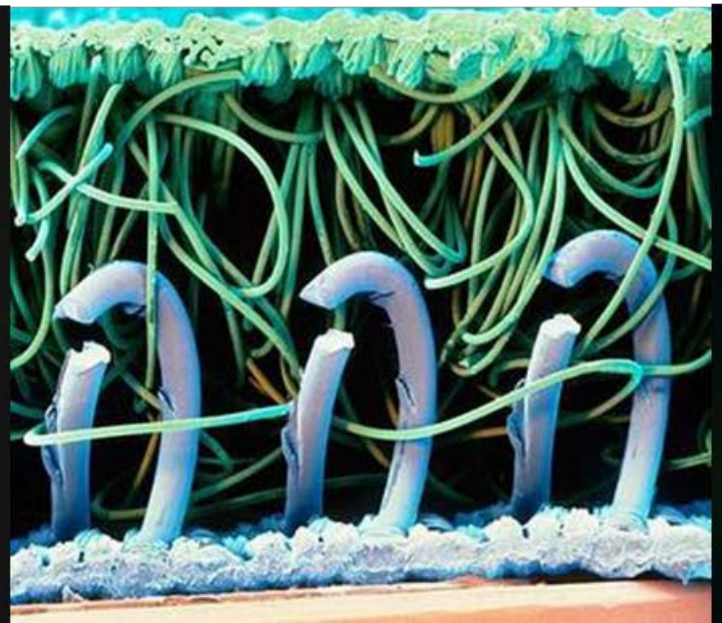
Material Experience

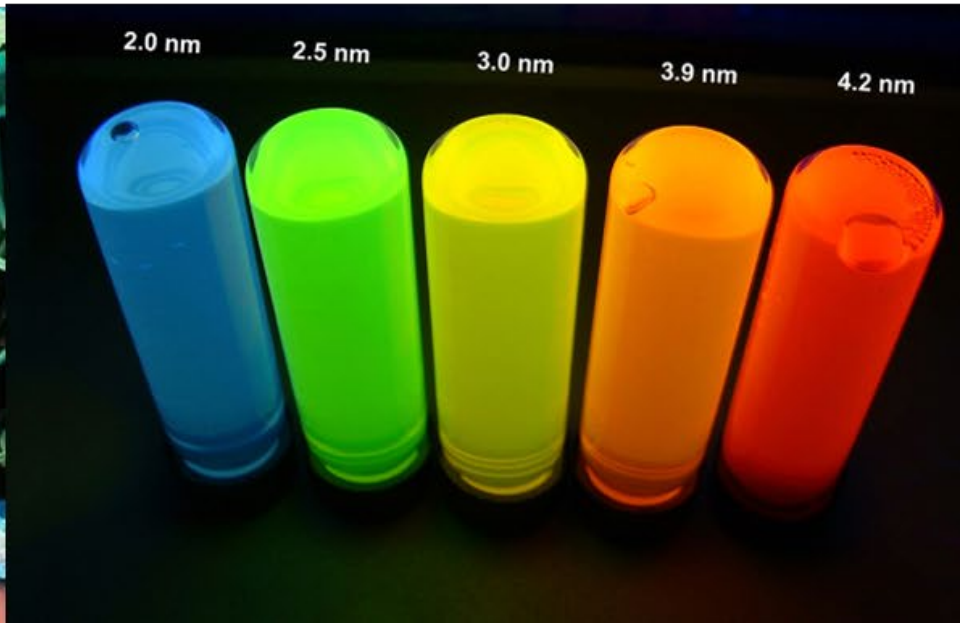
Billy Wu

Adapted from Weston Baxter

Imperial College London

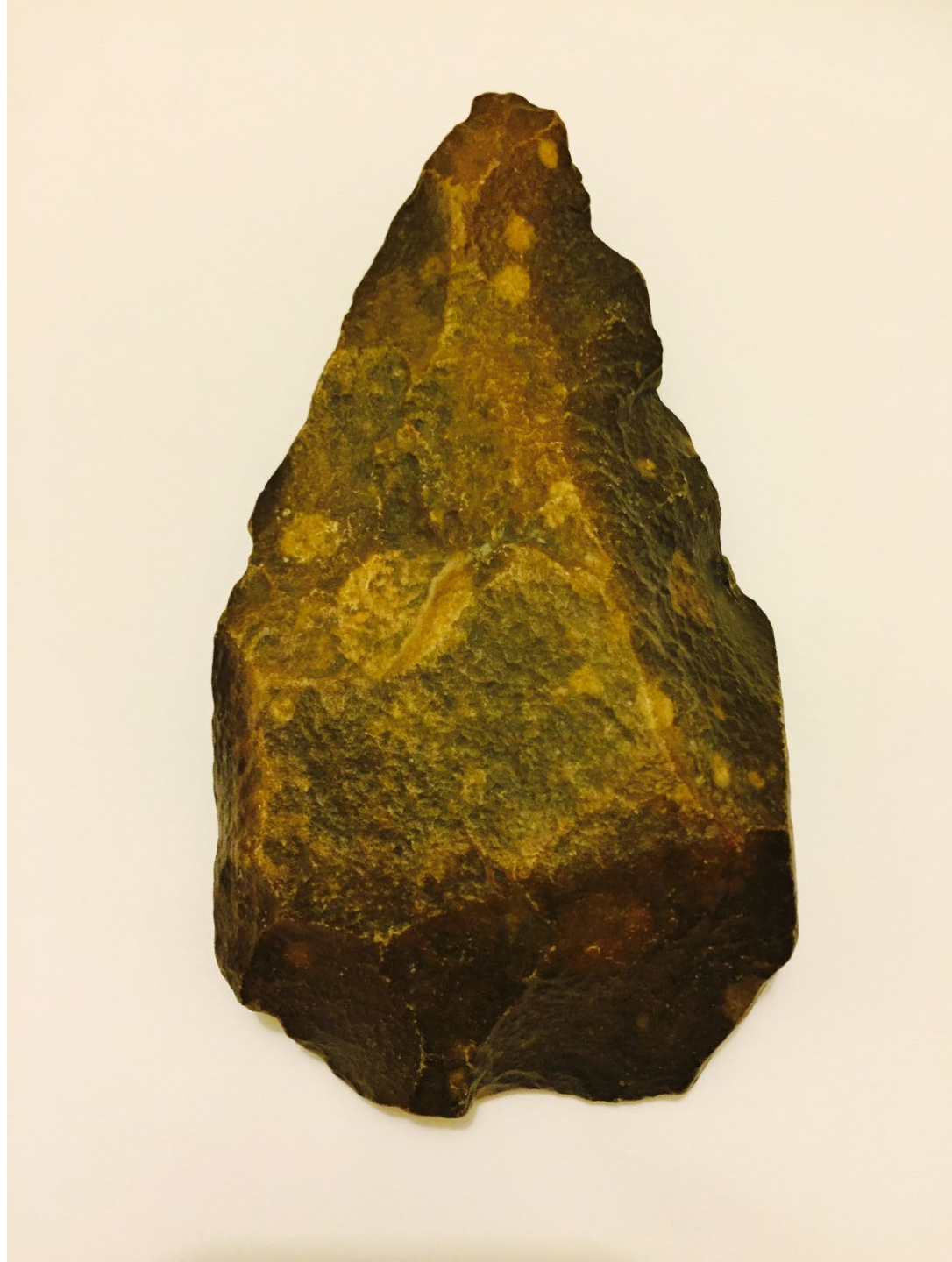
Last time on M&M…





Intended learning objects

- Understand how materials contribute to user experience
- Evaluate positive and negative material experiences
- Assess technical and experiential material properties
- Apply materials based on experiential properties



Material Experience is about understanding and creating meaning, evoking emotion, and affording interactions.

Video

Meaning

http://www.studio-ilio.com/

Video

Emotion

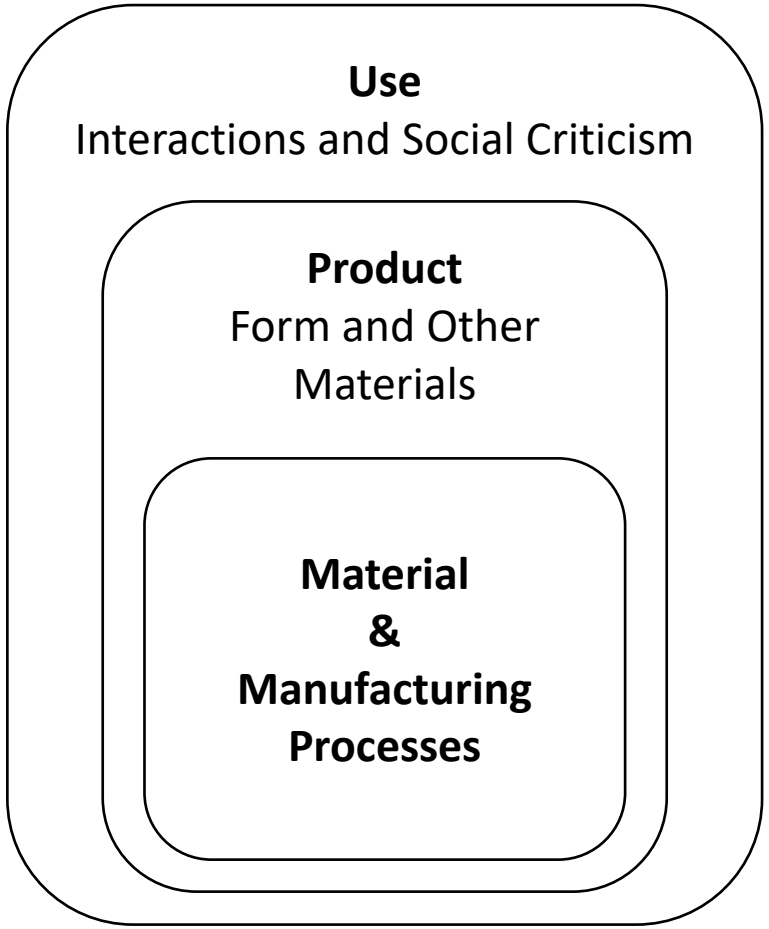
http://asenseof.com

Interactions

Video

Examples of Material Experience

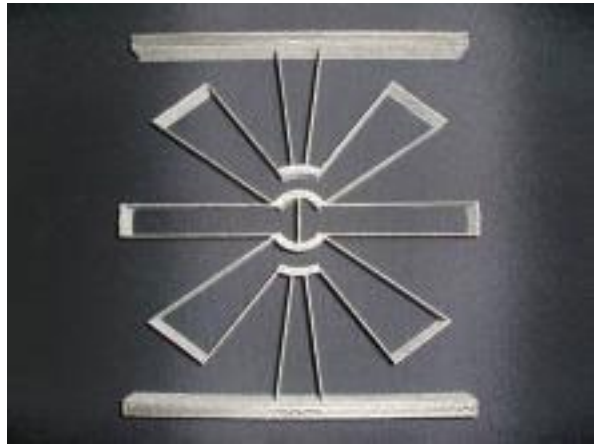
Material Experience in Context

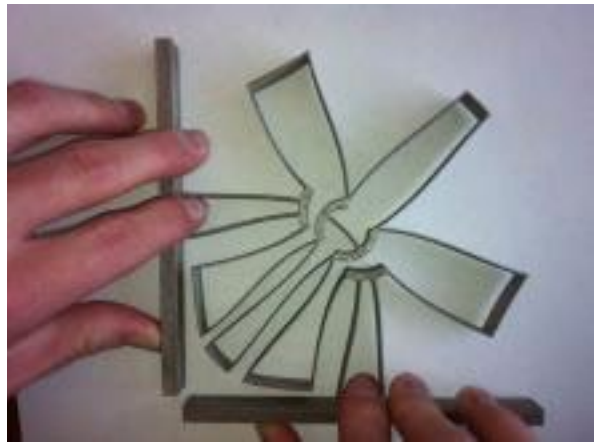



1 x 20p



www.woodlondon.co.uk/





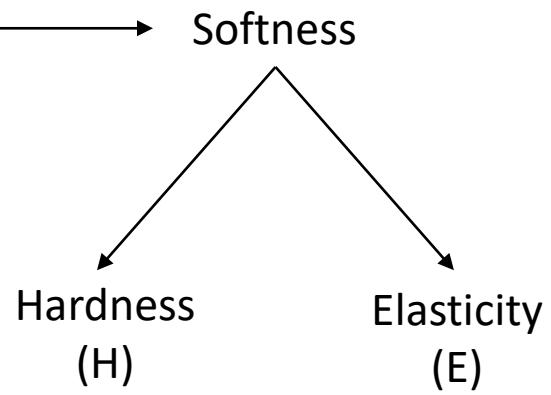
R. M. Fowler, A. Maselli, P. Pluimers, S. P. Magleby, and L. L. Howell, “Flex-16: A large-displacement monolithic compliant rotational hinge,” *Mech. Mach. Theory*, vol. 82, pp. 203–217, Dec. 2014.

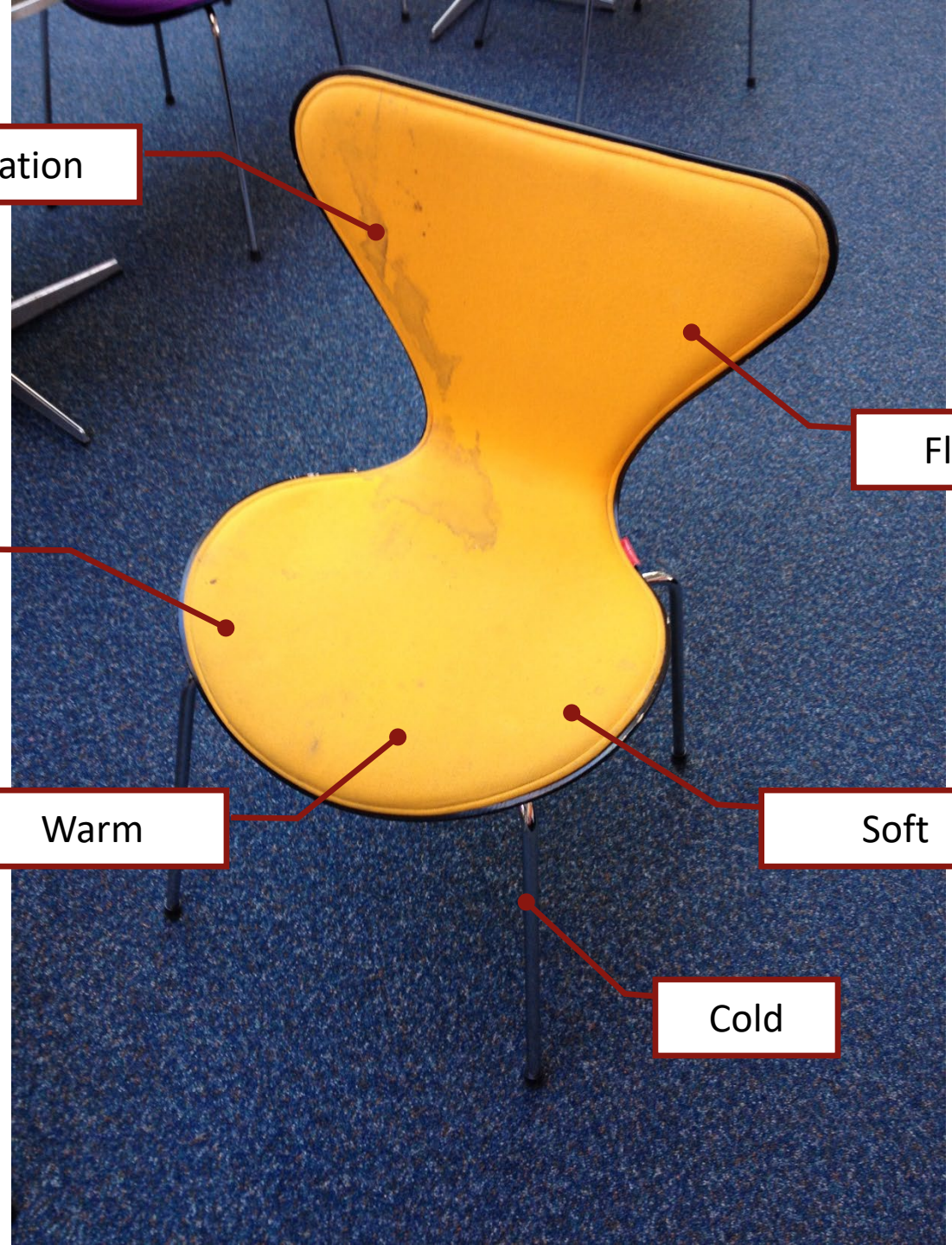
Evaluating Material Experience

Evaluation

Sensorial Properties

Sensorial Properties	
Visual	Colour Intensity
	Colourfulness
	Transparency
	Glossiness
	Reflectiveness
	Unevenness
	Texturing
	Patterning
Tactual	Softness
	Weight
	Flexibility
	Strength
	Elasticity
	Smoothness
	Warmth
	Sharpness
	Stickiness
	Wetness
	Resistance
Auditory	Muffled
	Dull
	Resonant
	Low/High Pitched
	Ringing
	Loudness
Olfactory/Gustatory	Odorous
	Bitter
	Sweet




Colouration
Flexible
Colour Intensity
Warm
Soft
Cold

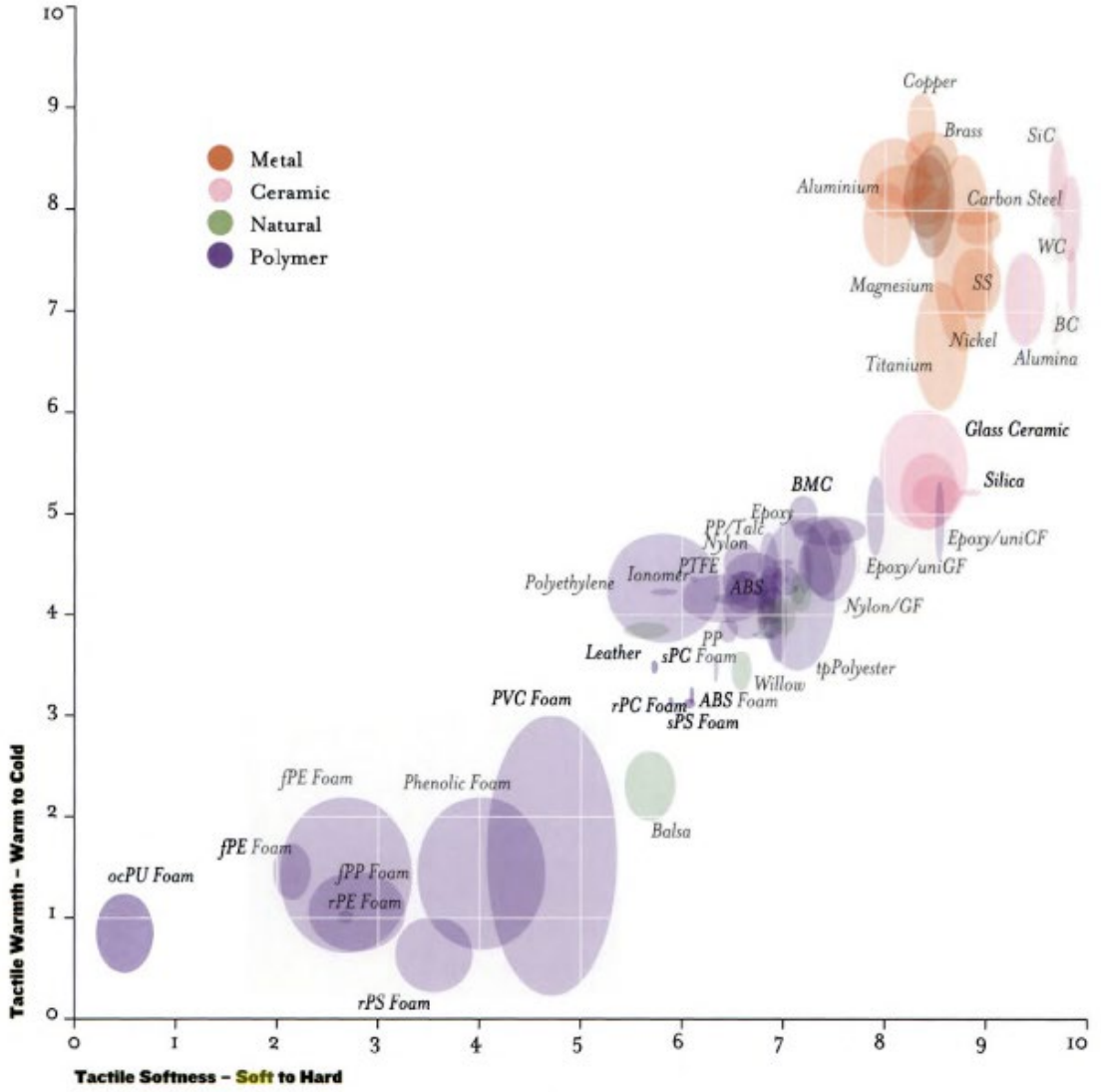
Evaluation

Material Appraisal

Attribute	Opposite
Aggressive	Passive
Cheap	Expensive
Classic	Trendy
Clinical	Friendly
Clever	Silly
Common	Exclusive
Conservative	Avant-garde
Decorated	Plain
Delicate	Rugged
Disposable	Lasting
Dull	Sexy
Elegant	Clumsy

Tools and Methods

"Warmth" = $\sqrt{\rho\lambda C_p}$



"Softness" = Hardness (HV) x Young's Modulus (E)

Implicit vs Explicit Methods

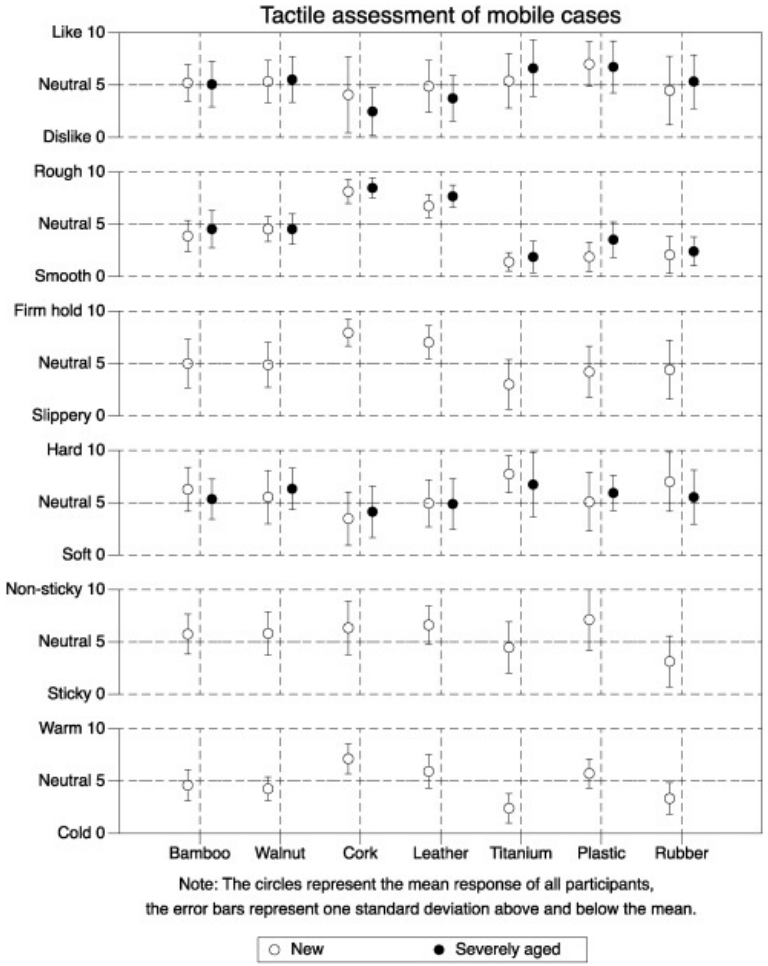
Explicit Attitudes

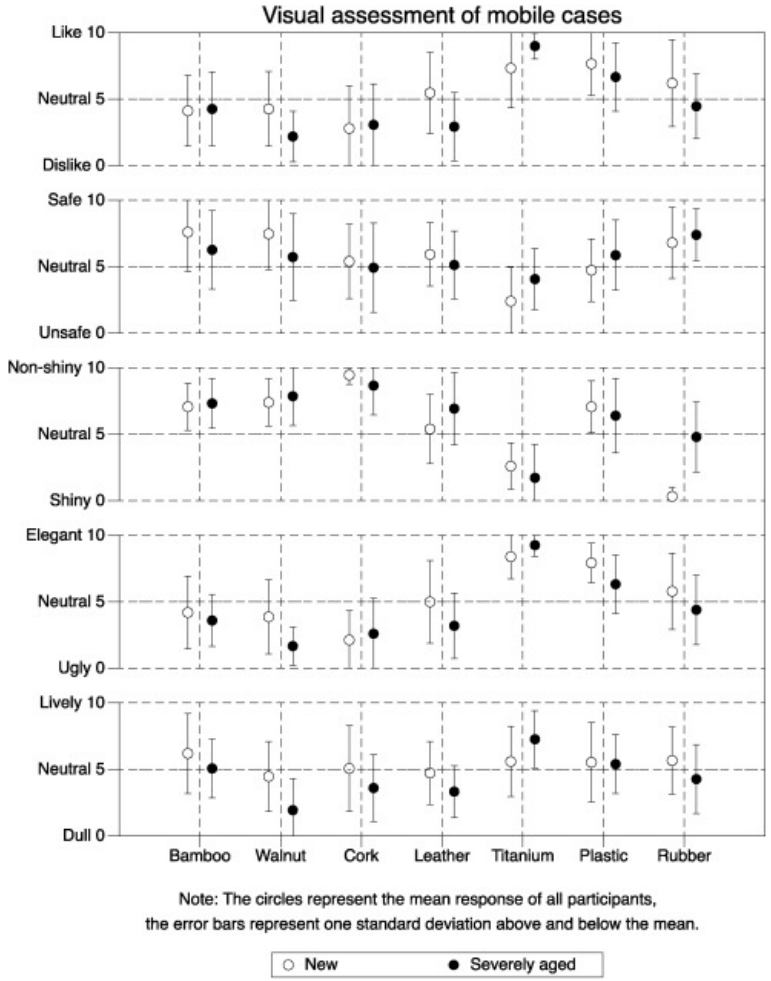
- Conscious
- Deliberately formed
- Known to individual
- Self-reportable

Implicit Attitudes

- Unconscious
- Involuntary formed
- Unaware to individual
- Unable to report

Explicit Methods
Semantic Differential Scale

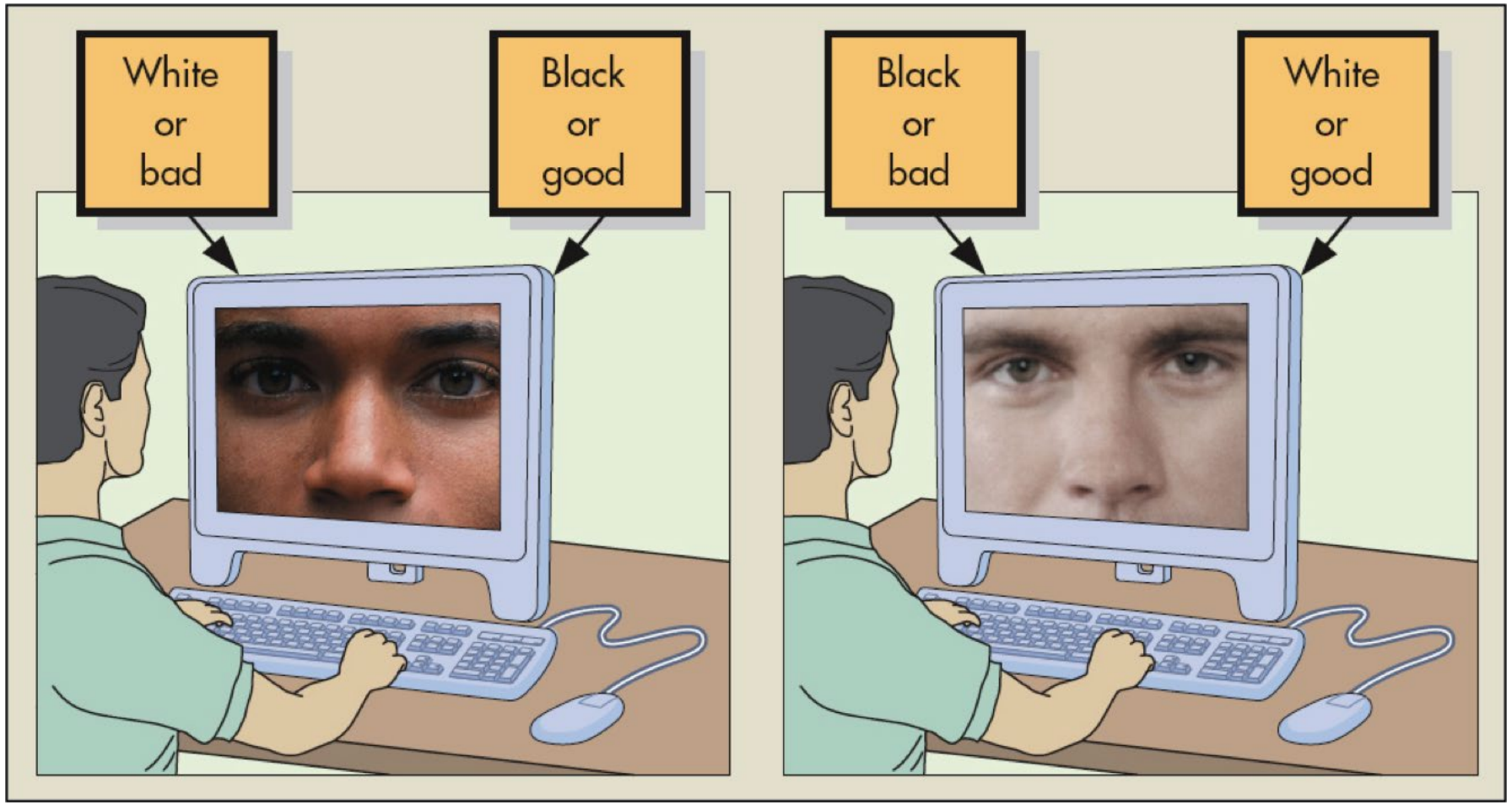




Menti!

D. Lilley, G. Smalley, B. Bridgens, G. T. Wilson, and K. Balasundaram, 'Cosmetic obsolescence? User perceptions of new and artificially aged materials', *Mater. Des.*, vol. 101, pp. 355–365, Jul. 2016.

Implicit Methods
Implicit Association Test (IAT)



https://implicit.harvard.edu/implicit/

Source: http://inequality2.comm.ccsu.edu/index.php/2015/10/05/the-implicit-association-test/

Recycling words

Sustainable, Green, Recycle, Environmentally Friendly

Waste words

Trash, Rubbish, Landfill, Waste

Unaltered Objects

Altered objects

W. L. Baxter, M. Aurisicchio, and P. R. Childs, 'Tear Here: the Impact of Object Transformations on Proper Disposal', in *Proceedings of 20th IAPRI World Conference on Packaging*, Campinas, Brazil, 2016.

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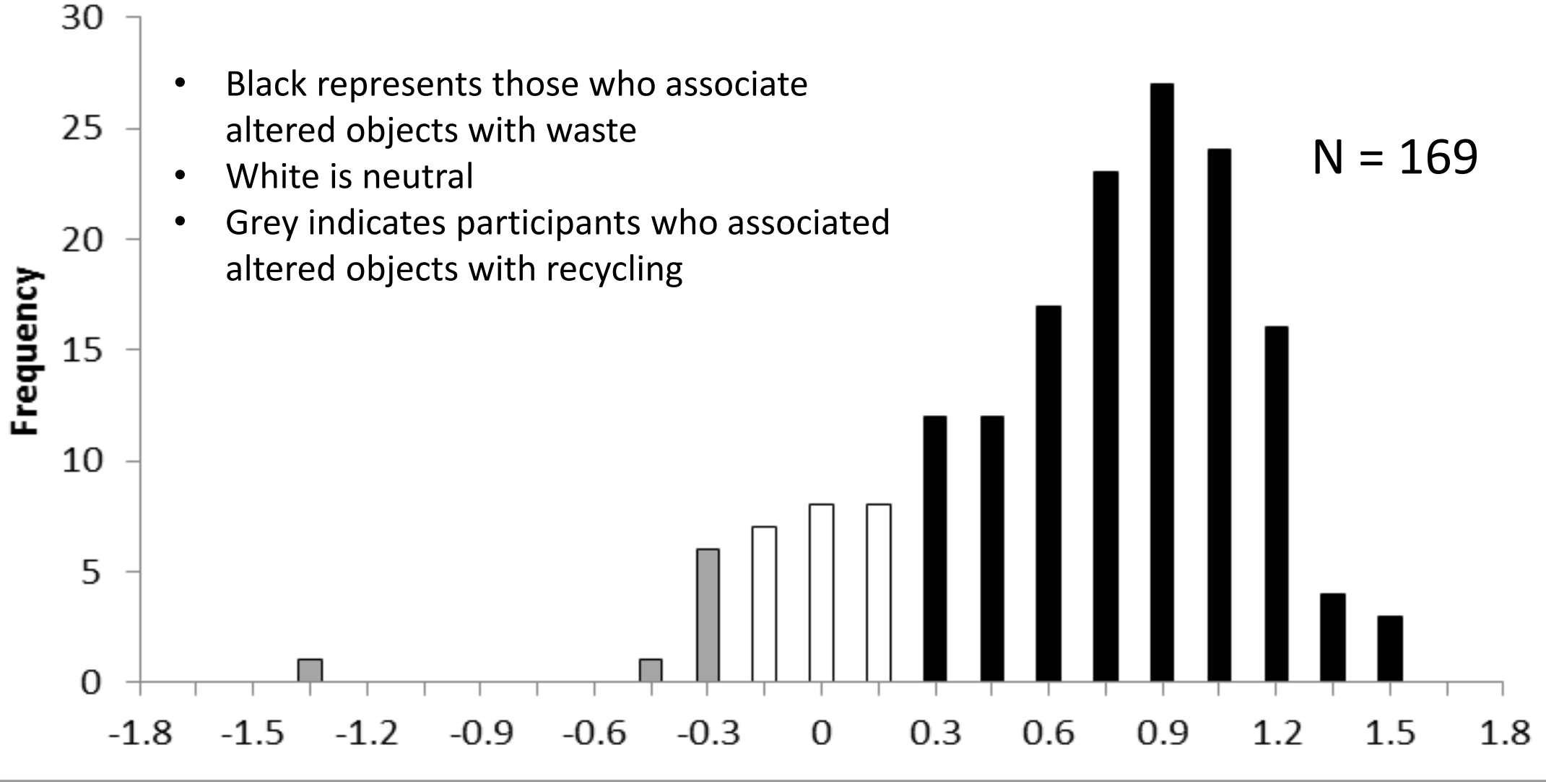
IAT Scores for Recyclables Perceptions



- Black represents those who associate altered objects with waste
- White is neutral
- Grey indicates participants who associated altered objects with recycling

N = 169

W. L. Baxter, M. Aurisicchio, and P. R. Childs, 'Tear Here: the Impact of Object Transformations on Proper Disposal', in *Proceedings of 20th IAPRI World Conference on Packaging*, Campinas, Brazil, 2016.

Summary

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Next time on M&M