

RRR 02

1. The concept of affordance, proposed by psychologist James Gibson and introduced into the field of design by Donald Norman, refers to the attributes or relationships that an object or environment offers to users regarding how it might be used. Simply put, it is the action an object 'invites' you to perform upon it. For instance, a chair affords the action of 'sitting', while a door handle affords 'turning' or 'pushing/pulling'.

Within user experience design, Norman further distinguishes between affordance itself and affordance cues. Affordance represents an object's inherent functional potential, whereas affordance cues are the prompts or signals indicating where and how this potential can be accessed. An excellent design seamlessly integrates affordance and affordance cues, enabling users to intuitively understand how to interact without deliberation. Conversely, poor design leaves users perplexed, as exemplified by the "Norman doors" in the Vox video that require labels stating "Push" or "Pull".

Taking the iPhone, iPad, and MacBook within Apple's ecosystem as examples, whilst sharing the same operating system philosophy, they offer distinctly different usability due to their differing physical forms and interaction methods.

iPhone:

Core usability: Ultimate portability, single- or two-handed grip,

communication at your fingertips.

Application Manifestation: Its compact screen and portability make it the preferred choice for immediate tasks. The core accessibility of the Messages and Phone applications lies in personal communication anytime, anywhere. The accessibility of the Camera application is the ability to swiftly capture moments, as you can rapidly retrieve it from your pocket and take a photograph. The accessibility of Apple Pay and NFC is completing payments with a tap, which relies on its always-at-hand nature.

iPad:

Core capabilities: Large-screen immersive viewing, flexible content creation, shared viewing.

Application examples: The larger screen offers superior media consumption and content creation capabilities. Drawing or note-taking with Apple Pencil in Procreate or Notes provides precise digital sketching. Keynote or Pages deliver a more comfortable document editing experience on iPad than on a mobile phone. When placed horizontally, it is ideal for group viewing of videos or browsing photos.

MacBook:

Core accessibility: Powerful multitasking, efficient content production, precise pointer control.

Application manifestation: The physical keyboard and trackpad deliver efficient text input and precise control. Video editing in Final Cut Pro or coding in Xcode embody its capability for complex, deep work requiring multi-window collaboration. Simultaneously opening multiple Safari tabs, Mail, and Messages apps while switching efficiently exemplifies its multitasking capability.

Equipment	Affordance	Application implementation
iPhone	Portability, touchscreen functionality, instant access, biometric authentication	Phone (instant calls), Messages (quick texts), Camera (snapshots), Wallet (NFC payments)
iPad	Large screen, touch and stylus input, flexible orientation	Notes (handwritten notes), Video (immersive viewing), Safari (comfortable web browsing), Files (document management)

MacBook	Physical keyboard, touchpad, multi-window support, powerful computing capabilities	Pages/Keynote (long-form documents/presentation creation), Mail (efficient email management), Finder (complex file system operations)
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2. Signifiers are a key concept proposed by Donald Norman to refine his theory of affordances. If affordances represent behavioral possibilities, then icons are any signals or cues that inform users of these possibilities.

Signifiers may be visual, auditory, or tactile, their purpose being communication—telling users where to operate and how to operate.

As Norman elaborates in *The Design of Everyday Things*, Signifiers can manifest as:

A flat surface on a door, suggesting it should be 'pushed'.

The raised shape and shadow of a button, indicating it can be 'pressed'.

The underlining and highlighted color of a web link, implying it can be 'clicked'.

The position of a volume slider, suggesting it can be 'dragged'.