Behaviours, transmissions, generations: why is energy efficiency not enough?

Isabelle Garabuau-Moussaoui
EDF R&D (Electricité de France, Research and Development)
France
isabelle.moussaoui@edf.fr

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Abstract
Energy use is nowadays a very important question, in the context of global warming and expensive prices of energy. "Energy conservation" is a paradox: environmental awareness increases, but also energy demand. Sociological knowledge concerning energy uses and energy savings remains important to understand the possible evolutions of practices and values and thus the possible future energy policies. Can the "consumer society" become a "less energy-intensive" society?

This paper proposes to innovate with a "new" way to analyse behaviours and to help policy makers to break the walls of "the behavioural complexity". We argue that energy efficiency, energy-using products and activities are socially embedded. More specifically, they depend on the "social age" of people (children, teenagers, young adults, parents, old age people) and on their generation (events, experiences that people did live).

The demonstration is based on the analysis of several qualitative studies carried out in France, showing that the generational and social ages analysis could be very efficient and innovative to understand:

- What kind of "energy-related material culture" have people, and how does it evolve during the life? In a context of increasing energy demand, is it possible to change the energy-intensive "socio-technical" mainstream towards a more sustainable way of life?
- What are the best moments during life for a behavioural change towards a less energy intensive way of life?
- Can we count on the new generation, to be more aware and less "energy-intensive"?

Introduction
Energy consumption is an integral part of our lifestyles. Energy is a way to reach an increasingly wide range of activities and services, but its flow is broadly invisible. Moreover, despite the risks of power shortages and increasing fossil fuel prices, energy is considered plentiful and cheap (or its costs are at least invisible). Despite sensitisation and energy efficiency efforts, effective new technologies and financial incentives, energy consumptions are still rising in France and the search for comfort and well-being still takes precedence over energy savings (Poquet, Dujin, 2008).

In this context, analysing practices and social representations concerning energy makes it possible to understand the social mechanisms participating to our “energivorous” lifestyles (Zelem, 2002), the social hurdles to shifts towards more moderate behaviour patterns, and potential ways to stimulate action.

The term "energy-related behaviour" actually covers a wide range of activities, each with its own constraints, social rela-
tions, strategic resources, social representations and social identities. What's more, the relationship to energy varies depending on socio-demographic variables: many researchers have shown the link between income and energy consumption (as well as, via the education level variable, between income and environmental awareness) (Wallenborn, Dozzi, 2007). Likewise, intercultural anthropological analysis help to show a relationship between energy consumption and belonging to cultural communities or, in any case, local life spaces (Wilhite, 2008). However, researchers hardly mention another variable determining energy behaviour: age, which covers two concepts, social age and generations1. We decided to focus on that angle of analysis, which has turned out to be very relevant by highlighting different energy-related behaviours and their evolution during lifecycles, and potential new ways to stimulate action for public policies.

However, we shall not analyse the correlation between age and behaviour quantitatively, but shall instead explore the qualitative links between social ages and energy practices/representations, because we are trying to understand the intra-familial and intergenerational dynamics (whereas the “age” variable in quantitative surveys refers to the age of the “head of the household” and not to that of each household member).

The issue

People’s relationships to energy, energy service demands and energy consumption are not static but vary throughout life. We therefore hypothesise that some times in life are more conducive than others to put across energy conservation messages. Or, at least, messages could be more or less likely to take root in the everyday lives of families, and which kinds of justification bear fruit in terms of changing behaviour. It also leads to a better targeting of the individuals, depending on their age and position in the life cycle, in order to analyse the specific brakes and levers to action (constraints, resources, message appropriation, the institutional agents’ legitimacy, acceptable or unacceptable messages, etc.). Many public policies are now based on a single tool and reach out to a single “citizen”. The social age approach could help to segment people’s profiles and to gear the tools to age groups. We will discuss below these analyses’ implications in terms of public policies.

Methodology

The analyses presented in this paper are based on a body of several studies and the findings are “exploratory” because additional research is necessary to totally back up, validate and weigh the results.

The approach is qualitative (interviews and observations in the people’s dwelling) and comprehensive. In other words, the goal is to deeply understand practices, opinions and social representations in relation to energy.

Several studies have been carried out2 in French middle class populations of different ages3:

- Children at elementary school4 (6-10 years old) and their families
- Adolescent high-school students (13-21 years old)5
- Young adults living on their own for the first time (in other words, who have just left their parents’ home)

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1. Social science research on the relationship to energy also largely overlooks the idea of gender.
2. These researches were carried out at EDF R&D and are transversally analysed here (Moussaoui, Vaubourg, 2005, Moussaoui et al., 2007, Moussaoui, Filliastre, 2008, Filliastre, 2008, Senzo, 2008).
3. We decided to focus on a type of social category: the French urban (big or medium-sized cities) middle-class. It allows us to compare the age differences inside this group.
4. In France, children go to school in several stages: nursery school (3 years between the ages of 3 and 5, non-compulsory), elementary school (5 years, between the ages of 6 and 10 approximately), junior high school (4 years, between 11 and 14 approximately) and high school (3 years, between 15 and 17-18 approximately). These different structures correspond to “passages” in terms of self-sufficiency and relations with others, which strongly shape the children’s identity dynamics. Some children repeat the school year, which accounts for age differences within the same school level.
5. We chose two separate ages of childhood to analyse those differences more easily. In France, children aged 10-14 are in junior high school and lie somewhere between childhood and adolescence, “adolescence” as F. de Singly (2006) names it.
Home-owning families with children (whom we call “active adults”) 
Retirees (55-65 and 70-75 years old).

Energy histories: the relationship to energy depending on historical periods
A first way to tackle the issue of the relationship to energy is to analyse historic events told by the people we met in connection with their past or present relationship to energy. Relationship to energy is historically dated and depends, for example, on the appropriation and incorporation of historic events and on the media messages connected to them. That approach partly enables us to understand how the relationship to energy is constructed over time and which kinds of arguments prevail in the discourses.

Two social representations have coexisted since at least the early 20th century but wax or wane in importance depending on the period:
• Energy consumption as synonymous with comfort, progress, upward mobility, social and financial ease;
• Energy care and conservation as an “ethic” of consumption (out of necessity or as a lifestyle choice, with a wide range of associated values, such as frugality, environmental protection, anti-waste or the critique of over-consumption).

The studies brought us into contact with people of various ages who have lived through events that have influenced their energy-related behaviour. Several argumentative logics about energy appear in connection with historic events that affect the individuals differently. The message absorbed in childhood remains deep-seated; the others are added to it when they corroborate what was learned then. In every generation there is a binary consumption/moderation relationship to energy; in other words the management of a double bind: the search for material comfort (linked to energy consumption) and the desire to pay attention to energy (to be moderate). This binary relationship takes different forms depending on the period.

To sum up, several trends in the logics of action and argumentation concerning energy have emerged:
• A logic of anti-waste among the oldest people passed down from one generation to the next, which is still a benchmark, even for today’s children:

The oldest event mentioned is “the war” (the Second World War) and the restrictions during and afterwards. The oldest people interviewed, who were children at this time, have vivid memories of the period:
“I belong to the war generation. I saw my parents with nothing to eat. My father went out during air raids to plant potatoes to feed his children. I don’t waste or throw away anything. That’s the upbringing I had. In 1945, I was 11, you’re aware of what’s happening at that age. I remember the tickets, the ration cards, the lines out in front of the shops. So I don’t waste anything” (male, 75).

The active adults we met had parents who went through hardship during the war and its aftermath. In the 1950s consumption, including energy use, was limited due to difficult access to energy sources (especially coal) as well as budget, economic and family restrictions.

Those restrictions, which these two generations experienced in childhood, shaped consumer habitus (Bourdieu, 1984) closely related to the idea of “anti-waste”.
• A logic of rise in material comfort, which is seldom questioned and has increased since the war (during the Long

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6. The interviews were translated by the author of this paper.
Indeed, the situation changed after the war, in particular in the 1960s, a carefree period when people stopped paying attention to energy: "There wasn't any energy problem in the early 1970s. We put petrol in the tank just to get the gift at the filling station. It was completely different" (male, 64). The social representation of plenty, abundance, predominated.

Another moment when this logic has exponentially developed is the 1990s (and the 2000s) with the consumer society logic (comfort, progress and modernity through high levels of energy consumption). For example, the oldest people say "[Energy consumption] has changed in that now we're tempted by electronic devices all over the place. For example, I've got an oven, a microwave, an espresso coffee-maker but also a regular coffee-maker, because I don't make espresso to dip my bread and butter into in the morning. Before, we didn't have a telly. Now I have one there [in the living room], one next door [in the kitchen] and one upstairs; I already have three tellies. We have more possibilities being offered us; it's true that we're in a consumer society... so we have more stuff than before" (male, 62).

Retirees and Baby-Boomers have experienced a rise in material comfort over their lifetime as a "social mobility" (improvement in the lifestyles during their life). But all the youngest generations live “inside” this “consumer society” and think it as the normal way of life. For the people interviewed, there are almost never any doubts about accumulating energy-consuming electronic devices and appliances, in particular, no matter how much attention they pay to energy. There is a "material culture" of energy and appliances, but some people begin to criticize the over-consumption (see below).

- **A financial logic**, which is very strong in every generation because that is the simplest way to translate energy conservation efforts (lower bills are a visible sign of a decreasing consumption):

An event that left a mark on several generations ended that trend: the oil crisis in the 1970s. Older people experienced it as a return to the restrictions of their childhood. Active adults, who were children or teenagers in this period, experienced it as the usual way of life. The sensitisation campaign ("la chasse au gaspi", that we can translate in "the hunt against waste") drives left a strong impression on the people interviewed and led them to adopt many energy-conservation habits, such as switching off lights and lowering the heat.

In the 1980s two contradictory trends arose among the people interviewed: the backlash to the oil crisis, leading them to ease up on energy conservation, and unemployment "crisis", leading to the opposite effect. The context of the 1980s-90s accounts for why households, fearing the effects of the economic downturn on their families, paid attention to their budgets.

- **A rising environmental logic**, which is hard to accept if it clashes with financial logic (e.g. with the difficulty of paying for energy-efficiency services, for energy management/conservation advice or for organic products):

Since the late 1990s (and especially since 2000), awareness of global warming and of the price of fossil fuels and their impending shortage has greatly increased. All the generations, excluded the oldest, say that they are sensitive to and preoccupied by the environment. But environmental-friendly practices are developed only when they are not paying or not expensive.

We can mention that media messages during the oil crisis also stressed environmental awareness, but over time the households we met interpreted it as a financial issue.

- **A logic of critique of over-consumption**, which is re-emerging today (it first appeared in the 1970s), even among people who are not politically active:

More recently, and in a minor key (not very widespread and not very strongly asserted), at least for now, today's young and active adults have embraced a logic of critique of over-consumption, disputing in particular the need of consumption (clothes, cellular phones, appliances, brands, including the energy needed, etc.) to forge a social identity.

- **A new “legalistic” logic**, among the oldest and the youngest people, who want to respect the law or the implementation of a public policy:

This logic of action and argumentation is linked to the fact that energy policies are nowadays materialised by more and more laws, technical regulations and stronger social norms. For example, the oldest people interviewed say they do certain things "because we have to" and the youngest (children) "because [their] parents tell [them]: 'do this, don't do that'". What is important in the action is to respect the enacted rule (by parents or by the society).

Analysis by “life histories” shows that the different generations' energy "habitus" (Bourdieu, 1984) depend on when they grew up and how that period's public policies or social representations managed energy. Generations pass down patterns of action from one to the next (parents and grandparents). As people age, patterns of action and argumentation accumulate more than follow one another depending on new events. Consequently there is arbitration and hierarchical ranking between several patterns of action when they contradict each other. The relationship to energy therefore grows more complex. Today the focus is shifting from an either/or argumentation (either conservation or comfort) to a double, contradictory argumentation (comfort and financial savings). And for children, the focus is shifting to a host of overlapping logics of action. Sometimes these logics contradict each other (comfort vs. critique of over-consumption, financial savings vs. the environment when that involves investing or buying appliances, etc.), but they can also round out and back up each other.

For example, the logic of saving money involves not only budget management problems, but also the fact that the economic “translation” of the energy-saving actions households took is still the most visible and appropriate dimension. However, that does not mean households are “rational agents” in the microeconomic sense, but looking for ways to “materialise” their energy conservation practices.

Energy policies and social representations have changed very much since the Second World War. In terms of resources, society has gone from scarcity to abundance, and then from abundance to a new fear of scarcity. In terms of environmental impact, political and social messages have also changed very much and have not been steadily consistent. They have been ei-
ther strong or weak depending on circumstances, the economic context and advances in the environmental sciences. In terms of social representations, people tend to accumulate the various messages rather than move from one to another. Today the situation is complex: messages have fluctuated and people tend to accumulate them rather than choose one or another. There are many contradictions. However, each generation has one “dominant” and one or more secondary argumentations and repertoires of action. Public policies can target different generations’ individuals in relation to those references. For example, the anti-waste logic and the legalistic logic work for the oldest people, which might help solve the problem of that generation’s lack of environmental concern.

Beyond these generational specificities, public energy policies must overcome a challenge: creating consistency in the crowded field of messages by finding ways to connect what seems contradictory. That has already been tried with financial argumentation, which helps to make energy-saving efforts visible and, therefore, to strike a chord with citizen-consumers on environmental issues. It could be tried for the comfort-environment dichotomy: some people mention how good they feel when everyday practices and environmental values are in harmony with each other (for example people who practice moderation and conserve energy or people living in “passive” houses). Other, more radical relationships are being developed (critique of overconsumption/environment) in local groups (Transition in UK, Degrowth movement in France, voluntary simplicity in Quebec).

What's more, childhood is a key time in building a relationship to the world and to energy, and there might be a temptation to focus on that period of life, but we shall see that this is risky in terms of family relationships and over-awareness.

How do people grow up with energy? The stages of life and the social ages of energy

We have seen that generations live through historic events that shape their relationship to energy, but each generation moves from one stage of life to the next and develops different relationships to energy between childhood and old age. We shall try to show how energy is involved in changes during the course of a lifetime and the ages of life to demonstrate that public policies still have a long way to go to personalise their messages.

In this part we shall describe the specificities of the stages of life, with passages, evolutions and breaks between one social age to the next. The idea of generation is found here again because we cannot remove the people interviewed from the historic context in which they live or have lived. But we are
Adding the idea of “passage” and “social age”, in other words the understanding of social mechanisms encouraging the building of an identity specific to certain times in the life cycle of individuals.

**Childhood: Becoming Autonomous Depends on Energy Consumption and Moderation**

Childhood is a critical time in building the relationship to energy and developing identity through it. It is a period when children are steeped in their families’ lifestyles and “cultures” (membership of a family, regional, national and ethnic culture). It is the time of “primary socialisation” and “diffuse” learning of behaviour patterns, social norms, rules of living together, what is allowed and what is not.

The construction of childhood identity is still largely based on energy consumption, although the environment is becoming increasingly important with the new generation.

Children learn the importance or non-importance of energy in their family (the importance of consumption in terms of demonstrating identity and social ease or the importance of moderation in order to cut costs or help the environment, for example). Is energy a family issue or not? Children feel and experience it on a daily basis. Even if energy consumption tends to rise when children are born. Energy awareness and paying attention to water are some of the educational tenets that the parents interviewed have developed when children arrive in the household.

Three stages in the transmission of home and energy practices can be identified in childhood. Parents remain highly present in the rules they teach their children and the practices they allow them to have, gradually teaching their offspring how to be autonomous when it comes to energy:

- In early childhood, children are very dependent on their parents for everything involving energy practices. Their parents cook for them, drive them to school, choose their TV programmes and times and plug in the electronic devices they use;
- Later, parents teach their children, showing them how to use a microwave oven and electrical appliances, how to get to school while driving them there and let them choose the TV shows they watch while still controlling the content and length of viewing time;
- Then, children no longer need to be taught and become more autonomous: they make their own breakfast, walk or bike to school without their parents, manage their own TV viewing and plug in and unplug electrical appliances.

The three stages correspond to different ages depending on the families and the activities mentioned. For example, children are often able to turn on the television earlier than they can go to school on their own. In some families, plugging in appliances is considered dangerous and delayed, whereas in others children manage their video game batteries very early on. In any case, the three stages occur when children are between three and 10 years old.

The relationship between energy and environment is another part of education. Today children receive environmental awareness at school and from the media (Garabuau-Moussaoui, Bar-tiaux, Filliastre, 2008), leading to the question: are they more “reasonable” than their parents?

Parents interviewed with children under 10 said they are “really disciplined” (woman, 36, children, 8 and 10), although sometimes “they forget” to do the right thing and must be “re-minded about running the shower too long, things like that. But we know that’s a bit normal for children. They can’t be careful all the time. We expect little mistakes” (male, 43, children, 9 and 12). Parents are both understanding and admiring: “they’re little but I think they do a good job. Sometimes they forget to light off the stairs when they come down, that’s all; the light seldom stays on in their room” (woman, 36, children, 8 and 10).

Children also perceive the “power” of energy conservation. Paying attention to energy at home (in particular, taking off lights, which is a very accessible gesture for children) is considered as a “good” thing and becomes a source of power struggle and family conflict. In energy management rules, children find ways to win a certain amount of power over their parents or siblings. Some even point out their parents’ contradictions to them (they make rules but do not always follow them): “[mother] Sometimes it’s on [spotlight] in the kitchen during the day, sometimes at night, but usually we switch it off. [Damien] Often when we’re having breakfast in the morning it’s bright enough to see but you still switch on the kitchen light!” (boy, 11, sixth grade, and his mother).

Parents may appreciate those kinds of comments in very different ways. Some refuse to let their children take on the role of the family’s rule enforcer: “When I told my dad that [leaving the living room light on] was using up lots of electricity, he told me: ‘you’re not the one who pays’” (girl, 10, fifth grade). Others listen to their children’s remarks about energy and water and change their behaviour: “Our father used to leave the water on, we’d tell him to shut it off” (girl, 9, fourth grade).

Role reversals help to increase children’s power but do not always create conditions conducive to increasing the “agency” (Giddens, 1984) at the family level because relations can then be more conflictual and some parents put the children in their place” (Moussaoui, 2008).

Children’s actions are limited. At first, they manage their gestures of switching off their appliances (radios, bedroom lights, etc.). Then they gradually can and must participate in managing the family’s common spaces (living room, kitchen, etc.). But they have little contact with energy-efficient appliances, except low-consumption light bulbs, which parents like for two reasons: they do not get hot, so there is less of a chance children will burn themselves, and they are economical when on for a long time, so they can be used as nightlights in bedrooms, hallways or rooms next to the children’s room.

Children are very aware of energy and environmental issues through school and their parents, but their relationship to energy is also based on a world of consumption, in particular their games and activities, which consume increasing amounts of energy (more and more games and toys using electricity; extra-curricular activities, which are sharply rising, require the use of a car; etc.).

Parents and children alike are caught in a contradictory process: how to maintain a childhood world, foster children’s sociability or even keep them at home to minimise risks (Pasquier, 2005) while resisting social pressure that consists of developing
that sociability around electronic devices (game consoles, mobile phones, computer and digital equipment, etc.)?

**ADOLESCENCE: CONFLICT MANAGEMENT THROUGH “LETTING THE FLOW RUN”**

Parents raise their children’s awareness and pass their values on to them early on in the families interviewed but run into a major stumbling block during adolescence. Parents of young children say their offspring are responsible and heed their requests to save energy, but parents of teenagers (over 12 or so) have a different experience. They say their children do not listen to them, or at least fail to carry out their requests. It is hard here to know whether that is due to a generational break with environmental awareness or a break in terms of the period of life. It is probably both.

Parents change their vocabulary to describe their relationships with their teenage children: “It’s tough”, “it’s hard because they have trouble understanding” (male, 41, children 14, 17 and 19). Parents say they “grouse” and “fight” but when asked what the result is, they answer “not much”. They feel like they are always repeating the same rules, but that their children do not learn them. A sense of powerlessness may ensue: “They do it for a little while and then stop again. As long as they’re not the ones paying, they have no idea [laughter]” (woman, 48, children, 15, 19 and 20). Parents decide to “let the water run” (in the literal and figurative sense) in order to avoid conflicts.

The teenagers interviewed seem to have forgotten everything they learned because they are seeking to escape from everyday life. They want to steer clear of conflicts with their parents, avoid routines, be outside the world, get away and dream. They are seeking to escape more than to transgress.

Energy savings are limited because teens say they “forget”, “can’t be bothered” or “don’t have the time”. However, adolescents can arbitrate by helping to save energy in the household in return for access to consumption. Some know that they must save on certain expense items for their parents to agree to pay for a new version of their devices (MP3, game consoles, etc.).

Adolescence is also a time when knowledge about energy issues still lacks a firm foundation, which can lead to mistrust or lack of interest in media and political messages. They doubt the legitimacy of institutions. What’s more, teens seem receptive to controversies. For example, they know about renewable energy sources but quickly mention aesthetic issues, breakdowns, prices, etc. In addition, they feel that messages on the environment are aggressive and incessant: “we’re fed up!” They consider them a passing fad: “There’s also prevention for children with cartoons; before it was racism and now it’s the environment” (boy, 16).

Adolescence is an in-between period in terms of the relationship to energy, a pivotal time when teens forget or challenge what they have learned and try to escape from moralising messages.

**YOUNG ADULTHOOD: MANAGING NEW CONSTRAINTS BY INTEGRATING AND CALLING UP WHAT THEY HAVE LEARNED**

Adolescence is a time marked by distance from energy care, but when children leave the nest they suddenly realise that they must pay attention to spending, leading them to be more responsible about energy and imposing material constraints.

Moving into a new home helps to shape a new social identity and a new relationship to energy: “I’ve paid attention [to energy] since I’ve had an apartment” (male, 22). Parents say the same about their children’s behaviour: “It was a bit hard with the girls because I had to make them understand that the light has to be turned off when leaving a room and they thought that was completely idiotic. They’re more willing to do it now that they’re on their own [laughter]” (woman, 57, children, 27 and 29).

An indicator of the transition from adolescence to young adulthood is the shift in the perception of energy-saving behaviour. Young adults go from a very negative judgement (“idiotic”) to summoning up certain rules or lessons they learned from their parents in childhood and adolescence: “I’m beginning to understand what our mother explained to us better” (male, 26). Young adulthood is a time when upbringing matters, but in a personal way. For example, today’s young adults tend to think their parents acted the way they did to save money, whereas they say they care about the environment. They perform traditional gestures that their parents taught them but with a new, ecological argument.

Young adulthood is also a time of social transgression that is “conscious” because social norms are known and understood but overstepped. Young adults want to create a temporary space-time of freedom, outside the rules they had to obey when they were children and those they will have to follow later on in life: “When I left home I told myself ‘wow’, this is great. I’m free, I want to live… and in fact I found myself saddled with all the hassles of a responsible adult and that brought me back down to earth; I had to pay my bills, etc.” (woman, 23).

Young adults think their future practices will be much the same as that of their parents. This is true of cooking (Garabau Moussaoui, 2002) as well as energy conservation: “For now I don’t take them into account [energy-saving practices he experienced when living with his parents] but later I’m going to use the same light bulbs [low consumption] my parents do” (male, 22). The ideas of doing the “right” and “wrong” thing are reversed but experienced as temporary: “[the interviewee says she leaves the television on when she is not watching it] I know it’s not right and I wouldn’t let my children do the same thing” (woman, 20).

Young adulthood is a time of managing financial constraints. Young adults therefore purchase few energy-efficient appliances but they do perform daily gestures (switching off the lights, managing the heat when they can, etc.).

Young adulthood is also a period of social inversion, which plays on the duality autonomy/dependence in relation to parents and on the constraints/freedom duality in relation to lifestyles and the peer group. They can seek energy conservation to achieve some of those goals (budgetary constraints, environmental values) but other contradictory aims are just as important (personal comfort connected to heat and to the impression of security when living alone; irregular pace of life, etc.).

Young adults are more aware of environmental policies than the children and teenagers (even of the policies of countries other than France, with the United States being the model to reject and Germany the one to emulate). But young adulthood is also a time when people develop mistrust of institutional actors, and “politicians” in particular. Collective commitment is exceptional. Young people opt more for individual solutions, closer to their constraints and personal margins of manoeuvre.
They are therefore receptive to the idea of "sustainable consumption". However, some criticise "business" for "co-opting" the notion: "I find there's a big commercial ulterior motive [behind messages on the environment]. And there aren't necessarily any rules..." (woman, 22). They sometimes perceive sensitisation campaigns as "ads". Confusion and mistrust of institutional sources of energy-saving messages are therefore big stumbling blocks during this period.

ADULTHOOD: RECONCILING MODERATION AND COMFORT
The idea of responsibility that young people reject becomes more concrete in the adult stage of life, especially when the households we met have their own children.

The home-owning middle-class adults with children we met have based their life project on the idea of moderation, which is characterised by a quest for balance between a control/management logic and a comfort/well-being logic. They have developed a certain number of "energy management" gestures learned in childhood and new practices gleaned from the media or "made up" on their own. Energy conservation exists when it is compatible with adults' goals and life projects. In particular, the group met invests housing and children with especially their energy consumption. They try to manage their financial resources without depriving themselves too much. They are not excessive, which would summon up very negative images of "stinginess". Energy-saving practices are more regular and less chaotic than during young adulthood. These adults say they "[pay] attention as far as possible" (couple, 48-49), showing that they do what they can without foregoing their life projects. Saving energy must not be an "obsession", "fixation" or "dictatorship" but it must be real in order to avoid "waste".

Adulthood, then, coincides with increasingly responsible, stable behaviour, as long as it does not overstep the limits of a social identity based on comfort, and with the development of routines, habits, which is at the same time a driving force behind attentive practices but also a brake on them (shifts towards more attention are an additional mental burden).

Adults buy energy-efficient appliances and make big investments (renovating, insulating and changing heating systems) but that has more to do with increasing comfort, cutting energy bills and boosting property value than with environmental issues.

Adulthood is based on a search for balance but, far from being static, that equilibrium is achieved through continuously adjusting constraints and opportunities. Behaviours are not at all immutable but change depending on new living conditions. There are possibilities of offering personalised advice that goes beyond basic energy management tips. But that requires looking for narrower profiles: age is not enough (income and values are very important criteria to take into account).

RETIREMENT: BETWEEN SELF-FULFILMENT AND MANAGEMENT OF "LOSSES"
The older adults we met have deeply entrenched home routines and their identities are no longer changing. They have acquired stability in their lifestyles. However, that stability, be it financial or otherwise, can be upset by losing a job, retiring, losing a spouse, etc.

The retirees we met seem much less receptive to the ambient environmental messages than people in the other age groups. Concern about waste and the need to save money are the main two driving forces behind their energy conservation actions. Some have decided to pay less attention to their energy bills since retiring because they want to "enjoy themselves" and attain or preserve a level of comfort. Others, by choice, necessity or upbringing, pay close attention to their energy expenses and consumption.

Their main concern is to maintain stability, which stems from a fear of moving backwards and of growing old. They try to keep up the image of the "active retiree" and avoid that of the "old person" as long as possible (Caradec, 2001).

Energy represents comfort and using it is therefore very important in their social identity. But retirees are also the group where energy-saving gestures and a veritable material culture of moderation are most deeply entrenched. However, that material culture has nothing to do with discourses or values. Senior citizens and their frugal behaviour are characterised by a not always conscious "ordinary resistance" (Dobré, 2002).

Senior citizens integrate energy efficiency as an indicator of social and technical progress but put technological breakthroughs leading to the accumulation of appliances and the consumption of electricity into perspective with stand-by modes: "Very few old appliances had stand-by modes. The new ones almost always have stand-by modes. The difference is that old appliances without stand-by modes use much more than new ones that do have them, but since there are more of them it's six of one, half a dozen of the other" (male, 63). The older people get, the less likely they are to make hefty renovation and insulation investments. Events can lead to work, in particular making changes to a home as people find it increasingly hard to move around (setting up a bedroom on the ground floor, etc.). Energy efficiency is not a priority but changes might be made to boost it for other reasons (building a veranda to enjoy the garden in spring and autumn will improve the front door's insulation for example).

The main curb on energy conservation is the search for comfort. Everybody sets his or her own comfort threshold below which he or she refuses to descend. What's more, the idea of social and material advancement is very important to senior citizens, who refuse to "go backwards". They feel like they have already done all they can.

Discussion/Conclusion
The stages in the life cycle, intergenerational relationships depending on age and the history that various generations have lived through must be taken into account when trying to muster support for changes in energy behaviour that will bring about a less "energivorous" society. It is possible and probably necessary to develop energy conservation messages and public policies specific to each period of life.
“STAGE BY STAGE” AND GENERATIONAL POLICIES AND TOOLS

Each period in life has its own behaviour-changing possibilities as well as obstacles to those changes. Energy-conservation policies can be based on all these stages of life and relationships between generations to implement more personalised, realistic advice taking contexts and lifestyles into account.

Childhood seems to be a time of life when energy socialisation is strong and concordant practices can be implemented. What’s more, children can have a “prescriptive” effect on those around them (parents, extended family, etc.). There might be a strong temptation to use them as spokespersons. Although children cannot hear everything and cannot become the only social agents in public energy policies, they tend to become key social agents in energy conservation advertisements, which poses the question of releasing adults from their responsibility.

In childhood, educational information and “constraints” (rules) are the two tools that seem most appropriate.

Public policies can therefore reach out to children while taking care to address the grown-ups around them as well (parents, teachers, etc.). The message will only hit home if there is consistency between it and the various social agents’ involvement. The idea of making children autonomous is important. Public policy tools must participate in that process without trying to make the child immediately independent. It is therefore a good idea to deliver messages and advice gradually so that children can implement them in the areas where they have the “agency” to act: first, their bedroom and activities, then, little by little, the family spaces, everybody’s activities, etc. Adults must be present during all those periods, first to accompany children in the implementation of their growing energy awareness, to explain how and why they can act; then, because children will be increasingly active in the shared, and therefore negotiated, spaces. The other family members must be able to act accordingly. The idea of progression is important: children must feel that their energy conservation gestures make them grow up. A veritable environmental- and energy-awareness message still needs to be constructed (what energy sources are used at home, what is their environmental impact, what impact does an energy conservation gesture have, etc.) and must also be done in stages. One does not speak the same way about the same topic to a child of six, 10 or 18. There is still a need for research to more deeply explore what children understand about energy and environmental issues at each age, and what lacks them.

Adolescence seems like a stage of opposition to or distance from energy care. Can an energy-conservation message be emitted towards this age group without setting off a family conflict? Or should their opposition and distance be harnessed in order to bring about behavioural changes? Documented information from a trusted source, unlimited access to information resources at any time, and tools that can help make visible the energy consumption that is hidden in their use of new technologies seem most appropriate at this stage of life.

Adolescence is a time when the legitimacy of the message’s source is very important. In addition to opinion leaders, a source, which should be independent from companies and government, would be welcome to transmit information and advice to teens. The messages addressing them must not gloss over possible complexity and contradictions. Controversies and scientific advances can be understood and even empha-
ask them to do more. However, senior citizens seem receptive to regulations and therefore participate in “mandatory” actions in a “legalistic” framework. Older adults might be “mute” social agents in the dissemination of regulations if they view them as a matter of obeying the law and not of individual responsibility. This means that infrastructure represents a constraint for these elderly persons (as is the case of the development of trash sorting through a transport network and adequate facilities).

WILL OUR CHILDREN SAVE THE WORLD?
In addition to the stage of life, the historical context in which individuals grow up and live must be taken into consideration. For example, the question might be asked how today’s children will develop. Will they end up feeling guilty or over-sensitized? Will they keep a material culture of energy moderation? Will they manage to resolve the consumption vs. moderation paradox in the construction of their identities? Or will they follow the stages of life such as they are revealed today? As teenagers, will they live apart from the world, the way today’s adolescents do, even though as children they think their actions can help to save the planet? In young adulthood, will they manage to strike a balance between environmental issues and their aspirations? As adults, will material comfort still matter as much in their social identity?

There is no predicting how today’s children will behave between the newness of their primary socialisation, steeped in certain environmental problems, and the continuity of the transition from one stage of life to the next, with its timeless social mechanisms. But today’s adults tend to immediately look to the “future generation” while forgetting that its autonomy—and therefore its ability to mobilise its environmental awareness in ways that can make a difference—will develop only after a process of familial and societal support.

It may seem easy to advocate a shift in children’s “material culture” to a less material culture or in any case one that consumes less energy. However, that recommendation forgets that children live in a society built before and around them and that they are therefore in no position to act to change the dominant material culture. That is when public policies play a part by acting on different places in the consumption “system” with various tools (regulation, the market, advice/awareness-raising, techniques) that address every generation but are personalised for each. That “tool mix” and “generation mix” will develop. Will they end up feeling guilty or over-sensitized?

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