Classification and framing: Design strategies for controlling affordances

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The origin of the concept of affordance

It all started when Gibson developed an interactionist view of perception and action that focused on information that is available in the environment.
‘(Affordances are) the actionable properties between the world and an actor.’

GIBSON, J. J. (1977)
2 The current scenario around the concept of affordance

PROBLEMS, PROBLEMS, AND MORE PROBLEMS
From a design perspective, all definitions of affordance – Gibson’s and Norman’s included as well – provided are contradictory.
Difficulty to conduct empirical research to test systematic observations across contexts, e.g., industrial design and interaction design

PROBLEM #2
Lack of prediction of the affordance a user is likely to perceive

PROBLEM #3
The use and misuse of the concept of affordance
Affordance as a binary concept is too radical and disconnected from reality

REFERENCE: GIBSON, J. J. (1977, 1979)
Stairs and a baby

Source: http://blog.childrensdayton.org/the-stair-climber
The claim that affordances exist independent of the user’s ability to perceive them is fruitless.

REFERENCE: GIBSON, J. J. (1977, 1979)
The idea of affordances between artefacts completely disregards perception

Robot: an artefact that acts as a user

Source: http://interestingengineering.com/the-robots-of-today-and-tomorrow
Taxonomies do not describe underlying organising principles

Sanjay Jacob
RE: Let’s go see a movie this weekend? Sounds like a good plan to me. I don’t ...

Cricket team practice
The Field
4:30 PM - 7:00 PM

Friday

Internet Explorer

Store

Unmanned commercial rocket vs. the International Space Station

Now playing
Extreme paragliding on the south coast of Australia

Weather

68°
Sydney, Australia
Sunny 51°/65°

Source: http://www.idownloadblog.com/2013/05/10/microsoft-cant-convince-apple-to-update-itunes-for-windows-8-metro-devices
The importance of the concept of affordance to us, interaction designers

Affordance is the link between users and artefacts through perception
‘Designers of the world: Forget affordances. Provide signifiers.’

We cannot abandon the term because we do not know what it is, and choosing a new word will not save us from the current struggle.

We all feel that the concept of affordance may be useful but we still do not know how, and we should not give up.
Affordances versus signifiers

A SIGNIFIER IS NOT AN AFFORDANCE, AND VICE VERSA
A CLEARER DEFINITION OF AFFORDANCE IS NEEDED
The concept of affordance should be described from a more pragmatic viewpoint

STEP #1: AN INITIAL DEFINITION OF THE CONCEPT OF AFFORDANCE
Affordance refers to cues of the potential acts upon an artefact by a user in a given environment.

STEP #1: AN INITIAL DEFINITION OF THE CONCEPT OF AFFORDANCE
The underlying key elements of the concept of affordance should not be overlooked.
- User
- Artefact
- User’s intended function
- Perception
- Environment

STEP #2: THE COMMON FOUNDATIONAL ELEMENTS
A clear distinction between the concept of affordance and other concepts has to be established.
Affordances are not actions per se, nor functions, nor signifiers, nor properties of a given artefact.
Affordance is about what you can do with an artefact

STEP #3: A COMPARISON BETWEEN AFFORDANCE AND OTHER CONCEPTS
Improving the definition of the concept of affordance

OUTCOME: A PRECISE DEFINITION OF THE CONCEPT OF AFFORDANCE IS CREATED
Affordance is the manner by which the purpose (function) of an artefact is enacted by the user in a given environment.

OUTCOME: A PRECISE DEFINITION OF THE CONCEPT OF AFFORDANCE IS CREATED
What can we do with this, so-called, clearer meaning?

ANY CONCEPT IS POINTLESS IF WE CANNOT USE IT FOR OUR BENEFIT, AND AFFORDANCE IS NOT AN EXCEPTION
We just need to ask the right question, which is ‘what are the affordances that are more likely to be perceived in a certain situation?’
Paper Towel Dispensers
The Design Stance is a theory that might help us understand this predictive process.

Designing for the end-user’s recognition of affordances as intended by the designer, i.e., perceived intended affordances.
Affordances

Perceived intended affordances
When designing, we may create artefacts that have affordances that allow the user to create their own intended purposes (functions), i.e., empowerment.

RIGID USES (STRONGER FRAMING AND/OR CLASSIFICATION) VERSUS MORE FLEXIBLE USES (WEAKER FRAMING AND/OR CLASSIFICATION)
Proposed Framework on Affordances
Testable hypotheses

1. Classification and framing are independent dimensions influencing the perception of an artefact’s affordance by a human agent

2. The strength of classification and framing are positively related to the accuracy of the affordance perceived by a human agent

3. The strength of classification and framing are negatively related to the variety of uses to which a human agent associates to an artefact

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