

Foresight & innovation

New Materials and Means of Production

7.3.2019 | heidi.paavilainen@aalto.fi

Who?

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MA (textile design)
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MUO-E1026 Design Driven
Foresight, 10cr, P2



Today we'll talk about

- Innovation
- How novelties become innovations
- Ways of innovative design thinking



Innovation?

Activity Level Defined by Steps per Day

Innovation

There are several definitions.
This loose definition fits well with
design activities:

Innovation is an adoption of
something that **changes user
behaviour.**



Better or novelty

- Innovation can be “**Sustaining**”, an improvement of an existing product or service.
- Some innovations are “**Disruptive**”. New product changes market radically.

Look for writings by Clayton M. Christensen.



Scale

Behaviour of an individual.
Behaviour of a community.
Behaviour of the majority.



The Apple Empire

It's 2050. Some people are still remembering Apple. Those old-timers tell stories about how Apple was admired and copied and how it drove commerce and well-being. It was a time when life was digital.



Rapala Imperium

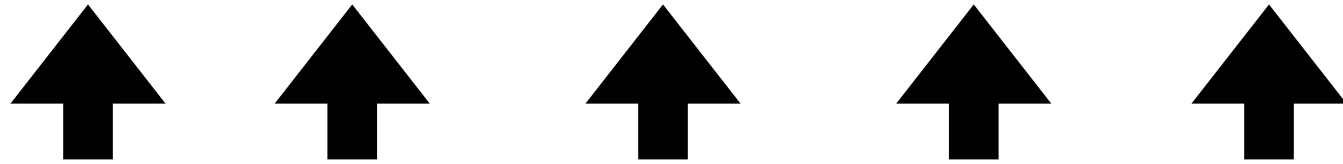
In 2050 life is different.
Rapala, a Finnish lure
company, is dominating
markets and mind sets like
Apple used to.

What would this mean?

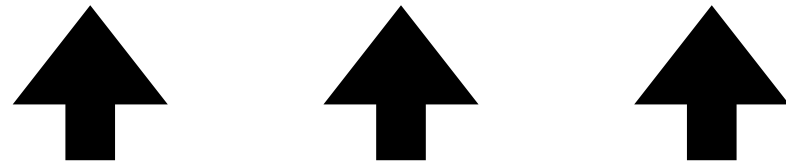


How novelties become innovations?

PRODUCTS & SERVICES
DESIGN TRENDS



LIFESTYLES



MEGA TRENDS



DESIGNERS VS TRENDS

- ▶ Designers typically aggressive or uncomfortable about trends (eg. Conran & Fraser, 2004, Designers on Design).
- ▶ In layman speech “following trends” means copying the latest fashions.
- ▶ Professional trend workers “follow trends” by observing and studying emerging trends sometimes several years before the trend peaks.



Mega trends

Mega trends are PESTÉ*-sized developments. Reports are used to build big pictures in f.ex. organisational strategic decision making.

*Political, Economic, Societal, Technology, Ecology/Ethical

Figure SP3: Summary of 2040 Scenario Attributes

| Scenario | Population | Employment | Distribution |
|-----------------------------|---|---|---|
| Baseline | <p>Population from 2010 Census. Labor Force calculated from Quarterly Employment and Wages data as well as age and gender 5 year cohorts from the Census.</p> | <p>Regional employment was 112,612 in 2010 and is based on data from NH Employment Security 2010-2020 RPC employment projections</p> | <p>The figure shows the baseline for the distribution of future land use</p> |
| Slow Growth | <p>The OEP/RPC population projection is utilized in this scenario leading to a small increase in population. Demographic changes lead to a slight shrinking of the labor force.</p> | <p>Employment reduced to levels supported by population projected by OEP/Planning Commissions.</p> | <p>The small population growth is distributed according to existing patterns and shows no real change in intensity or distribution of growth.</p> |
| Strong, Dispersed Growth | <p>Population is increased to levels that support NH Department of Employment Security based Employment Projection. This adds about 57,000 people to the region by 2040 and almost 18,000 to the labor force.</p> | <p>2010-2020 Employment projections from NH Employment Security are extended to 2040 increasing the number of jobs in the region by 39,000.</p> | <p>The substantial population and employment are distributed according to existing patterns.</p> |
| Strong, Concentrated Growth | <p>Population is increased to levels that support NH Department of Employment Security based Employment Projection. This adds about 57,000 people to the region by 2040 and almost 18,000 to the labor force</p> | <p>2010-2020 Employment projections from NH Employment Security are extended to 2040 increasing the number of jobs in the region by 39,000</p> | <p>80% of new population and 90% of new employment growth is distributed to 5 largest regional employment centers. Remaining growth is distributed to the other 20 communities.</p> |

Population trends scenario for New Hampshire region, Rockingham planning commission ([link](#))



Design trends

Design trend reports are used in getting the details right. Reports are about anything sensorial but most often about visual details. Designers interpret and apply this information.



Fenty Puma



Baja East



Michael Kors



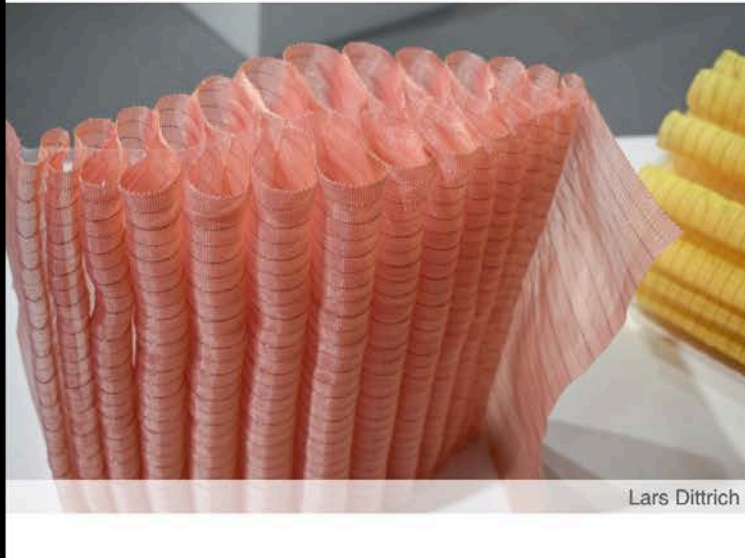
Gucci



No. 21

Tropical flowers in the Spring 2018 collections

Trend Checklist



- **Rich yellow** continues as a key colour this year across textiles and soft furnishings
- **Brick tones** and terracotta-pigmented hues increase prevalence, offering rich, warm earth effects
- **Distorted iridescence** explores digital colour effects and lustre-like sheens
- **Metallic** finishes celebrate shine and richness, creating luxury and opulence
- **Velvet** continues its momentum, applied in varying colour tones and product types, creating a sophisticated style for all markets
- **Ombé** evolves with soft organic blends
- **Embellished** details add a three-dimensional and striking character to everyday furnishings
- **Soft tactility** and comfort remain important, with brands exploring plush exaggerated piles and raised constructions
- **Mesh and grid** linework explores optical effects and new innovative materials

Source: Heimtextil 2019: Colour, material & finish report by Alexei Cowan / 16.1.19
> Search “wgsn” -database in Finna (Aalto has license).



Style Library



Ank Exports



Clarke & Clarke



Trend Forum



Saum & Viebahn



Saum & Viebahn

Velvet Touch

MATERIALS

- Velvet is not going away, driven by its comfort, soft tactility and lush qualities for all textile areas, including upholstery
- Velvet was widely presented in an array of colourways, ranging from muted pinks to vibrant teal and sophisticated emerald green
- Matte finishes, quilting, washed-out patterns, stitched detailing and pressed motifs are all techniques that have been adopted for interior products




Lifestyle trends

Lifestyle trends are “between” mega and design trends. Reports describe changes in consumer behaviour and values. Reports are used to make strategic business moves, e.g. development of new product lines and design of marketing campaigns.



**Lifestyle is the thing that gives people identity.
Identity givers are the most important aspects of life.**





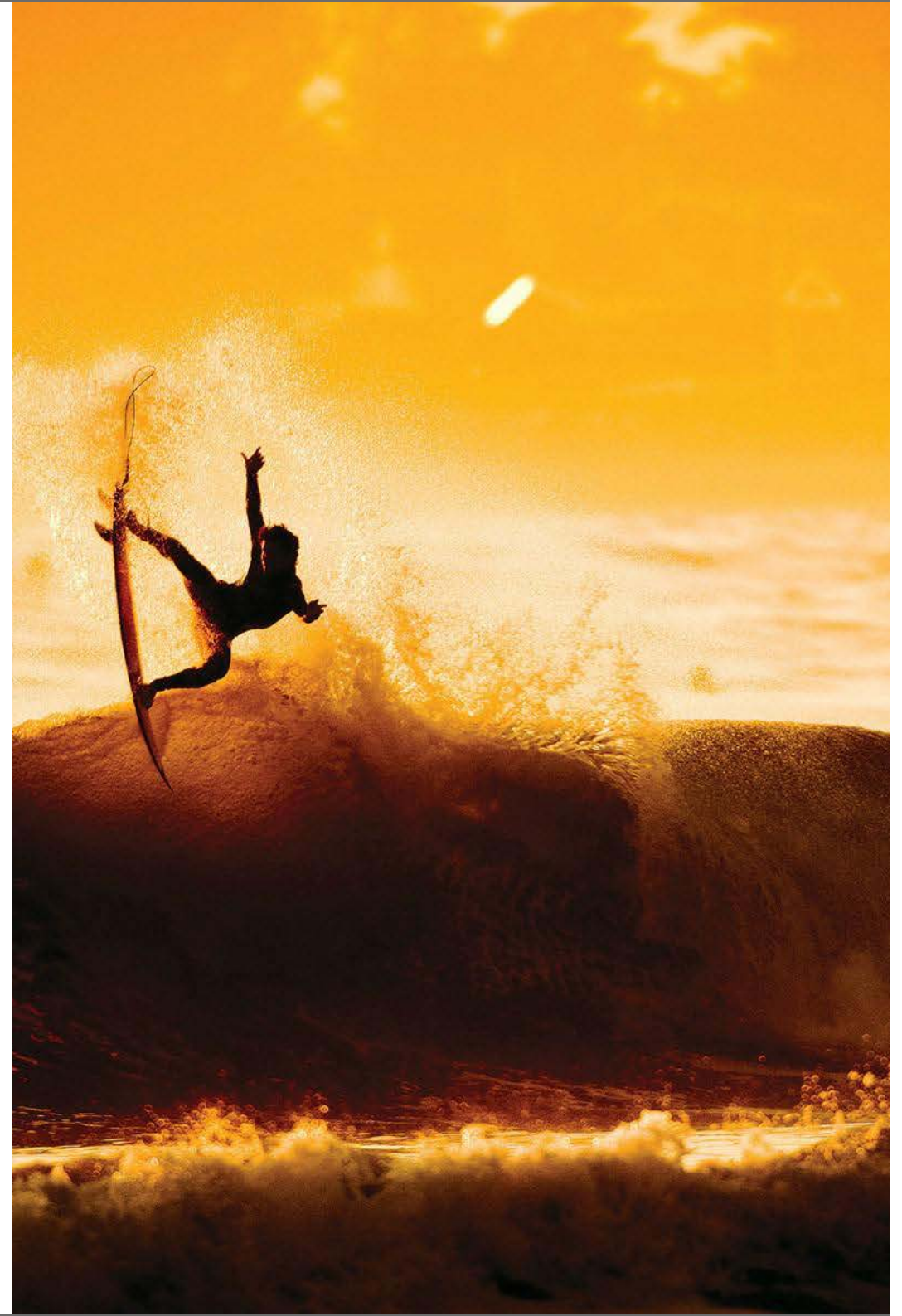
MY FAMILY * MY COMMUNITY * MY RELIGION * THE AMERICAN FLAG
MY TRAVELS TO DIFFERENT COUNTRIES * MY HOME * COOL BRANDS
THE COMPANY THAT I WORK FOR * COUNTRY AND WESTERN MUSIC
BIRD WATCHING * DOCTORS WITHOUT BORDERS USA * MOTORCYCLING
FAMILY HEIRLOOMS * BASEBALL * BEING A LAWYER * BASKETBALL GAMES
MY FAVOURITE CHARITY, NATURE CONSERVANCY * WHERE I LIVE
COLLECTING PERFUME BOTTLES * THE DALLAS COWBOYS * RALPH LAUREN
THE REPUBLICAN PARTY * NORMAN ROCKWELL ARTWORK * MY SEXUALITY
THE SIERRA CLUB * THE DEMOCRATIC PARTY * THE SALVATION ARMY
HISTORY * BEING AFRICAN-AMERICAN * MY TRAINING AS A NURSE
THE MUSIC IN MY IPOD (VEJLGAARD 2010: 38-39)

“WHAT GIVES YOU IDENTITY?”

WOMAN, 32

“The 32 years old woman gets her identity from ten distinct identity givers, but they are not equally important to her. Her identification with California is not strong. she could easily live in another state -- **as long as she can surf**. She is part of the peace movement and goes to different rallies -- though **she would not let this interfere with her surfing**. She is very happy with her work as a dentist, especially because **it gives her time and money to pursue** her all-encompassing passion: **surfing**. **Surfing** is her lifestyle, it is what dominates her life. She would like to go **surfing every day**, but that is not always possible. When it is not, she will be reading **surfing magazines** and chatting with **surfer friends** on the internet. The destinations of her vacations will almost always be determined by the **possibility to surf** and **meet other surfers**.”

(ibid.: 64-65)



MAN, 43

“The 43 year old man has different organizing principles. Being **married** and a **father** is the most important thing to him. He moved to Minnesota because of his **wife**, who is from there, but Minnesota is not a big part of his identity. He could live in many different places, as long as he is with his **family**. He is Catholic but not churchgoing. Moving to Minnesota has made him appreciate his Hispanic ethnicity more than when he lived in Los Angeles. Being a hotel receptionist is mostly about making a living. Hiking, trekking, and being outdoors are his hobbies.”

(ibid.: 66)




WOMAN, 58

“The 58 year old woman is a mother and a grandmother. Her only daughter lives in Paris, along with her two grandchildren. This means that they get together only about once a year. She has for many years organized her life around two great passions: **reading** and **writing**. She has **worked in publishing** for a couple of decades, and she has written **three books** herself that also have been published by **her own small press**. She has not other really great passions in her life. What mattered in her life is that she finally realized that she is a **lesbian**, and at the age of 45 she came out to her family, friends, and co-workers. Now most of her **social life** revolves around her **lesbian friends**. Her **reading** is focused on **lesbian literature**, and the **three books** she has written all have a **lesbian theme**. When she goes on **vacation**, it matters to her to be around **other lesbians**, so she goes to resort towns with many lesbians or on an Olivia cruise, the cruise line that caters to lesbians. Being a lesbian and a novelist have simply become her lifestyle.”

(ibid: 67)



A photograph of a balcony at dusk. The balcony has a white railing and a large potted plant with purple flowers. In the background, a multi-story building with a dormer window is visible against a dark blue sky. The balcony is part of a house with large glass doors that look into a brightly lit interior. Inside, a man in a white shirt and tie is seated at a table, and another man in a dark suit is standing next to him, possibly serving. The interior has wooden cabinets and a lamp. The text "People organize life with lifestyle choices. When people form groups, they start to negotiate about whose choices are organising their life." is overlaid on the right side of the image in white, bold, sans-serif font.

People organize life with lifestyle choices. When people form groups, they start to negotiate about whose choices are organising their life.





LIFESTYLE TRENDS

- ▶ Lifestyle trends describe how consumers prioritise certain themes in their lives to an extent that everything else is organised to facilitate the lifestyle.
- ▶ Downshifting, LOHAS and Cocooning are examples of kindred lifestyle trends that have been around already for over a decade.
- ▶ Example: Kinfolk print magazine.
<http://www.kinfolk.com>







FORECASTING TRENDS

- Observing and forecasting future trends is based on the fact that the history of the industry (of cars, clothes, food, service...) is so well known that the future can be extrapolated.
- This works since **in principle** human taste follows certain patterns.
- Basic patterns: pendulum, wave and cycle.

Vejlgaard, H. (2008). *Anatomy of a Trend*. New York: McGraw-Hill.

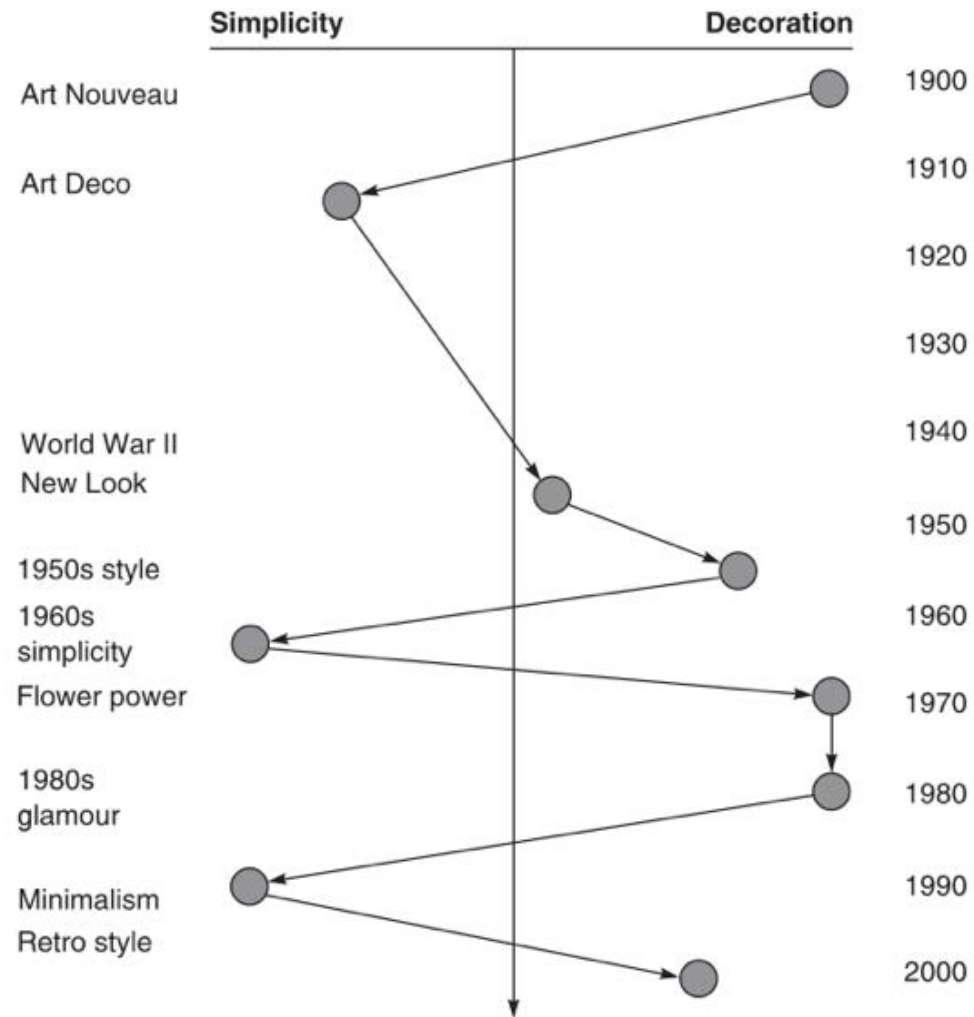


Figure 1.1 Oscillating trends in women's clothing styles in the twentieth century

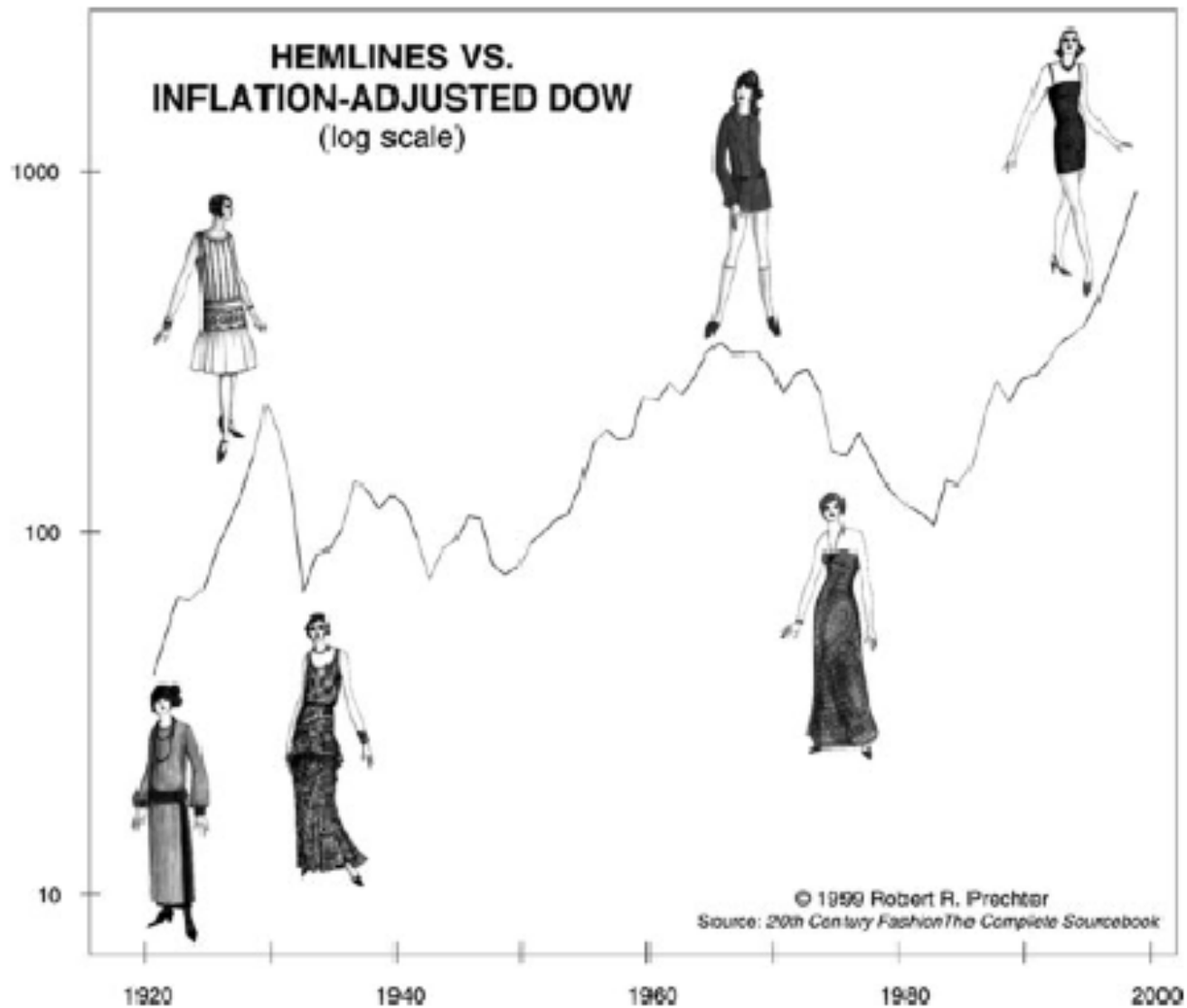


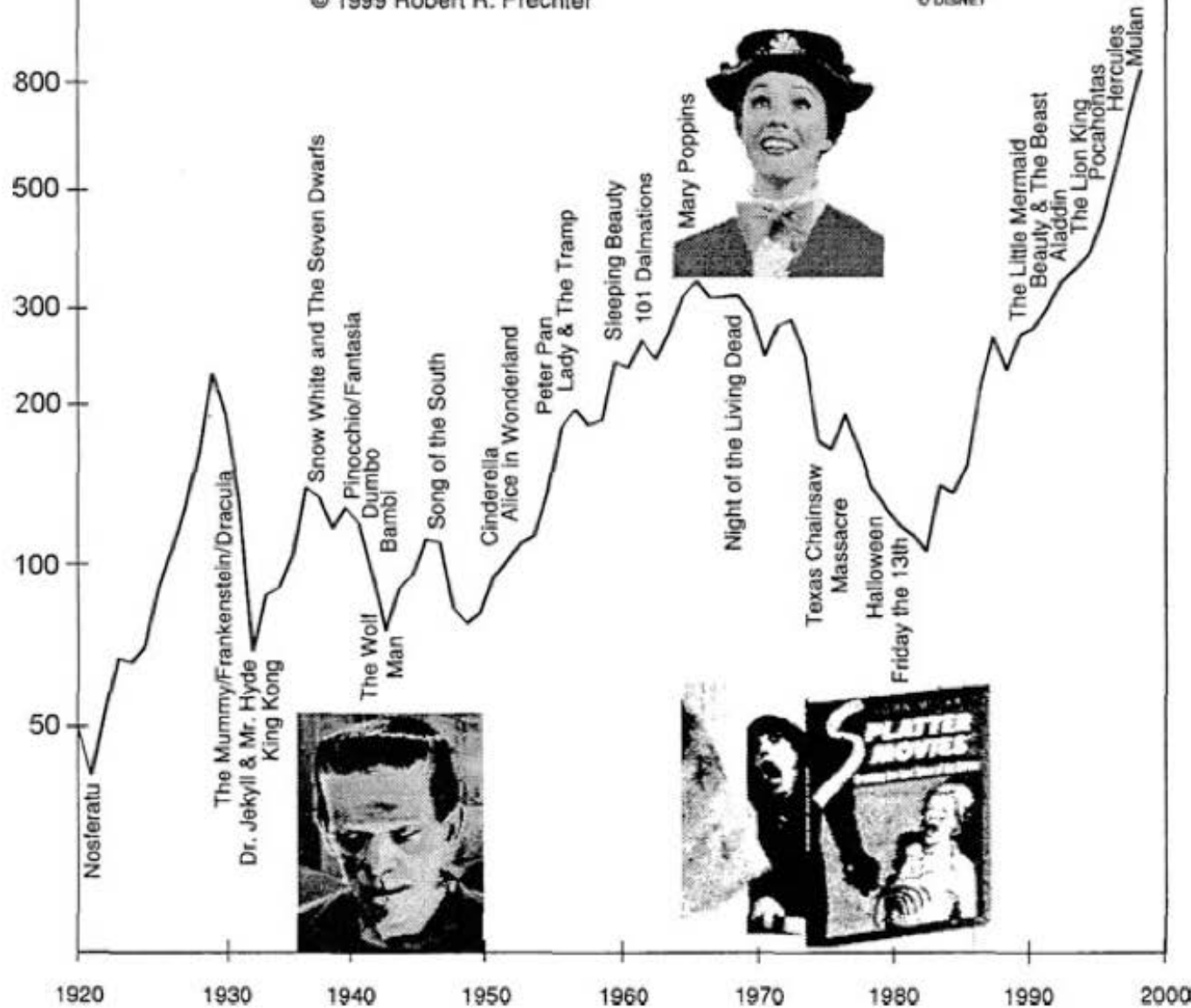
Figure 3.1 The skirt length indicator, 1920–2000.

Casti, J.L., 2010. Mood Matters. From Rising Skirt Lengths to the Collapse of World Powers, Springer.

CLASSIC DISNEY CARTOONS AND MAJOR HORROR MOVIES VS. PPI-ADJUSTED DOW

1921-1998
(log scale)

© 1999 Robert R. Prechter



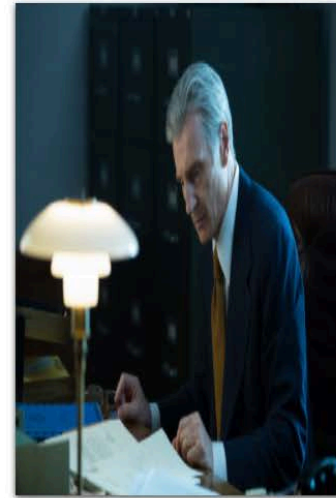
Top Trailers



Lore



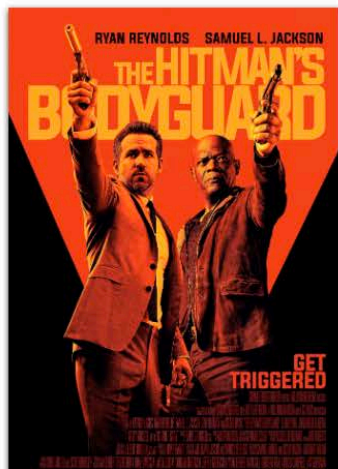
Friend Request



Mark Felt: The Man Who Brought Down the White House

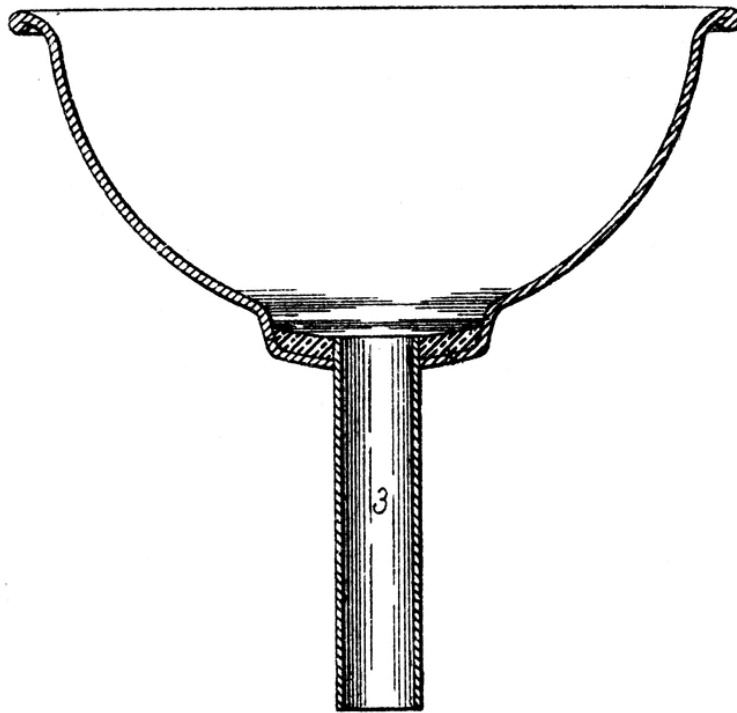
[Browse all trailers](#)

Trending Movies This Week



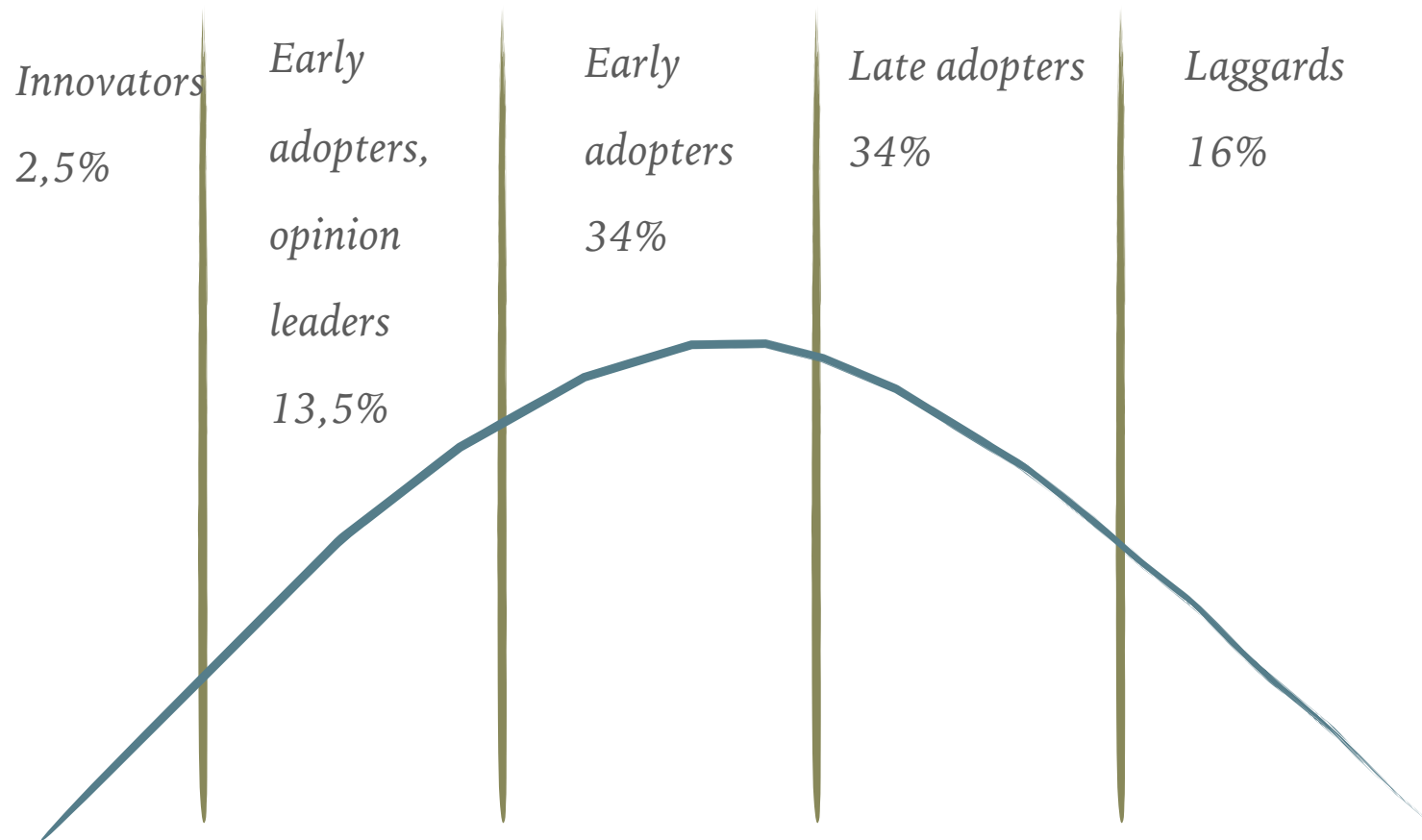
SOCIAL MOOD >> SOCIAL BEHAVIOUR

- **Social mood is rising:** Hope, family themes, good guy heroes, healthy hobbies, marriage, peace
- **Mood peak:** Hubris, upbeat, unrealistic designs
- **Social mood is declining:** Fear, anti-heroes, destructive actions, divorce, war
- **Mood bottom:** Despair, depressing



COLLECT AND EDIT

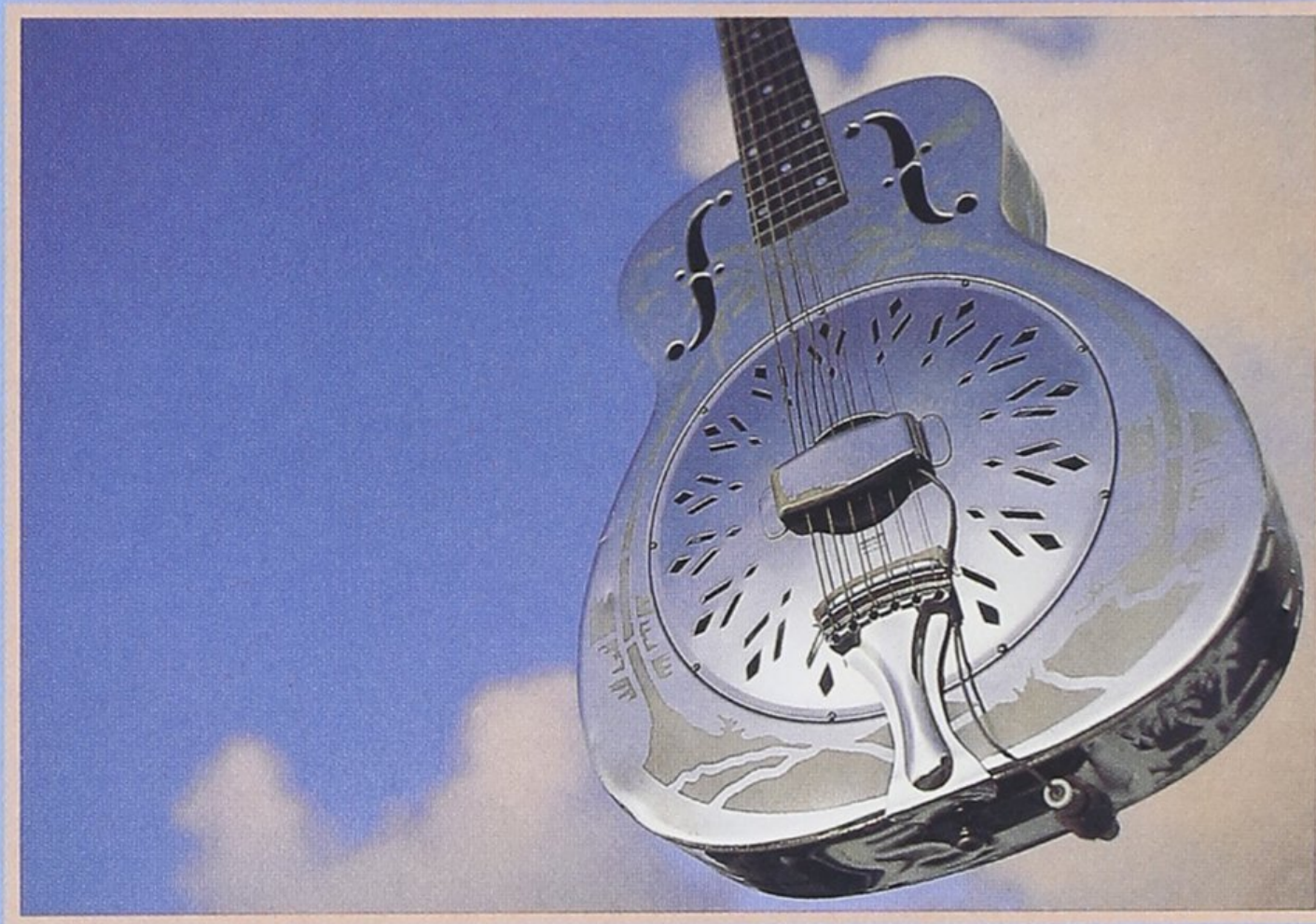
- ▶ When one is an expert of particular area, foreseeing trends in that area is, **in principle**, straightforward: you actively monitor environment and collect anything interesting, odd and exciting.
- ▶ Observations are grouped and thematised, preferably as teamwork.
- ▶ The outcome is a collection of initial trends, which are refined based on further information.



The adopter model from Rogers, E. M. (2003). Diffusion of innovations. New York: Free Press.

DIRE STRAITS

BROTHERS IN ARMS

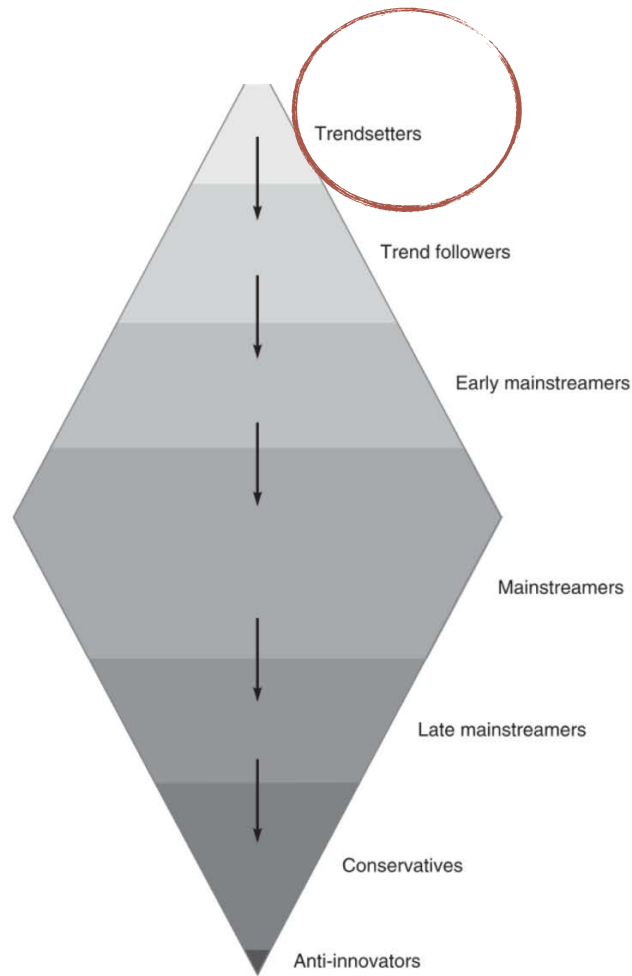


Published in 1985

One of the first albums targeted to CD-markets.

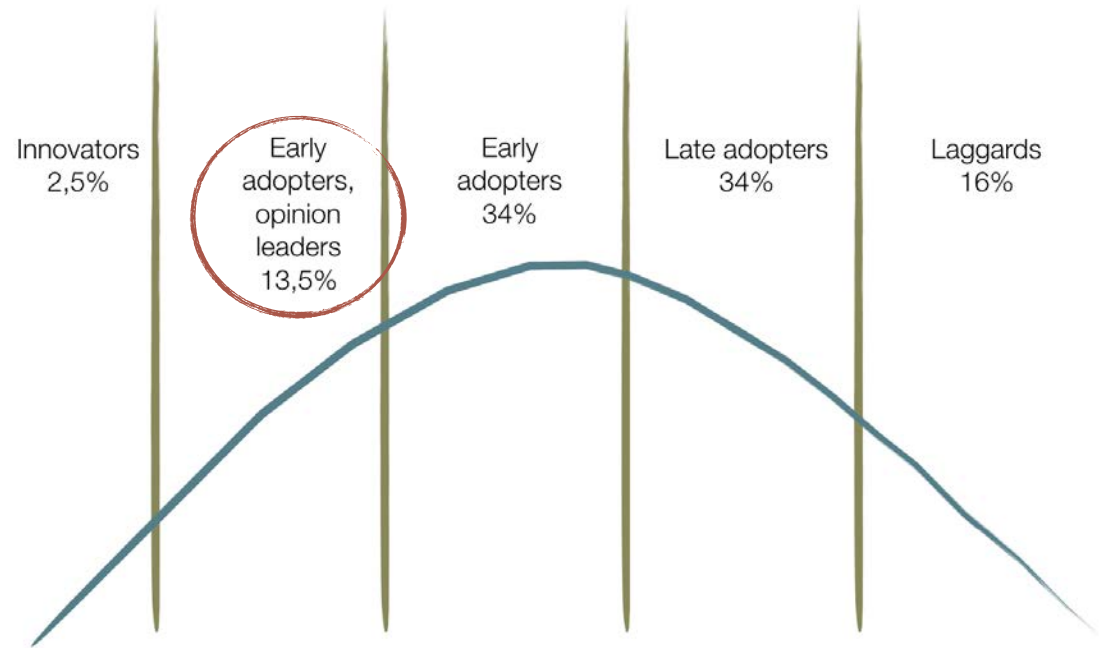
Huge hit: sold 29 million world wide.

Consequently: **sold also huge amounts of then novel CD-players**, even though record companies tried to kill the digitalisation of music.



Low risk adoption

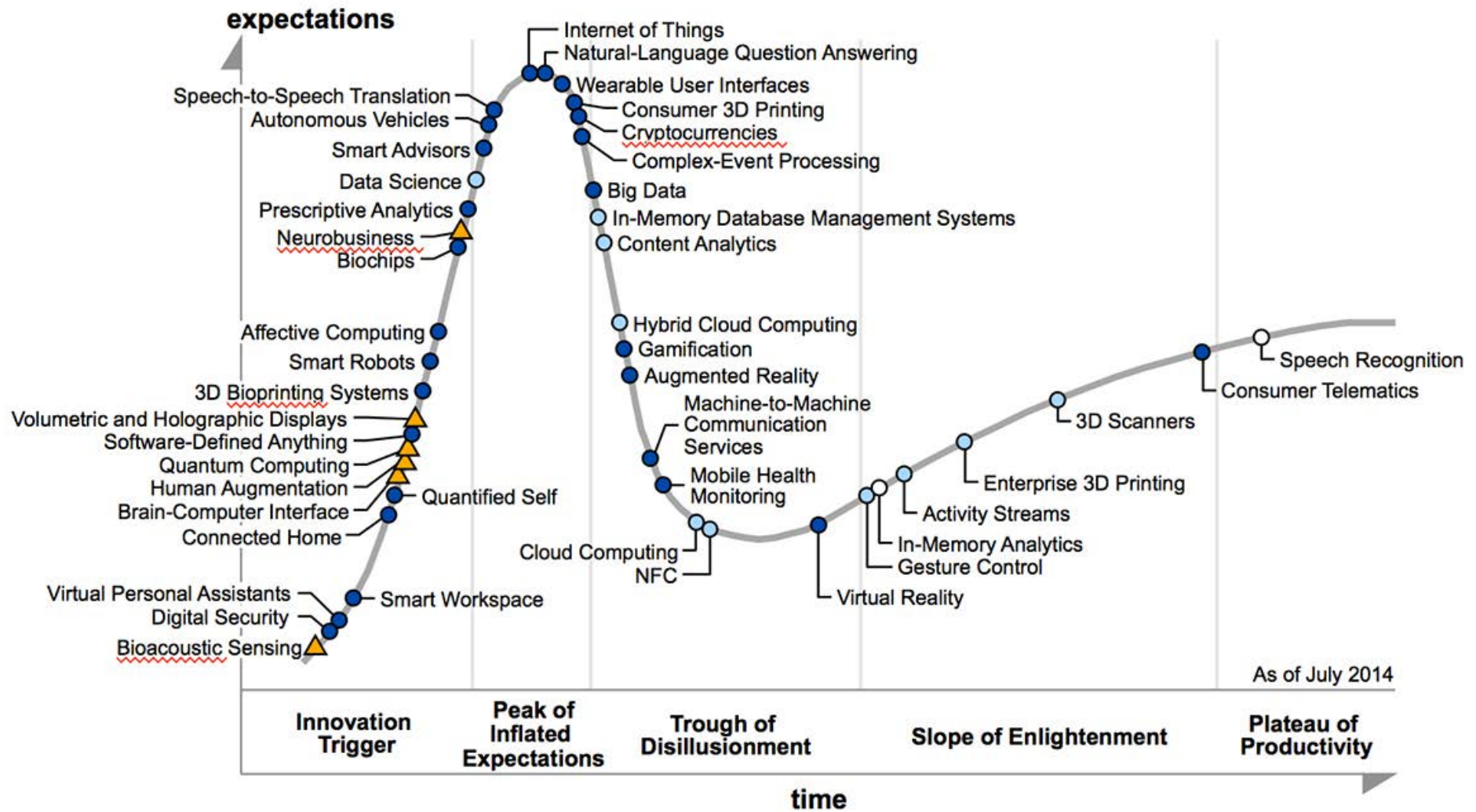
Anyone with enough exposure.



High risk adoption

Wealthy, mentally stable, well-connected

"Hype cycle" by technology research company Gartner



Plateau will be reached in:

- less than 2 years
- ◉ 2 to 5 years
- 5 to 10 years
- ▲ more than 10 years
- ⊗ obsolete before plateau

Ways of innovative design thinking

**How to design a change of
collective behaviour?**

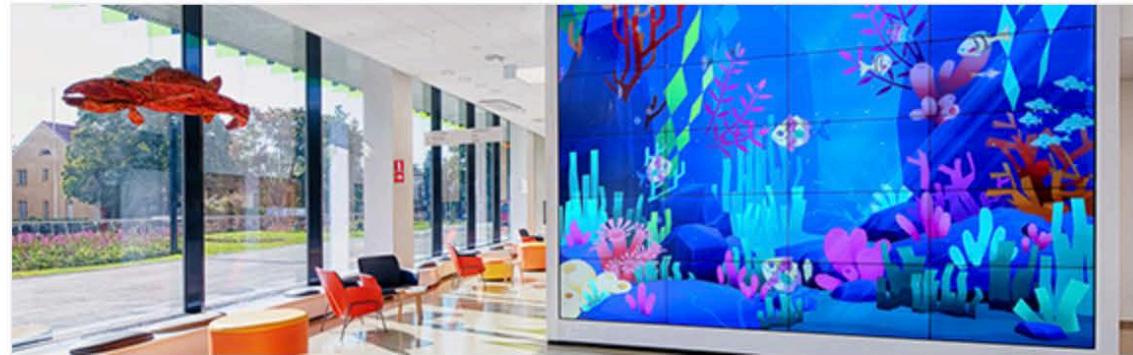
Innovative designer

Innovation is often a new interpretation of something.

For example to Roberto Verganti innovation is a changed context and mind set of use, typically from purely functional to something more experience driven.



- › Wards
- › Outpatient clinics, day activities, and other units
- › Specialist staff
- › Other facilities
- › When you are a patient in the hospital
 - Accessibility
 - Children's Rights in Hospital
 - Daily hospital fees
 - Entertainment for kids and adolescents**
 - Food at the Hospital
 - Information and registering
 - In-Hospital Schooling
 - Inpatient treatment
 - Parking
 - What should I bring to the hospital?
- › About us



MORE INFORMATION
[Play Area and Music Room](#)
[Play and Activity Unit](#)

Entertainment for kids and adolescents

To make our patients feel at home, every inpatient ward is equipped with a playroom, where patients and their siblings can enjoy playtime, games, drawing, and reading. The playroom has an adjacent coffee/break room for the parents. A wide range of toys, arts and crafts supplies, musical instruments, and games are also available for children to take into their own room.

Wards Tähti, Avaruus, and Vuori have their own nooks for teenagers, and Ward Taika offers teenagers an entire separate room. Adjacent to the play area on the 4th floor is also a separate room for adolescents / a music room with instruments, a pool table, and table soccer.

Personnel in the play area organises activities for children and adolescents every week.

Aquarium

The New Children's Hospital's marine aquarium can be visited on the 1st floor in the laboratory hallway. The vividly colorful aquarium houses sea urchins, coral, and various species of fish.

Color in your own colorful fish or sea creature on the media wall

The entrance lobby on the first floor has an interactive media wall. Children can color in or scan their own fish or another sea creature to be added on the media wall. Pictures for coloring and

- Not all changes are equal.
- F.ex. if someone starts to cross street in different place or starts to use different bus, that's not significant. The change should have volume in its context.
- If majority of a community starts to use a different mode of transportation, that is significant. It has consequences.

Designing the consequences is as important as seeing what will take on.



“Innovator’s dilemma”: Established companies tend to focus on their core business/market, and don’t have initiative to be interested in marginal nonsense. However, sometimes the marginal nonsense becomes the new dominator.

Skill of possibilities, design of change

- Core design skill is to learn to see and show possibilities that the client is not able to see.
- Everyone is blind to their own work, and daily work takes all one's time and energy. We need professional co- and foreseers.

Users as innovators

Sometimes innovations happen because users cannot buy the product they need and they then innovate it themselves.

Mäkinen S ym. (2013) Mountaineering. A combinatory approach for identifying lead users and other rare research subjects. Working paper. Science+Technology 7/2013. Espoo: Aalto University.



Designers as users

Sometimes company builds their design team from designers who are also experts of the use context.



Tanja Kotro

Hobbyist Knowing in Product Development

*Desirable Objects and Passion for Sports
in Suunto Corporation*



Regular Cash **369 ⁹/₁₀**

Regular Credit **379 ⁹/₁₀**

Savings per gallon **10 ¢**

Car Wash

Save 10%, 20%, 30% or more per gallon
with your **Shop** card
ShopCard



24 HOURS

Food Mart

SAVE 25%
25¢

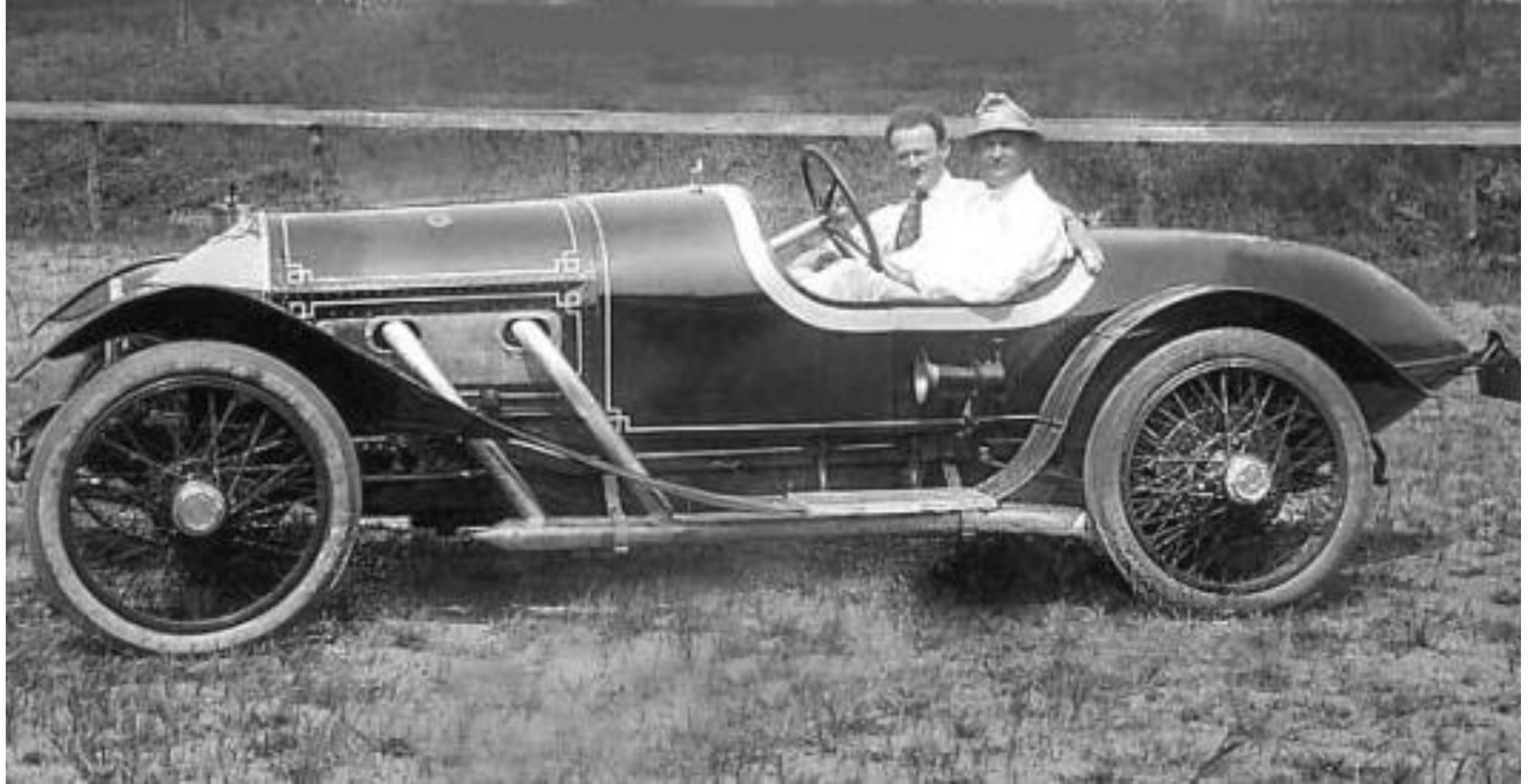
3.99

Case: Gas station

What's the very essence of a gas station?

See Chipchase, J. (2013). *Hidden in plain sight. How to create extraordinary products for tomorrow's customers.* New York: Harper Business.





At the turn of the twentieth century, gasoline was sold by pharmacies as a niche product for the few people wealthy enough to own cars. They were also wealthy enough to employ **drivers**, who maintained the car.



As more and more middle-class became car owners, service stations popped up across the country, offering what we now think of as “**full service**”. Major chains advertised the friendliness of their attendants, who would help drivers get where they needed to go.



As cars became more reliable and new technologies made it safe for drivers to pump their own gas, the essence shifted away from service to **refuelling** – not only for cars but for drivers as well, with convenience stations offering snacks, beverages, cigarettes, and restroom.



What will happen if the electric car becomes dominant?



- If we strip things back to the bare essentials, we can build or rebuild our understanding of services from the ground up.
- We can also take the same essence and use it as a starting point for designing variations of the same service for different markets.
- Or consider how a product or service would fundamentally change if something else were at the core. What would happen if the essence of a gas station was some currently peripheral aspect of the experience?

Kiitos
Thank you
Tusen tack

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