The 365 days of Christmas: connections between time, space and energy demand

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Every year the Christmas period seems to be starting earlier.[1] In fact, people have been complaining about this since at least 1901 when the Philadelphia Inquirer noted, disapprovingly, that "Gift buying … seems to get earlier every year".[2] These complaints link to deeply culturally-embedded social norms and expectations of when certain practices ought and ought not to happen, both in terms of correct sequences and rhythms. Whenever these sequences or rhythms have been relaxed historically, for example when sex before marriage, working on the Sabbath, or shopping in the middle of the night have become 'normal', there have been cries of impropriety, based on the shared ideas about the appropriate temporalities that are attached to different social practices (Torriti & McGraw, 2016).

How the Christmas period encroaches on the rest of the year reflects the stretching, compression, and reformulation of other social, cultural, political and economic rhythms. These occur principally as the result of processes of globalisation and significant changes in technology (Warf, 2011), and have been described using concepts like time-space compression (Harvey, 1999) or the 'annihilation of space and time' (Marx, 1993; Solnit, 2003). The capacity to manipulate time and space in these ways has required, and been enabled by, the relative abundance of easily convertible energy.

As the stretching of Christmas indicates, historical patterns and rhythms associated with shopping have undergone significant and recently rapid alteration. All types of shops are now open longer and this, together with the new possibility of buying online enables '24/7 shopping': something which is said to have transformed and perhaps even destroyed 'the weekend'. There are other examples of extending 'hours'. In higher education a greater emphasis on the 'student experience'[3] along with competition between universities[4] has resulted in facilities like libraries extending open hours far into (and occasionally through) the night.[5] Moves like this are justified by pointing out that "other top ten English Universities in the 2015 Guardian rankings all have 24-hour Libraries" (Warwick Student Union, 2016). Whatever the details, the effect is the same: previously fixed features of the temporal landscape are being eroded.

In combination, globalised business and consumer culture, the increasing irrelevance of differing time-zones (Benediktsson & Brunn, 2015), and more instantaneous travel and communication technologies have helped bring about more and different ways of working and living.

Crucially these have created new *expectations* and *norms*, leading to a relaxation of the 'orderliness' of temporal rhythms structuring social practice (Zerubavel, 1981, 1982).

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[1] https://en.wikipedia.org/wiki/Christmas_creep

[2] http://www.telegraph.co.uk/topics/christmas/christmas-news/11213546/Christmas-gets-earlier-every-year-No-it-doesnt.html

[3] http://www.universitiesuk.ac.uk/policy-and-analysis/reports/Pages/student-experience-measuring-expectations-and-outcomes.aspx

[4] https://www.warwicksu.com/asset/News/4000/The-Case-for-a-24-Hour-Library-SU-Report-FINAL.pdf

[5] https://www.theguardian.com/education/2013/mar/12/24-hour-library-people

This reconfiguring of social-temporal rhythms draws attention to several important questions. In particular, what is the impact on energy demand of a 365/24/7 economy? Equally significant, is it an abundance of energy, and energy-demanding devices that have enabled these trends?

The rise of international air travel has relaxed physical constraints, and ICTs allow instantaneous virtual communication with anyone, anywhere, at any time. Together these have been said to annihilate space through stretching the times at which activities take place. Though 'timespaces' are interlinked (May & Thrift, 2001; Schatzki, 2010) does a focus on time, rhythms and the regularity of practices reveal another face of these processes?

In a 24/7, connected, always-on society, where and when an individual is situated no longer defines the possibilities and appropriateness of which practices to perform. This is significant in that more overlapping rhythms and expectations of what can be done require more and bigger infrastructures: more roads, more powering and servicing of different spaces, more data centres[6] to facilitate different, geographically dispersed activities. As others have observed, the apparent 'dematerialisation' of online shopping (Cullinane, Edwards, & McKinnon, 2008) still requires thousands of delivery vans (often travelling on congested urban road space), warehousing and storage, etc. in its 'backstage'(Goffman, 1978). As such, while the 24/7 economy promises flexibility and 'instantaneous consumption', facilitating this requires locking in a high energy demand future.

Having things open 24 hours could have other systemic effects, enabling and reflecting increasing and more intensive interconnections between practices and rhythms, and establishing both denser and potentially more fragile forms of interdependence.

The consequences for energy demand are likely to vary and take different forms. 24/7 libraries clearly require more energy to run, but on-demand transport systems *may* be more efficient under certain circumstances (McKinnon, Browne, Whiteing, & Piecyk, 2015). In the past, social and temporal rhythms were tightly bound to seasonal rhythms and those of night and day – partly because of limited energy resources, and/or a lack of technologies capable of converting energy into light, heat, movement, and communication etc. In some part of the world these constraints no longer seem to pertain. So are there any limits to the stretching of practices in space and time?

Although what Zerubavel would call the physiotemporal rhythm of light and dark caused by the rotation of the earth can be compensated for by electric light, biological needs may limit how long *we* can stay 'switched on'. For example, though university facilities are open later, such capacity is often under-utilised, coming into conflict with other rhythms, such as the biological need for rest and sleep or the social need for non-scholastic pursuits. The mental health charity MIND notes that this kind of provision "could result in students feeling that they should be spending every spare moment studying. This is not a sustainable approach. Extended periods of pressure, including a lack of sleep … can all have a huge impact on mental wellbeing."[7] There may also be (geo-)political consequences of extending an 'always on' culture, grounded in forms of energy-abundance that are currently only available for the 'happy' few (Moran & Russell, 2009).

[6] http://www.demand.ac.uk/27/01/2015/article-society-pushes-to-go-faster-but-data-binges-carry-environmental-costs/

[7] https://www.theguardian.com/education/2013/mar/12/24-hour-library-people

Such examples underscore important temporal tensions between rhythms. Whereas technology affords the ability to purchase practically anything at 3am, rhythms related to the traditional 9-5 work pattern, the regularities of sleep, and/or family obligations related to getting the children up, fed and off to school at a punctual time (Cass & Faulconbridge, 2016), remain.

In Zerubavel's terms, the biotemporal rhythms of sleep and eating, and the strength of some sociotemporal rhythms such as parenting and work still have the power of 'entrainment' (Parkes & Thrift, 1979) or 'pace-making': restraining the flexibility of other practice time-spaces by making them fall into line. Some things still need to be sequenced or limited in duration or frequency and in relation to other rhythms.

What are the consequences of increasing societal and institutional 'flexibility' in what happens when, including the possibility that Christmas begins on 26th December? The impact on energy demand is likely to be massive but perhaps that will be the least of our worries. Only time will tell…

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