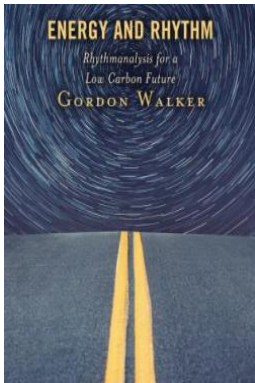


1. Essential reading



Energy and Rhythm. Rhythmanalysis for a Low Carbon Future, by Gordon Walker

By Sylvain Allemand (Journalist)
08 September 2022

Energy is not only a question of techniques and uses, but also of rhythms. This is what geographer Gordon Walker, a professor at the Lancaster Environment Center, argues by taking into account social rhythms as well as bodily and cosmological rhythms. These rhythms have been directly impacted by what he calls "techno-energies", i.e. fossil fuels exploited on a large scale since the start of the industrial revolution. How can reading *Energy and Rhythm. Rhythmanalysis for a Low Carbon Future*, published in 2021, shed light on the path towards a more resilient socio-technical systems in the light of the ecological and climate crises ?

Rowman & Littlefield, 2021.

It is generally accepted that we must decarbonise society and, therefore, reassess all the ways in which we produce, distribute, and consume the resources we use for heating, lighting, transport, etc. Yet most often, discussions and decisions focus on technological solutions to be promoted (in this case renewable energies, even as part of an energy mix) and/or on the new behaviours to be adopted (in the sense of greater sobriety, in particular by adopting climate-friendly lifestyles).

Energy, a matter of rhythms

We should not forget that energy is not just a matter of techniques or uses, but also of rhythms. This is what geographer Gordon Walker, professor at the Lancaster Environment Centre, argues, considering social rhythms (daily life, domestic life, organisations, the city...) as well as biological rhythms (heartbeats, breathing, menstrual cycles, the digestive system...) and cosmological rhythms (related to the solar cycle and the earth's rotation, to the seasons...).

These are all rhythms that have been directly impacted by what Walker calls "techno-energies", i.e., fossil fuels exploited on a large scale and in an increasingly intensive way since the beginning of the industrial revolution. In fact, since the advent of 'artificial' heating and lighting and motorised travel, we have been somewhat freed from the constraints of circadian and seasonal rhythms. Just think of how

electric lighting has allowed us to extend working time; this is an evolution that has been widely documented and that Walker recalls to highlight the much more subtle changes it brought about with regards to the "sensations of time and the beats that structure the rhythms of the social order."

At first glance, however, we may be surprised by how fossil fuels (coal, oil, nuclear) have been able to dictate our social and biological rhythms to such an extent, allowing us to liberate ourselves from seasonal and nychthemeral (day and night) rhythms. Are not these energies by nature "inert," just like the heavy equipment and infrastructure supposed to extract, transport, and transform them? But energy sources, including fossilised forms (coal, oil...), are a matter of atoms and, therefore, of movement (electrons gravitating around a nucleus). Rhythm is therefore at the heart of energy just like there is energy within rhythm. Think about how electricity grids work, relying on extreme high-level management, in order to anticipate the balance between a fluctuating supply and demand over the course of a day, a week, a season...

We are the energy we consume

The author furthers his analysis by showing how the rise of electricity has impacted our daily rhythms through modes of transport (he cites the example of trains and how timetables dictate other social rhythms), and even through ventilating homes and workplaces (with air conditioning which allows people to occupy an indoor space regardless of the weather conditions outside). Not to mention the profusion of household appliances that have changed how we store and cook food, inducing new rhythms for domestic life that are always increasingly disconnected from circadian and seasonal rhythms. In this sense, we can surely agree with the author that "we have become, in a way, the energy we consume."

Energies subject to social and cosmological rhythms

However, our social rhythms in turn also impact the dominant energy system. Walker highlights this through a detailed and comparative analysis of electricity consumption curves in England and France. He reveals differences linked to the preference in France for electric heating, as well as to the greater importance of certain socio-cultural practices, such as dinner, the preparation of which can be relatively energy intensive. Within a country, energy regulation must deal with more or less predictable variations, connected to social rhythms (the high use of toasters in the morning, for example) and cosmological rhythms (a harsh winter that forces people to use more heating than usual). More importantly, whatever activities we undertake, a day is always 24 hours; one week, seven days, and the four seasons continue to follow one another with their changing temperatures and hours of daylight. Even with the current triumph of techno-energies, our bodies are still influenced by natural rhythms.

Therefore, the relationship between energies and rhythms is one of coevolution rather than subordination. This is why Walker rejects a vision that is not only dualistic (society versus nature) but also deterministic and progressive (which would favour a single energy model), arguing that this fails to adequately capture complex and heterogenous national realities. Despite the existence of transnational macro-technical systems, each country is responsible for finding new arrangements between energies and different rhythms - biological, social and cosmological. He therefore refrains from advocating a standard model that would apply in all circumstances around the world.

Change of rhythms on all levels

Meanwhile, he underlines the scale of the challenge of decarbonising society. Indeed, it implies anticipating a change of rhythms at all levels - micro, meso and macro - towards a deceleration (he quotes Hartmut Rosa's use of the term) but also towards what he himself calls a de-energisation (a reduction in our consumption of techno-energies that does not in turn bring about new rhythmic dissonances in our lives).

This is easier said than done, given how entangled, embedded and entwined our rhythms are (the author notes how the English language is loaded with terms to describe such entanglements). Take automobility: it is a "polyrhythmic" assembly, containing the rhythms of extraction, transformation, transport and storage; rhythms that are involved in the mode of fuel supply (related to the location of service stations, to the volume of the tank, to the movements of people and of transported goods, etc.). The energy transition cannot therefore simply involve replacing combustion engine vehicles with electric vehicles. It must anticipate knock-on effects with regards to biological and social rhythms. At the micro level, for instance, we will have to adopt new rhythms for powering our vehicles – you do not charge a battery the same way as you fill up a tank – and at the macro level, we will need to adapt our methods of managing the electricity grid to ensure a balance between supply and demand. Hence the usefulness of smart grids, which are electricity networks that integrate digital technologies to optimise their operation and allow for new uses (self-consumption, predictive maintenance ...). But here again, the author points out their multiple implications, some positive, others more problematic: for example, developing an incentive policy at the cost of an infringement of privacy (by using personal digital data relating to their energy consumption). This runs the risk of generating resistance (as we saw in France with the rollout of the Linky meter) as well as aggravating inequalities between those who will be able to step into the digital era and those who will not. Extending Walker's analysis, we can identify another challenge: that of calling out the coalition of actors (public authorities, energy operators, engineers...) that exists to promote a dominant energy regime and, with it, a particular polyrhythmic system that permeates social life and even our individual lives. In this regard, we can see that the advent of a carbon free society will also require dismantling a coalition that supports techno-energies and replacing it with one that at least welcomes the promoters of renewable energies.

Despite all the potential difficulties, the author does describe changes that can be made and some already at work, at the level of individuals (for instance, how they use active mobilities to reconnect with biological rhythms that help them stay healthy), at the level of housing (for example, changes driven by initiatives in terms of self-production) and at the level of the city (such as discussions around a form of local urbanism that is less dominated by cars).

Walker is not advocating a return to candlelight (this image is often invoked to disqualify alternatives to the energy systems that came out of the industrial revolution) or archaic modes of transport, but the adoption of rhythms that are adapted to the needs of a modern low-carbon society. Without providing specific examples, he warns us of the need to anticipate how a rhythm change in one area of social life may have knock-on effects on the other rhythms of our personal lives. Yet he does not extend his analysis to the point of imagining the new rules or standards to be established (if indeed, this is how we should consider the future of our societies).

While the book speaks to public authorities, it is also aimed at researchers, starting with those in the humanities and social sciences. It is a question of blending society and nature. This is what chronobiology does, to which the author refers. The fact that he is a geographer is not insignificant: of all the disciplines, it is one of the few that is at the crossroads of earth and life sciences, the humanities and social sciences. This is also evidenced by the eclecticism of his bibliographical and disciplinary references and the works from which he draws.

While his vision of energy is based on our understanding of thermodynamics (which focuses on the interactions between heat and other forms of energy – electrical, mechanical or chemical), his thoughts on rhythms draw on Henri Lefebvre's pioneering views on rhythmalysis . This French philosopher and sociologist demonstrated how the city is a matter of rhythms - rhythms that make a city a city: an environment where we do not simply live and move about, but where we live things intensely, because of flows and traffic of all kinds, but also, sometimes, in a "natural" environment (according to him, for

instance, Mediterranean cities follow the rhythms of waves and sunshine, which contribute to their unique identity). Walker notably cites the famous passage in which Lefebvre describes the city from his window, to show how it is made up of rhythms of varying intensity, linked to the way people move – on foot, by public transport, alone, in crowds... For Walker, referencing this passage provides an opportunity to highlight the additional value of his own analysis: to mobilise rhythmalysis in the service of the energy transition, going so far as to promote a "right to the low-carbon city" (echoing Henri Lefebvre's "right to the city").

A rhythmoenergetic turn?

Although mobility is mentioned on various occasions, it is not emphasized as much as it might have been, given its obvious relationship to rhythm. This is surprising considering that Lancaster University was one of the intellectual centres of the mobility turn, which, from the 1990s, sought to make mobility a defining feature of contemporary modernity –Walker hardly quotes John Urry, despite hailing from the same university (he cites just one of his articles). We could have some initial reservations about this, yet Walker's focus lies elsewhere, negotiating a different turn, one that concerns how we address a carbon-free society: in short, a rhythmo-energetic turn. In this sense, his book should spark stimulating debates and open new research avenues, as did the publications promoting the mobility turn (by John Urry, Tim Cresswell, and others).

Reading it should encourage researchers to carry out surveys among ordinary people to examine how they strive - quietly, with the means at their disposal - to adopt new rhythms in the context of the energy transition. Such surveys would be a useful addition to those already carried out on the impact of COVID-19 - a crisis that confirms many of the hypotheses formulated in the book, which, as its author points out, he began writing well before the pandemic started.

Clearly, Energy and Rhythm deserves to be translated into French - just like John Urry's books (see bibliography) - although the English version remains accessible despite the use of technical terms and concepts. In either language, readers will appreciate being able to read the seven chapters in whichever order they so choose. Perhaps just to make them feel, through the experience of reading, a form of rhythm...

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Movement

Movement is the crossing of space by people, objects, capital, ideas and other information. It is either oriented, and therefore occurs between an origin and one or more destinations, or it is more akin to the idea of simply wandering, with no real origin or destination.

En savoir plus x

Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

En savoir plus x

Associated Thematics :

Lifestyles

- Rhythms of everyday life

Policies

- Time policies
- Ecological transition



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