

Creating pleasance: New needs for the smart home

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Automating the smart home

- 3 year project funded by the Australian Research Council
- With Larissa Nicholls
- Currently in 2nd year
- Analysing international smart home visions and how smart automated technologies are being incorporated into Australian household practices
- 3 phases
 - Content analysis of international magazine/ online articles
 - Industry interviews (Australian)
 - Household tours, photography and interviews with Australians who live in smart homes (broadly defined!)
- <https://automatedsmarthome.wordpress.com/>

Content analysis of the 21st Century smart home

- 220+ magazine, newspaper and web articles published 2000-2015
- Searched for 'smart home', 'home automation' and derivatives/ related terms
- Qualitative inductive coding of article text (Schreier 2012)
- Frequency coding for 166 primary images using pre-defined parameters drawn from content (Schreier 2012)



Key questions

- **What is pleasance?**
- **Where has pleasance come from?**
- **How might/ is pleasance changing everyday life?**
- **What does this mean for energy demand?**



From leisure to pleasance

From labour to leisure: 20th Century smart home



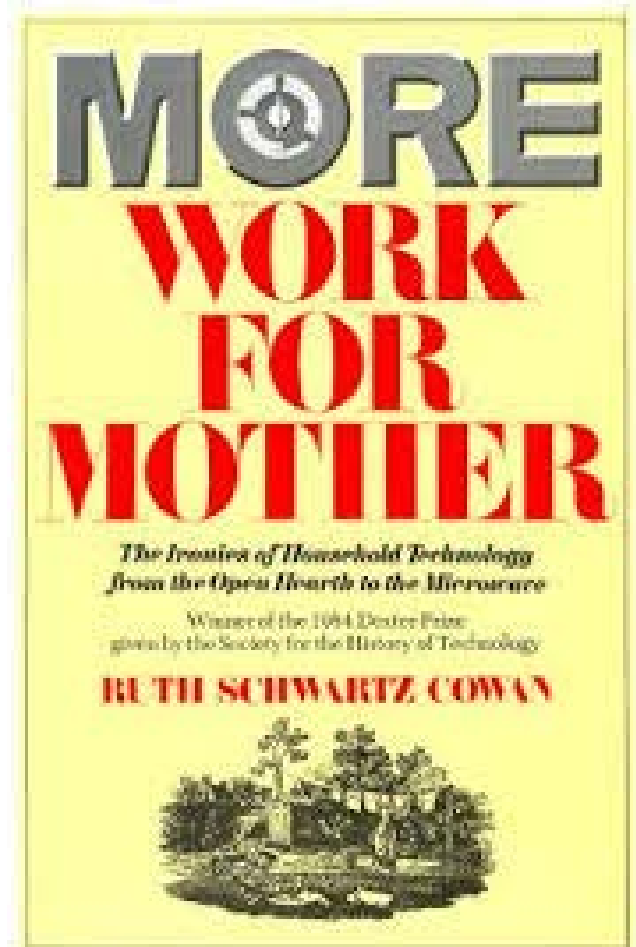
Westinghouse's 'Total Electric Home'

*"Imagine this: Total Electric Living... where **electricity does absolutely everything**: heats, air conditions, cooks, preserves food, lights, entertains, encourages hobbies, **makes it the easiest way ever** for you and your family to be happier, healthier, to live fuller lives"*

Source: <http://thriftshopromantic.blogspot.com.au/2008/06/futures-so-bright-inside-1950s-total.html>

From labour to leisure: 20th Century industrial home

- Outsourcing domestic labour to appliances and electricity
- Intended to free up women's time
- Raised cleanliness (and other) expectations



Energy-intensive leisure: 20th Century smart home

- Westinghouse's 1930s 'Home of Tomorrow' provided '**a connected electric load equal to that of 30 average homes**, "ready to do the work of 864 servants with the flip of a switch."
- Some of the features of the house were air conditioning, an electric garage-door opener, automatic sliding doors, an electric laundry, 21 separate kitchen appliances, burglar alarms, 140 electric outlets, and 320 lights (Horrigan 1986: 154).



From labour to leisure: 21st Century smart home

Robotic maid service providers

*'If your house is able to think and feel, what can it do for you? Well, it could **be an affordable or even a free housekeeper** that can automatically take care of your family and property to make your life easy, comfort, organized and secure'*

(<http://www.asmag.com/showpost/17834.aspx>)

- Lili, Alexa, Siri, and Google Assistant



From labour to leisure: 21st Century smart home

Wife-like replacements responding to the contemporary 'wife drought' (Crabb 2014)

*You like to talk; **you want a home that will listen to - and obey - you.** Ever wish you could stumble through the front door after a long day and say, "Turn on the TV and start dinner!" **Unless you have a particularly servile spouse**, that tactic is unlikely to get you anything but silence - or nasty glares. The Home Automated Living HAL2000 speech-recognition system can bring you closer to that vision' (PC Computer 2000).*



See also: <https://theconversation.com/smart-homes-promise-to-end-the-wife-drought-but-where-do-women-fit-in-50976>

From labour to leisure: 21st Century smart home

Less work for father?

*'So when dad arrives home, smart-home technology will turn on his favourite music play list, boil the kettle, dim the lights to his preferred level, turn the television on and switch to the news. It will then interact and **ask dad what he wants next** - and hopefully even turn down the children's music'*

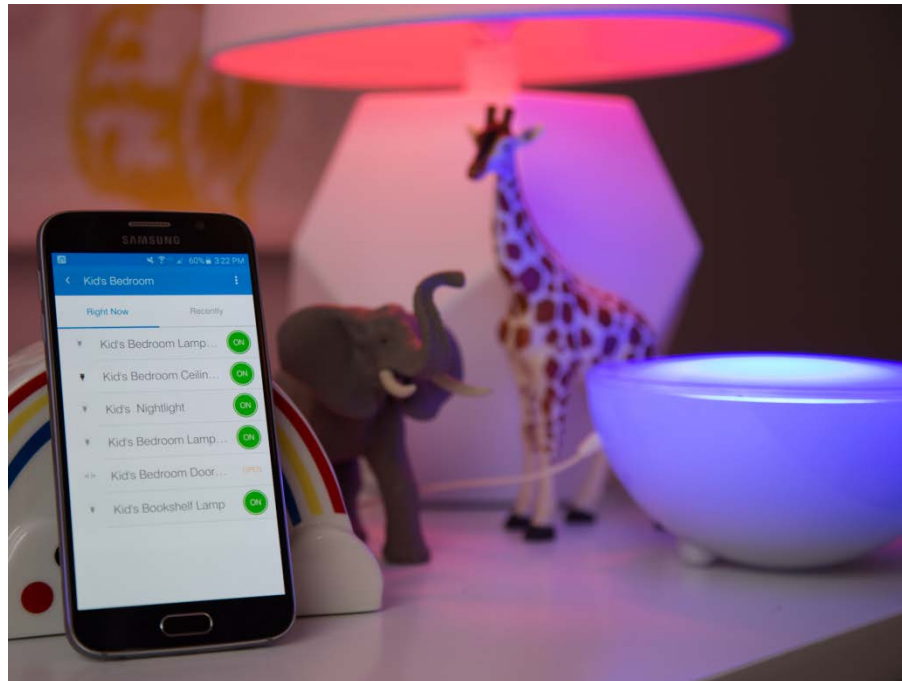
<http://www.theaustralian.com.au/life/smart-homes-are-simplicity-itself/story-e6frg9zo-1226755178531>



From labour to leisure: 21st Century smart home

Outsourcing parenting responsibilities and labour

*'Your Hue **can alert you and your children when it's time for bed**, time to leave for the school bus or when you need to grab the umbrella before walking outside.'*



From labour to leisure: 21st Century smart home

Reducing new technology labour

*‘Ceding mundane responsibilities to the automation system “freed up” the minds of participants so they could focus on issues that transcended daily life. **Ironically, technology was used to free the residents from technology; more technology provided the illusion of less technology**’ (Woodruff et al. 2007: 531).*



From leisure to pleasance: 21st Century smart home

- **Lutron home automation**

- ‘Your home is a place where you experience **comfort, romance, and peace of mind**—a place where you experience pleasance.’

- ‘pleasance ... is **a fundamental feeling** that is hard to define but that people desire to experience’.

- http://www.lutron.com/TechnicalDocumentLibrary/3672324a_Pleasance-Lutron%20Product%20Bro%20FINAL_sg.pdf

- ‘The qualities of experience, the sensory, affective and satisfying dimensions of everyday life’ (Pink 2012: 119).

- A meaning or internal reward of practice (plus competences and materials) (Shove et al. 2012)



What does *pleasance* mean?

- **Lifestyle convenience**
- **Elegance**
- **Atmosphere**
- **Ambiance**
- **Vibe**
- **'Look and feel'**
- **Beauty**
- **Seamlessness**
- **Eye-pleasing**
- **Mood**
- **Relaxation**
- **Pleasure**
- **Luxury**
- **Lavish**
- **Fun**
- **Play**
- **Domestic bliss**
- **Efficiency**

(keywords from content analysis)

Early pleasance (1950s)



Westinghouse's 'Total Electric Home'

'First impression? Warm and friendly. When guests approach your Total Electric Home, a soft glow of Rayescent (TM) lamps along the entrance path guides them up to the entrance. Additional lights go on automatically as they come near. Bright, cheerful entrance lighting and dramatic interior illumination extend a gracious invitation to your Total Electric Home.'

Source: <http://thriftshopromantic.blogspot.com.au/2008/06/futures-so-bright-inside-1950s-total.html>

Early pleasance (1980s onwards)

Jewish religious practices

*'Technology was typically characterized as "enhancing" the Sabbath experience, adding to the **atmosphere** and the **ambiance** (e.g. **prettier lights, running water in a fountain, better food**, etc.). The Sabbath is a **sensory experience**, and the automation complements this'* (Woodruff et al. 2007: 532).



Early (and current) pleasance – home improvement

*‘**Bathe in luxury:** The bathroom is the new room for relaxation whether it's stone baths or walk in showers and wetrooms.. .. We don't design ordinary bathrooms we design, **peaceful, stunning and relaxing** bathing rooms’.*

<http://www.luxuryhomeimprovements.co.uk/index-1.html>



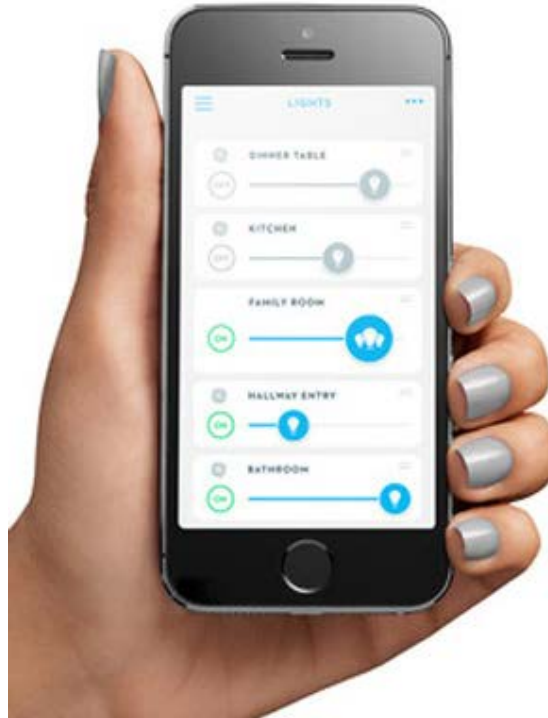
Pleasance in the 21st Century smart home

- “**One touch of a button** can create the **perfect ambiance** for a dinner party, a romantic evening at home, or a festive gathering of friends on the back *patio*.” <http://www.electronichouse.com/eh-magazine/smart-home-library/subsystems-make-sense-smart-home/>
- Pleasance enabled by electricity AND sensors, ICT, automation, connected devices etc.
- Smart home technologies make achieving pleasance *simple and easy*.
- Pleasance is *accessible*



Pleasance devices (smart materials)

- Lights
- Audio
- Home cinemas
- Screens
- Projectors
- Apps
- Smartphones and tablets
- Sensors
- Home networks
- Monitors
- Cameras
- ...



Energy efficient pleasance

- Rick presses a button on a control panel, and **the lights that the children left on downstairs are shut off, the alarm system is armed, and the heat is lowered**. The house even prepares for the morning. After Rick wakes up, he'll hear the soft strains of **Brazilian jazz** as he steps onto the **recently heated bathroom floor**. When he gets out of the shower, **his towel will be waiting on a warming rack** (Good Housekeeping 2000).
- 'Home automation can turn off lights or lower the thermostat automatically when you aren't using them and **easily lower your utility bills by 10% to 25%.**'

<http://compnetworking.about.com/od/homeautomationvalueproposition/a/top-reasons-to-automate-your-home.htm>



Resource Man?

- Imagined rational, functional, efficient and tech-savvy consumer/ smart tech user (from energy industry/ policy) (Strengers 2013)
- **Seeking pleasance**



Pleasance interventions in everyday life

1. Recrafting existing practices

Lighting

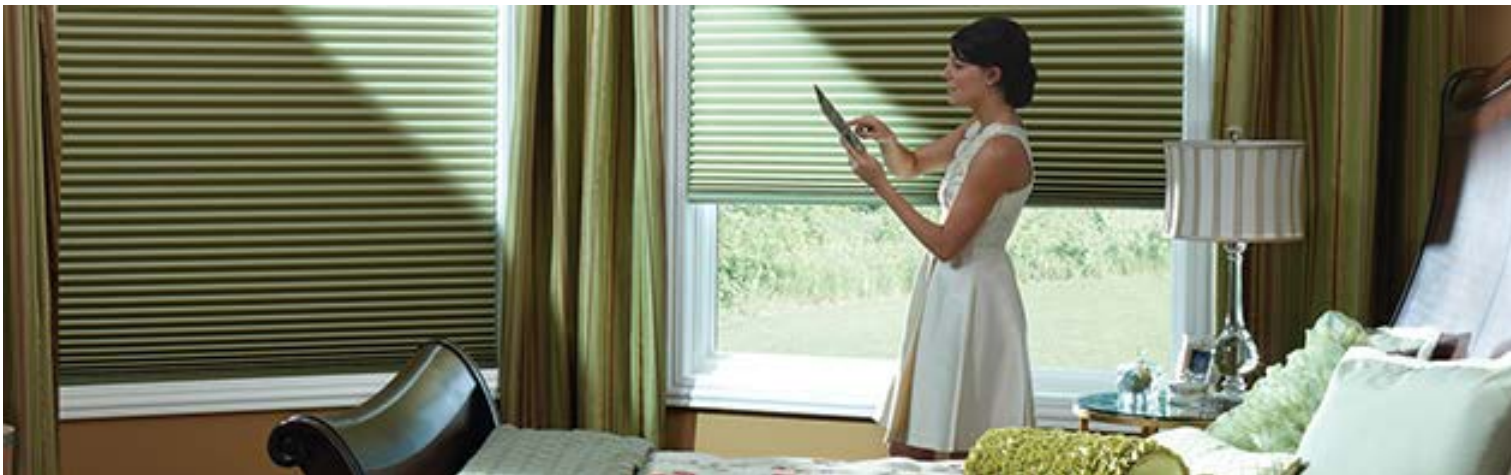
*'We wanted to take lighting beyond being just a light bulb. ... **Light can do wonderful things for your body**, so we looked to develop something that could help you **relax, concentrate or re-energise**.'* (Connected Home 2015).



Comfort

*‘In the foyer, a wall-mounted 9-inch touchpanel welcomes homeowners, giving them the technological ease of **touching one button to alter the environment of the space**: the thermostats adjust to the ideal comfort level, lighting activates to preset intensity levels, motorized window shades move to either shield the afternoon sun or reveal the amazing panoramic views of the city. **“It’s a joy and a pleasure to have one remote or one keypad to use to operate all the audio, temp controls, shades, and window treatments,”** says Drake, who has a similar system in his own home.’*

<http://www.electronichouse.com/eh-magazine/smart-home-library/automation-art-deco-collide-historic-walker-tower-nyc/>



2. Integrating pleasance devices into practices

Changing practice bundles

Playing

*‘The Hue light bulb from Philips is probably the **most fun home automation tool** currently on the market. Pick up a starter pack of three bulbs and one WiFi bridge device (\$200) and have **hours of fun playing with the lighting of your home**. Each bulb can deliver a full spectrum of color. Have a photo of your favorite beach at sunrise? Pull it up in the Hue App on your smartphone and recreate the exact lighting in your living room.’*

<http://realtytimes.com/consumeradvice/homeownersadvice1/item/28670-20140514-the-smart-home-starter-kit-6-essentials-of-home-automation>



Dancing

‘When Dance Party is cued, the Elan g! system pulls out all the stops. “It was custom-designed for my three little girls to dance to their favorite music as it plays through every speaker in the house,” Reddy says. “It’s a feature that really shows how much fun technology can be for the entire family, and we use it all the time.”’

<http://www.electronichouse.com/eh-magazine/smart-home-library/radical-restoration/>



Winding down/ sleeping

*'An hour before bedtime, program all the lights in your house to dim to 30%. Then have the lights in the room you'll probably be in (such as the living room) turn to the **pre-set Relax mode**. This will **help everyone start to wind down**. It's only once you've experienced the impact of lighting on your mood that you truly understand its benefits, but in our household **simply changing the color of the lights has had a dramatic impact on our children's behavior.**'*

<http://resources.uknowkids.com/blog/keep-your-family-on-schedule-with-smart-lighting>



Getting up

*'In the morning, a “**Wake-up scene**” prompts your bedroom drapes to open slowly to the daily sunrise, while the thermostat adjusts, and the morning news or music gets started.'*

<http://thenextweb.com/insider/2015/05/24/why-the-diy-smart-home-revolution-wont-work/>



Entertainment

*‘After the **movie**, walk back out into the rec room and turn right to find yourself in the **indoor spa with an in-floor hot tub**, made even more dazzling by the **custom dome projection system** that puts a synthetic starry sky above your head. The pros at Movietime installed a **laser projector in the floor** next to the hot tub and perfectly masked the light path so no light spills over: only the **dome is lit with a moving sky, clouds, and stars**. Now that you’re feeling refreshed, may we suggest a **wild dance party?**’*

<http://www.electronichouse.com/eh-magazine/smart-home-library/pool-house-party-zone/>



Watching TV in the pool

*'The Control4 automation system makes it simple for the family to enjoy their favorite music and TV programs throughout the premises, which houses 20 Sonance outdoor speakers and a 55-inch outdoor SunBrite TV, which Sunbelt chose in white to match the wall on which it's mounted. **Should the owners take a dip in the pool they can keep on watching by using the TV's articulating arm to swivel it toward the water.'***

<http://www.electronichouse.com/eh-magazine/smart-home-library/backyard-living-meets-indoor-comfort/>



'Pet pampering' and appreciation

*'Some Control4 customers will use the audio and lighting functionality of the system to create unique scenes that highlight the **beauty and visual impact** of the aquarium.'*

<https://www.control4.com/blog/2014/05/top-5-ways-to-pamper-your-pets-with-home-automation>



3. Pleasance practices?

Art appreciation

*'The focal point of the room, a **10-foot long panoramic photograph of the ocean** by landscape photographer Peter Lik, is accompanied by a special piece of audio curated by Reddy himself. **A tap of the Ocean button** on a sleek Vantage wall-mounted keypad (see sidebar) cues up an **audio track of the sound of crashing waves and signals the lights to accent the art and soften the room for a calm, peaceful environment.**'*

<http://www.electronichouse.com/eh-magazine/smart-home-library/radical-restoration/>



Implications of pleasance

Programming and performing pleasance

- New forms of household labour (and technological competence)
- More work for Father?



*‘Using your Apple Watch and the Elgato Avea app, you will be able to **select one a number of scenes** including Cherry Blossom, Cozy Flame and Fairy Woods. **You'll also be able to set your Avea bulbs** to wake you up, adjust their settings or turn them off all together. ... With the Philips Hue Apple Watch app, **you can select various predefined scenes**, such as Relax, Deep Sea, or Energise, as well as turn all or some of your lights off.’*

<http://www.pocket-lint.com/news/134116-got-a-smartwatch-here-is-how-to-control-your-smart-lighting-from-your-wrist>

Boundaries of practices shifting

- Pleasance devices intended to be integrated into expanded range of everyday practices:
 - E.g. lighting part of playing, sleeping, relaxing and entertaining
- New practice bundles forming?
 - E.g. sleeping & health monitoring; swimming & watching tv
- New pleasance practices?

*'If anything in some ways you find that ... **you may use more [energy]** because now you know when you wake up in the morning **you've got the house music system on playing your favourite radio station or your news which you wouldn't have done before**, it might have been the transistor radio whereas now the whole house is doing it.'* (Andre, industry interview)

Boundaries of home expanding

- Remote and 'always-on' access from anywhere in the world
- Pleasance extending outdoors to create 'whole-of-property' experiences (fountains, gardens, pools, outdoor kitchens and living rooms)



Protecting pleasure

- 'Away' and 'Vacation' Mode
- Security, surveillance and remote monitoring



The 'back-end'

- Temperature-sensitive control rooms (air-conditioning and 'always on' equipment)
- Software and hardware updates (embedded energy and data centres)
- Live media streaming, data collection and connectivity (data centres)



Future of pleasance (and smart homes) unknown



- Pleasance constitutes a form of intervention into everyday practices
- Unlikely to unfold 'as advertised'
- New pleasance (and energy) 'needs' emerging alongside energy-saving messages
 - Undermines energy-saving benefits of automation
 - Hides energy impacts of pleasance
- Emerging, fast-changing field
 - Can't keep track of new devices, but might be able to follow concepts, practices and services (and identify alternative interventions)

Thank you

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References

- Crabb, A 2014, *The wife drought: why women need wives and men need lives*, Random House.
- Horrigan, B 1986, 'The home of tomorrow, 1927-1945', in JJ Corn (ed.), *Imagining tomorrow: History, technology and the American future*, The MIT Press, Cambridge, Massachusetts, pp. 137-63.
- Pink, S 2012, *Situating Everyday Life*, SAGE, London.
- Schreier, M 2012, *Qualitative content analysis in practice*, SAGE Publications, London.
- Schwartz Cowan, R 1989, *More Work for Mother: the Ironies of Household Technology from the Open Hearth to the Microwave*, Free Association Books, London.
- Shove, E, Pantzar, M & Watson, M 2012, *The dynamics of social practice: everyday life and how it changes*, SAGE, London.
- Strengers, Y 2013, *Smart energy technologies in everyday life: Smart Utopia?*, Consumption and Public Life, Palgrave MacMillan, London.
- Woodruff, A, Augustin, S & Foucault, B 2007, 'Sabbath day home automation: "it's like mixing technology and religion"', paper presented to Proceedings of the SIGCHI conference on Human factors in computing systems, San Jose.

Security

- The outdoor space is also outfitted with 10 Wirepath and Speco surveillance cameras for added security and **peace of mind**, intercoms for immediate communication throughout the estate, and automated lighting. Since the owners are constantly on the move, the mobile accessibility through the Control4 app was a must-have, allowing them to check in on the property and control the electronics from anywhere in the world.
- <http://www.electronichouse.com/daily/smart-home/14-acre-estate-like-park-filled-home-automation-tech/>

Relaxation (bathing/ meditating)

- One of the more interesting features in this outdoor escape is the Laser Stars Hologram projector (only \$125 and available at Amazon) that shines onto the spa area's dome ceiling. Overhead, it projects images of slow-moving clouds and stars that twinkle.
- <http://resources.uknowkids.com/blog/keep-your-family-on-schedule-with-smart-lightin>
- Music and lighting combine to set the mood in a tranquil meditation room
- <http://www.electronichouse.com/eh-magazine/smart-home-library/radical-restoration/>

New forms of household labour

- Using Control4's Comfort User Interface, these presets can be designed around certain activities that take place in your home; for example, an "exercise" preset could instruct the thermostat to lower the temperature for a workout, while a "movie" preset adjusts the climate in the media room. All you do is tap the appropriate preset on a touch screen whenever you're ready. This way the climate in your house is comfortable at all times, no matter how your day unfolds, and you waste no energy heating areas that don't need it.

Where is pleasance?

- Everywhere
- Lighting
- Cooling/ Heating
- Cooking
- Entertaining
- When is pleasance a practice in it's own right? Atmosphere/ ambiance infusing all practices. A practice unto itself?
- A pursuit?

How to conceptualise pleasance

- An 'internal reward' of practice (Warde?)
- A teloaffective structure (Schatzki 2002; 80) – an orientation of practice 'allied with normativized emotions or even moods'
- A 'meaning' of practice (Shove et al. 2012) – including ideas and aspirations
- New materials and competences
- Changing existing practices and creating new practice bundles
- A practice in its own right?

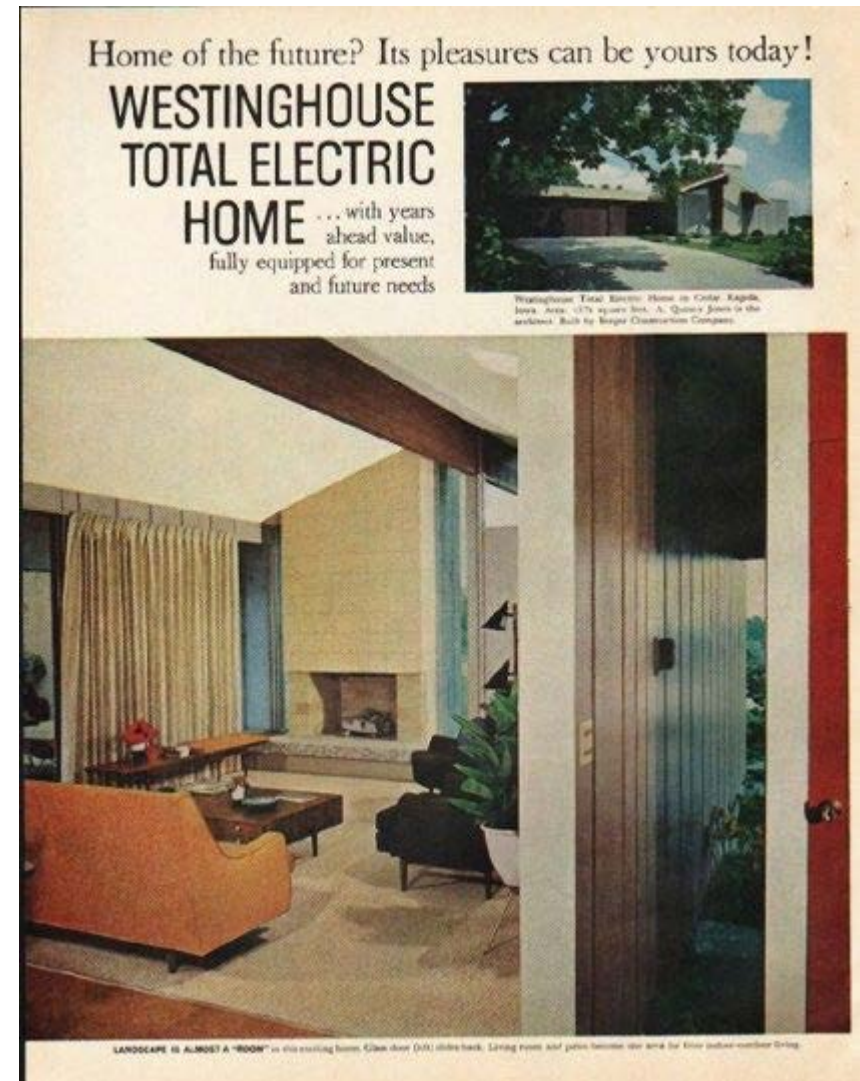
Aesthetical appreciation

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- <http://resources.uknowkids.com/blog/keep-your-family-on-schedule-with-smart-lightin>

From labour to leisure: 20th Century electric home

*'Of all the gifts that electricity brings, almost the greatest is the **relief from the burden of mechanical, monotonous, everlasting toil.** ... our homes will be transformed to operate smoothly with the aid of electricity, so that the labour involved in cleaning, in heating, in cooking and in washing and other domestic tasks will be **performed by an electrical deputy.** The energy thus released can be **devoted to the enjoyment of home life,** to education, to the cultivation of music and art and the other **beneficial recreations** for which a measure of freedom is essential.'*

A.G. Whyte, *The All-Electric Age*, London, 1922, p. 228 in Forty 1986, p. 190



From labour to leisure: transitioning to 21st Century smart home

- Disney's 1999 Smart House Movie
- PAT (Personalised Applied Technology) smart home system is surrogate wife and mother to single Dad Nick and his two children (<https://gigaom.com/2015/01/03/smart-house-predicted-the-smart-home-in-1999-so-where-is-it/>)
- https://youtu.be/4uSGOZ_VJc4



Home decoration

‘Whirlpool, for one, may soon offer magnetized “skins” that can be attached to the front of a washer and dryer. Available in a variety of designs and colors, it will offer consumers a way to instantly alter their style.

Considering the average lifespan of a washer and dryer is around 14 years, it’s an easy, affordable way spruce up your laundry room when you redecorate your house.’

<http://www.electronichouse.com/eh-magazine/smart-home-library/smart-appliances-ready-network-home-automation-systems/>



Pleasance makes saving energy easy and cool

*'Imagine the money you can save—by **touching one button** on a smartphone as you leave the house, you can have the lights switch off, the motorized shades close, and the thermostats set back. **Energy savings is finally in vogue and – dare we say – cool.**'*

<http://www.electronichouse.com/eh-magazine/home-energy-management-library/7-simple-gadgets-home-energy-management/>