist, but would include another perspective; the one I develop in the final part of this paper.

In his later work, Ivan Illich recognized the problem of the centrality of scarcity, and argued that the eco-frugalist side of it is the most problematic. “We are straight on our way towards an energy-obsessed low energy society in a world that worships work but has nothing for people to do” (Illich 2013, 118). In our attempt to manage energy (and thus the ecosystem and the biosphere), we move from a technocracy to an “ecocracy”, in the sense that life itself becomes managed by the system. Eco-cracry is described by Henryk Skolimowski (2005, 272-3) as “recognizing the power of nature and of life itself, mean[ing] observing the limits of nature, designing with nature, not against it, creating ecologically sustainable systems, reverence for the planet – not its continuous plundering”. In the perspective of the eco-frugalist, this “reverence” can be understood as little different from the reverence the first industrialists may have felt for the steam engine: observing the limits of nature in order not to overload or exhaust it, but instead making sure the “factory of life” keeps outputting the things we need. Whilst the boundless consumerists end up deploying technologies that are counter-effective in their own aims and destructive to freedom via radical monopoly, eco-frugality reduces life itself to a process that needs to be optimized regarding its (energy) efficiency. “[The ecocrat] replaces the technocrat whose authority was at least limited to the management of people and social machines. The ecocrat’s aims transcend these institutions; his management tools fit nature into their domain” (Illich 2013, 120). More so than boundless consumerism, which at least let everyone “design their own life”, eco-frugality represents one step further towards the submission of everything to the goal of efficiency, which, as we know by now, is an empty goal in itself. Ecocracy is in this sense not a reversal of technocracy, but a more refined version of it, taking into account the ecological basis in which technocracy functions. Understood this way, the concerns around the negative message of eco-frugality are very serious indeed. In its attempt to extend life, it inadvertently reduces it to another cog in the machine. If we want to save ourselves from this dystopia, we must move beyond the scarcity perspective.

4. THE REJECTION OF THE SCARCITY DISCOURSE BY QUALITATIVE ABUNDANCE

If one would have to choose between mindless consumption in a world that is falling apart and a lifeless life of austerity, there is little appeal to either option. But in some discussions on energy transitions, a much more positive note can be detected, for example when people speak of the feel-

ing of empowerment after placing PV-panels on their roofs, or when the commute becomes something to look forward to when it is done by bicycle instead of automobile. Such positive aspects of energy transition may be noticed and mentioned, but in a debate revolving around scarcity, there is no place to integrate such notions. To stick with the example of the commute by bicycle, a boundless consumerist may respond that everybody is free to ride their bicycles, but the fact that most people commute by car shows that there is an obvious need for automobiles, so we need to work on ways to continue fueling them. An eco-frugalist may respond to the bicycle commuter by emphasizing the amount of energy saved by cycling instead of driving. But the idea that there may be something *good* about riding a bicycle remains unchallenged, and therefore undeveloped. It remains a personal preference, a side-note, whereas it needs to become truly part of the debate. What is needed is a line of argumentation that challenges the dominance of scarcity.

A seed for this can be found in the work of Illich when he suggests that “we cannot break out as long as our principles are the laws of thermodynamics” (Illich 2013, 118). Illich realized that life (or at least the good life) should not be understood in terms of efficiency and scarcity, so his earlier arguments for the bicycle as a more efficient mode of transport than the automobile were misconceived, and indeed counterproductive: they reinforced the notion that efficiency is what matters. But the most important vice of the automobile is not its failure to deliver the promised speed, but rather its way of transforming distance. Whereas the self-propelled traditional modes of travel should be understood as *transit*, the automobile, as well as other modern, “fast” modes of travel are forms of *transport*. Transit is an intrinsically human mode of moving around, one that makes people connect with each other, makes them appreciate the route itself. Transport on the other hand obliterates distance, sucks people up at one point to emit them at another, and makes the distance invisible and un-transitable. This makes transport qualitatively different from transit and therefore incomparable to it quantitatively.

For the later Illich, the efficiency of the bicycle is thus beside the point when we are interested in a mode of travel that is compatible with a good life: it is a good mode of travel because it agrees with human nature, it is egalitarian, accessible, safe, and gentle on the earth. And because of these features it also happens to be efficient and sustainable. It is sustainable *because* it agrees with the good life, not the other way around. This effect is not unique to the bicycle. Other examples are shopping for food at a farmers’ market in order to know where your food comes from and to celebrate the seasons (whilst also reducing the carbon footprint of your

food), and building a house that lets in lots of sunshine for a more pleasant living environment (whilst reducing the cost of heating). Although these ideas and examples remain short of a robust law that connects a certain understanding of the good life with a sustainable society, they at least offer some theoretical scaffolding that enables discussion, and a first indication that there is a valuable connection to be explored further. I propose to name this line of reasoning *qualitative abundance*, referring to the shift in focus from the quantitative, measurable scarcity that underlies the discussion between the two positions mentioned above.

Qualitative abundance thus starts not with the availability of energy, but with its uses: the question for energy transition is not how much there is or can be in the future, but how much and what kind of energy is needed for humans to flourish. It sets out to understand how energy consumption contributes to well-being, and how to improve upon energy consumption practices. By making the good life the central issue, it does not just go beyond the more-is-better rhetoric that is often central to quantitative discussions, but also beyond concerns of quantity in general – there does not necessarily have to be an “optimum” quantity either, as this may be strongly related to the ways in which energy is produced and consumed, and to the particular ideas of the good life that one may ascribe to.

Much like the other two lines of reasoning described above, qualitative abundance may also come in different forms. One way to distinguish between various forms is through their underlying theories of the good life. Hedonists would be interested in an energy system that provides them with the greatest amount of pleasure. Desire satisfactionists would strive for an energy system that would satisfy their desires, and objective lists theorists would want an energy system that enables the achievement of a particular list of goods. Although any theory of the good life is compatible with questioning the kind of energy consumption to achieve its goals, the outcomes would be different. For example, moving from utility grid-delivered electricity to a cooperatively owned microgrid increases independence and sense of community, but decreases convenience and possibly security of delivery. How to balance these effects on well-being? Such questions are under-explored and would benefit from systematic treatment. But even in its current underdeveloped state, the notion of qualitative abundance can guide to break the dominance of scarcity discourse by engaging with either of the other two starting points. In the next section, I will sketch the discourses that could emerge and develop in this way.

5. NEW DIMENSIONS OF DISCOURSE: PROSPERITY AND SIMPLICITY

If the discussion between boundless consumerism and eco-frugality is characterized by their shared concern and different understanding of scarcity, the discussions between qualitative abundance and the previous two may be characterized in similar ways. I will suggest that the central issues these discussions revolve around are *prosperity* and *simplicity* respectively. A schematic rendition of the resulting lines of discourse can be found in *figure 1*. The three original positions are found in the corners, and between each combination of them, the central issue of discussion is mentioned. Finally, between the positions and central issues, one can find the opposing understandings of the central issue at hand.

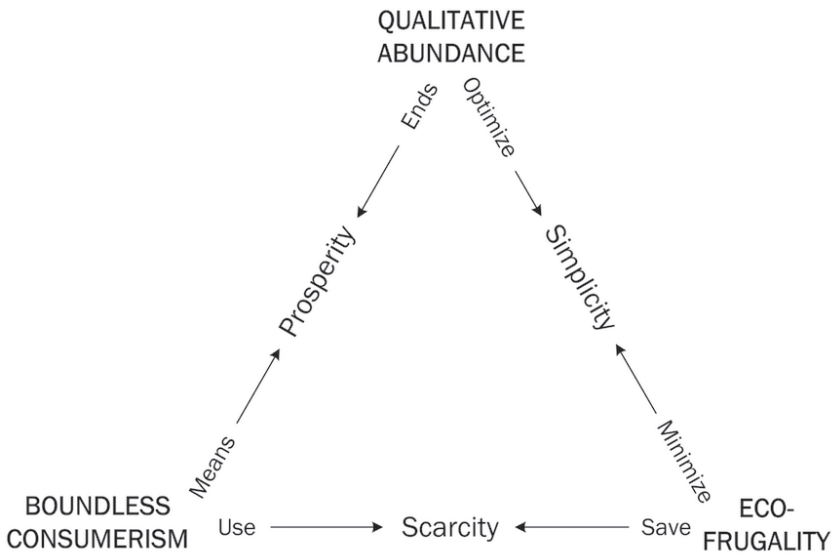


Figure 1. – Lines of discourse on energy transition.

Boundless consumerism and qualitative abundance are both concerned with means and ends. The former aims at supplying a maximum amount of the means of energy in order for society to consume it – for whatever ends it can imagine. The latter, on the other hand, aims at maximizing the ends (what is the very best way we can consume energy?), to then look for the energy means that best fit those ends. They are both concerned with *prosperity* through the expenditure of energy, but approach it from diametrically opposed directions.

Proper discussions on prosperity could further the debate on energy transition significantly, because it will improve the modes of comparison between various means. For example, when dealing with the transportation system, the boundless consumerist perspective may suggest that comparisons between modes of travel should be done in terms of energy costs per passenger kilometer. Prosperity would be the ability to travel far and often. But we are not necessarily interested in passenger kilometers, but rather in visiting friends and places of interest, getting to work, or the feeling of being on the move. The amount of passenger kilometers needed for this are dependent on the geographical dispersal of one's social network, the richness of one's (nearby) surroundings, the distance to work, and the modes of transportation chosen. All of these are more or less interrelated: someone living and working in the same city is more likely to have friends in that same city than someone who commutes from a sleeper town, for example. A better mode of comparison between modes of transportation would revolve not around passenger kilometers, but around people's ability to "get around": prosperity lies in going where and how one pleases. This can be achieved not only by making passenger kilometers more affordable, but also by making people interested in local destinations. In more general terms, discussions on prosperity in relation to energy transition raise questions on the proper ends for which means are expended.

Eco-frugality and qualitative abundance both tend towards being critical of overconsumption of commodities: qualitative abundance raises the question whether they are truly the proper means towards an end, and eco-frugality wonders whether we can really afford them, or whether there are better ways to spend those resources. In short, then, they are both interested in simplicity, in the general sense of the word: in having fewer things and complications around. They differ on the proper aim of simplicity: eco-frugality aims at doing with as little as possible, whereas qualitative abundance suggests there is an optimal amount of simplicity (or complexity) that we should strive for.

Simplicity is not a new topic when it comes to discussions on consumption. The *voluntary simplicity* movement, which can be traced back to the mid-nineteenth century with the work of Thoreau, was described by Elgin and Mitchell (1977) as follows: "The essence of voluntary simplicity is living in a way what is outwardly simple and inwardly rich. This way of life embraces frugality of consumption, a strong sense of environmental urgency, a desire to return to living and working environments which are of a more human scale, and an intention to realize our higher human potential – both psychological and spiritual – in community with others" (Elgin and Mitchell 1977, 2). This description clearly contains elements of

eco-frugality (frugality of consumption, environmental urgency) as well as qualitative abundance (human scale, higher human potential, community with others), but puts little effort into distinguishing between them and recognizing their different roots.

The tension between the two approaches is clearly noticeable in the concept of *alternative hedonism*, coined by Kate Soper (2008). Her argument for alternative hedonism is again made along two lines: the first, eco-frugal line that the affluent lifestyle of consumerism is beginning to show its polluting and exhausting dark side, and the second, qualitative abundance line that there is a seductive alternative, “an altered conception of what it is to flourish and to enjoy a ‘high’ standard of living” (Soper 2008, 571). Like Elgin and Mitchell, Soper also intermingles these lines by combining environmental and personal critiques of consumerism: “Consumerism is today for many people both compromised by the pollution, congestion, stress, noise, ill health, loss of community and personal forms of contact it entails, and viewed as pre-emptive of a distinct range of pleasures” (ibid.).

Soper holds that both lines are complementary, and this is reflected in the ways alternative hedonists behave. This behavior is partly explained by altruistic motivations, but not entirely. “It is, for example, a decision to cycle or walk whenever possible in order not to add to the pollution, noise and congestion of car use. The hedonist aspect, however, of this shift in consumption practice does not reside exclusively in the desire to avoid or limit the un-pleasurable by-products of collective affluence, but also in the sensual pleasures of consuming differently” (Soper 2008, 572). Because these “sensual pleasures” can only be had in a healthy environment that is not flooded with automobile traffic, the “altruism” of not adding to congestion is really a form of “self-policing” (ibid.) or moral constraint to achieve a greater good.

It is important to notice that although the two lines of argument may be complementary, they do not coincide: they come from different perspectives and provide us with different boundaries. There are sensual pleasures to be had with walking, and Soper embraces those because walking is also sustainable, but the “sensual non-sustainable” (of, for example, powerboat racing) still needs to be rejected with a negative argument. This illustrates that qualitative abundance by itself is not enough to guide us in energy transition; only in combination with concerns of climate change, resource depletion, etc., one can be sure that the resulting energy system will be both catering to the good life *and* sustainable.

Three things need to be said about this. First, there is reason to believe that it is no coincidence that many practices that tailor to the good life are also eco-frugal. This was mentioned above, and is discussed in more detail

elsewhere (Geerts 2017). Second, in cases of conflict, it may be possible and desirable to “self-police” at a higher level, and change our ideas of the good life. Many of us started something (a running habit, a change of diet) because we believed it was healthy, and at a later point started enjoying it and understanding it as increasing our well-being for its own sake, and not only because of its health effects. Along the same lines, we could develop low-energy habits and learn to love them. Third, the problem of incompleteness is true for eco-frugality as well: the negative line of argument will by itself also fail to guide us in conflict situations. If we have a variety of options available to reduce our environmental impact, but a limited amount of time and effort to put into it, what are we to choose? Qualitative abundance suggests choosing the option that increases our well-being whilst reducing its environmental footprint.

Finally, this third point hints at the final feature of the schematic description of discourse on energy transition in *figure 1*. Qualitative abundance does not just draw attention away from scarcity, but offers a new route to compare the other two positions: between for example overconsumption and underconsumption. This comparison is impossible without the “detour” of this extra position, because none of the three positions in the corners of *figure 1* can be related to the issue opposite of them. Similar to qualitative abundance being unfit to discuss scarcity, boundless consumerism is incompatible with simplicity, and eco-frugality does not have anything to say about prosperity. Referring to either of these concerns therefore automatically precludes arguments from the positions opposite to them. So, if we maintain that a discussion on energy transition must go beyond scarcity, we must learn to discuss the ends to the means of boundless consumerism, and the balance⁵ to the minimalism of eco-frugality. In other words, we need to develop qualitative abundance.

⁵ The idea that simplicity is fundamentally a ‘balancing act’ is described most explicitly by Gambrel and Cafaro (2009), who argue that (voluntary) simplicity ought to be understood as a virtue. Virtues are always conceptualized as the mean between two vices. Simplicity should be understood as the prudent mean between several axes of vices: between underconsumption and overconsumption; unthinking consumption (carelessness) and overthinking consumption (obsession); none or crude consumption (asceticism) and luxurious consumption (lavishness); inefficient or pointless consumption (wastefulness) and hyper-efficient consumption (penny-pinching), for example (Gambrel and Cafaro 2009, 91). Although these distinctions are useful, they do not coincide with the distinction between negative and positive (or eco-frugal and qualitative abundant) approaches to simplicity mentioned above. These are all related to finding a balance that leads to a good (virtuous) life, and not to the balance between living a good life and minimizing one’s environmental footprint to do so. The balanced virtue that Gambrel and Cafaro refer to finds itself in between the vices that can be recognized in boundless

6. CONCLUSION

This paper has attempted to develop a number of concepts aimed first to clarify discussions on energy transition, and second to expand these discussions to better include concerns for the good life in relation to energy consumption. It has suggested that the main lines of argumentation can be described as *boundless consumerist* and *eco-frugalist* respectively, and that these share a concern for scarcity. The focus on scarcity leads to side-lining of arguments that suggest that in energy transition society should not just be concerned with replacing finite with sustainable energy sources, but also with replacing counter effective energy practices with ones that actually promote well-being. The introduction of the concept of *qualitative abundance* facilitates the emergence and development of two discourses beyond the well-established scarcity discourse: one in connection with boundless consumerism on the question of *prosperity* (what kind of energy means are fit for achieving human ends?) and one in connection with eco-frugality on the question of *simplicity* (how to get rid of overconsumption without overshooting towards underconsumption?).

Discussions on both prosperity and simplicity, even in relation to energy transition, are not new. However, the impact of these discussions on the mainstream discourse on energy transition has been minimal. It is the hope that the framework provided in this paper helps to understand how various discussions on these topics relate and in what way they can be used to challenge the dominant scarcity discourse. A first step in that direction would be to develop a more thorough overview of such discussions than I have been able to provide in this paper. But perhaps just as important as developing the alternative would be to keep showing the need for it: to simply ask what we need all that energy for.

consumerism (overconsumption; unthinking, luxurious, inefficient consumption) and in eco-frugality (underconsumption; overthinking, none or crude, hyper-efficient consumption). Therefore, their use of the concept of voluntary simplicity seems to coincide with my concept of qualitative abundance, and not with the debate between qualitative abundance and eco-frugality, which I characterize with the concept of simplicity. Although this is a possible source of confusion, there may be a straightforward reason for it. Gambrel and Cafaro notice that their term of ‘simplicity’ seems to contrast more strongly with the approach that is here called boundless consumerism than with what is called eco-frugality. They argue that this is acceptable because they hold that modern society has a clear tendency to err on the side of boundless consumerism, so they propose a strong pull in the other direction. In other words: their ‘mean’ is slightly overcompensated, and leaning beyond qualitative abundance towards eco-frugalism – exactly where I place the concept of simplicity. Qualitative abundance may be understood as a more neutral, albeit admittedly also less ‘simple’, term for the true mean.

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