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The iPhone is not easy to use: a new direction for UX Design

by Fred Beecher on August 17th, 2009



I live and breathe user experience design, and yet it took me two years to get myself the device referenced by almost every single presentation about user experience since 2007... Apple's iPhone. My reasons were very specific and perhaps boring, but what is interesting is the perspective this wait has afforded me. Since it was released, the iPhone has grabbed an astonishing share of mobile Web traffic, been regarded as a "game-changer" in both the design and business worlds, and has even been referred to as the "Jesus Phone." Now that I've owned one for two weeks I've developed a different perspective. The iPhone is surprisingly difficult to use, but it sure is fun! And *that* is why it's a game-changer.

A Lack of Affordances Leads to Low Learnability

Learnability contributes greatly to the usability of a system. If a system is designed for a specific context, it should be easy for people in that context to approach it, assess its controls, and manipulate it. Granted, [learnability isn't everything](#), but when it's tough to figure out how to do things you're on the express bus to a frustrating experience. There are two things about the iPhone that contribute to its difficult learnability. It lacks physical affordances and suffers from inconsistent visual cues.

Gestural user interfaces (UIs) are the 21st century's version of the command line interface... they're really fast and easy provided you've memorized a bunch of commands. This is fine for those who are accustomed or inclined to explore a device, but many people just want to check their calendar, write an email, or make a grocery list. These people will react to what they see on the screen rather than explore possibilities, which leaves them out of luck with a gestural UI.

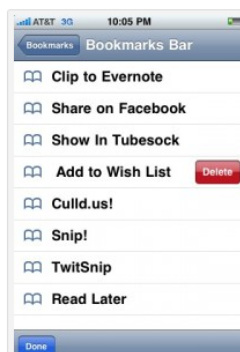
The iPhone's featureless touchscreen is Don Norman's proverbial [glass door](#). Apple has done a stunning job of making things that are pressable *look* like they're pressable, but that will never be as effective as an actual button. With physical, simple buttons we can rely on motor memory to manipulate a device without paying attention. But the iPhone's buttons are highly contextual, which forces us to pay attention to the device to remain aware of its context even after extensive use of the system. The "problem" is that the iPhone is a convergent device, a device with multiple functions. With 50,000 apps, you might even say infinite functions. The *only* way to build a device that serves 50,000 different purposes is to make it almost entirely free of physical affordances. Of course, the big value proposition of the iPhone is that it is the first mobile device to achieve an *effective* convergence.

Pressing a button is an action that a gestural UI can communicate visually, but there are a number of other actions that have no visual cue. Direct manipulation gestures such as tap (on something other than a button), double-tap, tap-and-hold, swipe, and pinch/zoom are far more difficult to communicate. These rely on user experimentation and memory.

Even worse are the modal gestures such as shake to undo and swipe to delete. If users discover them at all it's usually by accident. They don't map to anything (outside of an Etch-a-Sketch) and there are no clues to indicate that they're available. Being mentioned in a WWDC keynote does not count as a clue.



My phone displayed this message several times while I was simply using it. The message is without context, and what's worse reveals an important feature without showing how to access it on purpose.



The red Delete button also showed

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up unexpectedly. I had no idea how I made it appear. Its appearance made me feel uneasy because I didn't want to delete anything.

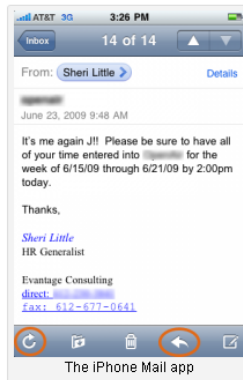
Inconsistent Visual Cues Don't Help Either

Apple has gone to great lengths to make the UI consistent, even publishing the iPhone Human Interface Guidelines, but some inconsistencies remain. Application buttons can have labels or not. Some applications, like TweetDeck, AP Mobile, and others, obligingly label their buttons:



An example of an iPhone application with button labels.

Others, mostly Apple applications, do not

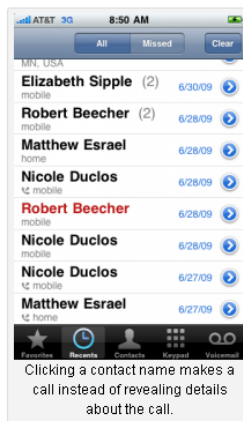


The iPhone Mail app

Does the circular arrow mean reload like in Safari? Or reply? If it means reply, what does the other arrow mean? Labeled buttons communicate their functionality much more clearly. (The circular arrow *does* mean reload, but makes no sense in the context of a message. The swoosh arrow does mean reply.)

The landscape keyboard, despite being a basic device function, isn't supported by all applications. When it is supported, there are no visual or other cues that indicate it. Not only is it difficult to learn when the landscape keyboard is available, cues as to its availability are stored in only one place, user memory.

Even the iPhone's implementation of its standard gestural interactions is inconsistent. This is most frustrating on simple interactions like tap. There are obvious tap targets like buttons and non-obvious targets like received calls, tweets, emails, etc. In some cases, a tap on a non-obvious target means "open" or "get detailed info." But in others it means "take action." The worst example of this is the Recent Calls list. I can't tell you how many times I've accidentally called someone when what I wanted to do was get more details about the call. Yes there is an arrow button, but it's on the right side away from my focus. Other applications (like Mail) have trained me to tap an object to get a detailed view of it, so my natural tendency is to tap the contact name or number.



Clicking a contact name makes a call instead of revealing details about the call.

When applications do not implement buttons, device functions, and non-obvious gestural interactions consistently, this increases the learnability problem. Not only do users have to learn and memorize what the device does, they have to learn *how each application* makes use of those functions! This is much less of an issue in point-and-click interfaces, which require fewer physical interactions and present most options on the screen for users to react to.

If the iPhone is so difficult to use, why is it still regarded as a game changer by both the design and business worlds? Because it does several important things right, but most of all because it's *fun*.

Fun is the New Usable

As a user experience designer, I thought my job was to make things not suck. Until recently. As technology has evolved, human behavior has evolved along with it. Since behavior is the basis of user experience design, my job has evolved as well. Now, my job is to make things people love. At the 2009 IA Summit, [Karl Fisch](#) articulated the value



evolved to what now, my job is to make things people love. From 2000 to 2011, that job articulated the value proposition of user experience design with sparkling clarity. "Engineers make things," he said, "we make people love them." And then he held up an iPhone as an example.

This is a *crucial* change, the importance of which cannot be overstated.

Play

Any new system or gadget has a learning curve, but where the iPhone differs is that the nature of traversing that curve is more fun than frustrating. You swipe and pinch and tap and shake your way to familiarity instead of pressing awkward buttons and navigating byzantine menu structures. You learn the iPhone by playing with it, which *encourages* interaction because *humans are built to play*. Even in a system like this, we could quickly be dissuaded from doing so if wrong actions had negative consequences, such as getting online or sending messages accidentally. The iPhone is mostly devoid of these sorts of consequences. The only time I've run into this is repeatedly calling people I didn't want to call while viewing my Recent Calls list.

The iPhone goes further than encouraging play; it *rewards* play. If you explore the phone's applications, you will often find them anticipating your needs. When viewing a video you've shot and press the action button, you can email it or upload it to YouTube. If you try to email it and the video is too large, it will ask if you want to send a smaller clip from the video instead of preventing you from sending it. The iPhone then presents you with the UI to trim a clip and continue with your message. The original video remains untouched. Simple, sensible, satisfying.

Effective & Delightful Convergence

On the day I got my phone, someone sent me an email that contained a physical address. The phone turned it into a link. I clicked it, got a map, and the phone asked me if I wanted directions. From my current location. I giggled excitedly.

The delight induced by how well the iPhone's applications interact with each other is another reason for its success. This is the point at which usability and playfulness intersect. The experience of having needs not just met but anticipated creates the joy that encourages users to continue exploring. This intelligent interaction between applications is absolutely key to making a convergent device *delightfully* convergent.

But you can't have a delightfully convergent device that isn't *effectively* convergent. What converges are contexts of use. The interactions between applications that I described above represent relatively minor, detailed contextual shifts. These small shifts result in delight *only* if the device handles major shifts effectively as well.

Before I had an iPhone, I would switch major contexts by switching devices. If I got a call while listening to my iPod I'd stop it, put it down, and pick up my phone. This was intuitive to the point of being instinctual. But now my iPhone must handle that switch of context for me. If it failed to do that in a sensible way, I would think the iPhone sucks. An effectively convergent device is one that, like the iPhone, can handle major shifts in context in a way that supports the user's transition between those contexts.

Implications for User Experience Designers

iPhones fly off the shelves despite being difficult to learn.

Why?

Because they let you do what it says you can do and they make you happy while you do it. This proves that my job as a user experience designer has evolved rather than simply changed. While it's still my responsibility to prevent things from sucking, now it's also my responsibility to add a little playfulness. As Kim Goodwin said in her [Interaction09 keynote](#), we have a limited window in which to prove how valuable design can be to business. There are three ways in which user experience designers can learn to incorporate play into the systems they design.

Experience and Research Play

You can't build playfulness into your designs without experiencing playfulness yourself. Play games and pay attention to what makes them fun. For example, the only rule in the card game Flux is that the rules constantly change. Completing a level in Peggle gives you the "Ode to Joy," rainbows, unicorns, and fireworks! Use these elements as inspiration for working playfulness into your designs. You might not be able to play the "Ode to Joy" when people complete a purchase, but can you delight them in another way?

Play is a behavior. As a user experience designer, you should explore research about play and playfulness just as you'd explore research about gestalt perception or information seeking. [The National Institute for Play](#) is a good place to start. The ACM digital library has some [resources on playfulness and computers](#). Questia has [resources on play in general](#). (Both ACM and Questia are paid services.)

Become Familiar With Game Design

Game designers put a lot of thought into how to design a fun experience. We can learn a lot from the principles they use to make this happen. Much of game design seems to revolve around creating, sustaining, and developing a narrative. This aspect is less important to user experience designers than game mechanics and the design of casual games.

A game mechanic is anything that guides the play of a game. Most mechanics take the form of either rules or possible actions. In cribbage, players must discard two cards to the crib (rule) and they keep track of their progress by placing pegs on a board (possible action). Game mechanics translate into the user experience design world as interaction patterns. Understanding how game designers make games fun by designing pleasing game mechanics will help you design pleasing interactions. The Critical Gaming Network's Game Design 101 has a [great discussion of game mechanics](#).

Casual games are those that are meant to be picked up and played simply for the joy of playing them. They are always enjoyable, often compelling, but not engrossing. Peggle and Paper Toss are canonical examples of casual games. Casual game design is important to user experience designers because they place special emphasis on learnability and delightful interactions. When we design systems that are fun, delightfulness should be a side effect of interacting with them even though it is not the goal. People still have tasks to complete and we can't let fun get in the way of that. For more on casual games, read the [Casual Game Design](#) blog as well as [Nicole Lazarro's "Why We Play Games."](#)

Re-Learn the Art of the Tutorial

My experience with the iPhone has led me to think that maybe fun doesn't need to be intuitive. Maybe fun is so valuable that people will make the effort to learn a system built on fun interaction patterns. If I had the opportunity to change one thing about the iPhone, I would add a tutorial. By tutorial I *don't* mean a boring list of stuff you can do with it. I'm specifically thinking of some sort of mini-game. It would introduce users to all the different gestures they can do and the contexts in which they're appropriate, challenging them to choose and perform the right one.

Tutorials in the casual games I've played take one of two forms. The first is much like the mini-game I described above. This type of tutorial is composed of levels in which the goal is to learn, explore, and practice one or more game mechanics. The player then begins the "real" game. The iPhone games Isotope and TaxiBall contain good examples of this type of tutorial.

The second is the in-game tutorial. In games with this type of tutorial you simply start playing. Early on the game will put you in simple situations that require you to use one or more of the game's mechanics. The game will then display

a short description or demonstration of the mechanic you need to use to get over the current hurdle. The frequency with which the game shows these descriptions decreases over time. The iPhone games Spore Origins and Rolando contain good examples of this type of tutorial.

Both types of tutorials have their advantages and drawbacks. Mini-game tutorials are very focused. They allow users to learn everything at once. They keep out of the player's way as they play the game. But what mini-game tutorials lack is context. In a game, context is less important because the world is rigidly defined. But in real-world systems, context is key to good user experience design. In-game tutorials are all about context, but they interrupt the flow of play. This is less of an issue in a game than it is in real-world systems. In a game, the frequency and temporal location of tutorial elements can be highly controlled. They appear when players expect them to appear, when beginning a game. The contextuality required to make these work in the real world means that they could interrupt important tasks and cause frustration.

Casual Game Design has [several good articles on game tutorials](#) if you are interested.

The Way Forward

I strongly believe that play is an integral part of the future of user experience design, and I am looking forward to making that future happen. To do that, I'm going to take the words of Mary Poppins to heart:

“For every job that must be done, there is an element of fun. You find the fun and SNAP! The job's a game!”

I dub this the Mary Poppins Principle, and I challenge you to use it to find the fun in the jobs that your users must do. But for now, go have an ice cream cone. You deserve a treat for reading this whole thing.

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This article is written by



Fred Beecher

Fred Beecher is a Senior User Experience Consultant at Evantage Consulting in Minneapolis, Minnesota. Fred has been working in user experience design for 11 years, doing user research, information architecture, interaction design, and usability evaluation for a diverse array of clients like Medtronic, UnitedHealthcare, 3M, RBC Dain Rauscher, General Mills, Thomson Reuters, National Marrow Donor Program, and more.

Brainfarts

Chris says:

August 17th, 2009 at 9:55 pm

Well done article, Fred. I like the examples: crystal clear instances of UI stumbling blocks. Using more examples from game design are also spot-on.

I think it's safe to say Apple realized there would be some interactions that didn't map to real world actions, and that they also realized that people are (usually) first time users only once.

Perhaps they knew that they had some creative license or freedom to use the left-to-right wipe as a unique interaction because once a person used it, they'd remember it for elsewhere. Unfortunately for iPhone users as you point out, they don't use such patterns consistently (date events aren't deleted in such a swipe, for one).

The undo prompt after shaking the iPhone is particularly irksome for me. I used to shake my phone a bit if it stayed in landscape mode and I was holding it upright or vice versa; now if I do that I not only have a mispositioned screen, I also have to tap Cancel. Some sort of landscape/portrait override would be quite welcome (as would a feature to remember wireless networks I don't connect to, but alas...).

Brad Nunnally says:

August 17th, 2009 at 9:57 pm

I have always found value in Game Design Theory in the world of UX. I remember a graph in college that showed how over time a game is meant to get harder in order to keep a player engaged. The channel in which you can increase the difficulty is very narrow, and if missed you will have a game that is either too hard or too easy. (<http://twurl.nl/7rcvu> - Not the original graph, but it gets the point across)

This graph translates directly to UX. If something is too easy to use, people get bored with it and move on to something different. If it is too hard, frustration and confusion pushes the user to a different product. A really talented designer can even take this aspect of game theory and design a 'roadmap' for novice users to become super users.

Putting enough 'fun' into our work makes it more enjoyable for us, the designer, and our users. It's a win win.

Thomas says:

August 17th, 2009 at 10:10 pm

"There are two things about the iPhone that contribute to its difficult learnability..."

Like many UX analysis, this is sort of an academically provocative but totally unsubstantiated article. The iPhone is difficult to learn? Can you prove it? It's very easy to point to sort of platonic theories about perfect "affordances" or "inconsistency" but ignore the plain fact that no one actually experiences difficulty because of these things. In fact the real world often fails to provide affordances and is wildly inconsistent and

...now, we can have such time to provide alternatives and to make adjustments, and people adapt perfectly well.

"...but many people just want to check their calendar, write an email, or make a grocery list." Ah the classic oversimplification so loved by the UX guru. "People" "just" want x, y, and z. Who exactly are these "people" you mean? 80-year old grandmothers? Teenagers? And what do you mean by that "just"? Your use of that word brings with it so many assumptions, not the least of which is that there's this class of users whose needs are less sophisticated than your own. Why, they merely want to accomplish these simple daily tasks, the poor bastards! They have no time or interest in anything but checking tedious chores off their simple list—that's what that "just" says.

And then this, which undercuts your whole hypothesis: "You learn the iPhone by playing with it, which encourages interaction....we could quickly be dissuaded from doing so if wrong actions had negative consequences....The iPhone is mostly devoid of these sorts of consequences."

But this means that the difficulty *doesn't matter*. If something doesn't feel difficult to learn, it is in fact *not difficult to learn* (vis your point about studying video games, also difficult but which feel easy to learn).

I truly don't understand the point of an article like this, except as an attempt to take an academic theoretical framework and to try to nitpick a design to see where it fails. Again, it's mostly frustrating because you've ignored the obvious real-world evidence that the iPhone isn't difficult and is easily learned.

Marcelo Eduardo says:

August 17th, 2009 at 10:19 pm

After reading the whole article, I came prepared to type here a lot, but Thomas already did.

I second his words.

I have studied and (recorded also) hours of people using this device, and others brands and I would not try to go that specific. While you have a point in some inconsistencies across the GUI, you simply placed yourself as "the people" what in my opinion is the first big UX mistake a designer can make. Write "For ME it was difficult" until you have proof that a good amount of users from several different background think the same.

Br

Marcelo

seppo says:

August 17th, 2009 at 11:35 pm

Ha! Thanks for the mention of Taxiball. We put a lot of effort into the tutorial, and it seems like a lot of people have responded positively to it.

While I think Thomas' point that if something doesn't feel difficult to learn, it's not difficult to learn, I also strongly agree with Fred's viewpoint that fun is a critical component to the iPhone's success.

The thing is, "fun" is hard to pin down. As a game designer, "fun" to me means a few things - responsiveness is a big part of it - you have to be able to draw a clear causal relationship between your action and the device's response. It can also mean a little graphical flourish - the equivalent to Ode to Joy in Peggle - people love shiny things, and the iPhone's full of them.

In a way, what the little graphical flourishes provide are twofold - first, they draw a strong causal connection between your action and the device's response, and second, they act as a reward to the user - even if the response to the original action isn't what the user intended!

Take, for example, the flip-up corner on the gmaps app. When I click it, I'm happily surprised by the little animation of the corner flipping up. There's no harm done in having done it. It's surprising, risk-free, and rewarding to itself. It encourages exploration. It may be totally inconsistent with other apps, but because it's fun and not punishing, encourages people to play - which is how they learn the best. :)

seppo

DotNetShoutout says:

August 18th, 2009 at 12:23 am

Johnny Holland - It's all about interaction » Blog Archive » The iPhone is Not Easy to Use: A New Direction for User Experience Design...

Thank you for submitting this cool story - Trackback from DotNetShoutout...

Fred Beecher says:

August 18th, 2009 at 12:39 am

Great discussion, all!

Thomas & Marcello: You both raise very valid points. You're right, maybe I should have indicated for whom the iPhone is difficult to learn. It is people who want to do things as opposed to people who also enjoy interacting with technology. The word "just" failed to make that division clear.

The important differentiator here is that there are people who are inclined to explore and interact with technology and those who are not. For those who are, the iPhone is a treasure-filled paradise. But for those who aren't, it's just another device that does some things better than other devices do them. These people "react" to technology while others, like us, "proactively explore" it. If the non-explorers have nothing to react to (affordances), they will take no action and thus will be unable to use a feature you or I would find through exploration.

You see my statement about the iPhone encouraging interaction and thus learning as undercutting my argument. You're right, it "is" contradictory. And that's a big part of my point. If you are someone who reacts to technology rather than explores it, it is highly likely that you will "not" explore it through interaction. Granted, there might be people on the fence between reactive and pro-active, and I'd bet that those people would be more

easily swayed by the iPhone than other devices, but the fact remains that much of the iPhone remains unavailable to people who don't explore.

Really, the criticism of the iPhone's UX design is not the main point of this article. It's the hints about the future of UX design that these observations have allowed me to glimpse that are the real point.

Yes, the iPhone is a truly landmark achievement of design, but its flaws point us toward the design problems UX designers will have to grapple with in the near future. And it seems like we could learn a lot from the folks in the game design industry who already have years of grappling with these problems under their belts.

Fred Beecher says:

August 18th, 2009 at 12:47 am

Seppo: Seriously. Great job on the Taxiball tutorial! It was enjoyable as I was going through it, and it really didn't take a lot of time. When I got to the actual game, I knew what to do and didn't struggle with the mechanics of the game. (Oh yeah, the game's pretty good too. :)

Your point about the immediacy and causality of fun interactions is great! That's the kind of low-level, visceral fun that I see becoming a huge component of UX design in the near future. The flip-up corner is a good example of an interaction that, while non-standard and fun, is at least possible for every type of user to engage with. It presents at least "something" for a non-exploring user to react to.

seppo says:

August 18th, 2009 at 2:34 am

Oh - one more thing that supports the "fun" theory...

Originally, Taxiball's tutorial had very literal text. Here's a timer, here's an obstacle, here's what it does, etc. It felt... painful. Every time text popped up, it was an intrusion into the interactivity, and people closed each text box without reading and moved on, making the tutorial pretty ineffective.

One day, out of the blue, we decided to make the tutorial text rhyme. Rhyming, by most measures, made the text "worse" - it was harder to convey a particular idea clearly AND have the text rhyme. But the critical difference was that now, reading the text was rewarding and fun. Understanding it was harder, but because people would read the text, and enjoy it, they'd take the time to understand the mechanics as well.

It became quite clear at that point that efficiency is by no means the shortest route to understanding. And in the case of the discussion of the iPhone's, consistency and efficiency aren't necessarily the shortest route to usability.

Fun stuff. Thanks for a really thought-provoking article. :)

Vesa says:

August 18th, 2009 at 6:14 am

Preference over performance anyone? That is how it has always been and how it will be

LKM says:

August 18th, 2009 at 9:28 am

I'm not sure it's valid to look at undo and swipe-to-delete and conclude that the iPhone is hard to learn. Yes, some features can only be discovered by accident or by having somebody tell you about them or through a tutorial (and I would consider Apple's earlier iPhone ads tutorials), but these are all non-essential features. You can use your iPhone just fine without ever undoing anything, and you can delete things without the "swipe" motion. I guess most people do. Do they find the iPhone hard to learn because they don't know how to undo, and probably don't know that the feature even exists? I doubt it.

So I don't think the question "if the iPhone is difficult to use, why is it still regarded as a game changer" is valid. The iPhone is not, in fact, difficult to use.

I do, however, agree that it's important to make applications fun to use, similar to games. So what makes a game fun? Good games typically rely on simple, easy-to-learn gameplay, which is used to create what the gamer perceives as increasingly difficult situations. Games are typically complex systems derived from a simple set of rules. There are no hidden rules in Tetris.

Humans feel fun when they are challenged, but in control and able to master the challenge. They want to feel powerful, but they also want to feel as if they had just done something extraordinary. The result of this is that fun games are not actually hard; they just "feel" hard. In modern games, you feel challenged constantly, but you hardly ever die. At the end of a session, the game wants you to feel as if you had just mastered something really difficult, when in fact, the game just made you feel that way (see Half-Life 2, which always makes you feel as if you were just barely surviving, while always adapting the gameplay to your skills).

So it's very dangerous to play a game and derive from your own experience of said game why it was fun for you. In reality, the game probably did something very different from what you actually thought it did. Simply looking at a game may give you the impression that "hard" things are fun. But that's not what's actually fun about a game. The fun part is "mastering" something you "perceive" as a difficult task.

In the context of an application, this means that an application must be easy and obvious to learn and use, but must allow users to do things the user perceives as being difficult. A great example of this is AutoStitch, an applications which stitches pictures into a panorama. It's extremely simple to use, you simply take a bunch of pictures from roughly the same point of view, open the app, select the pictures, and it creates a panorama. There's nothing difficult about it. However, the result is so astonishingly cool that you're proud of what you've created, even though the part "you" did wasn't all that hard.

Another such application is Keynote, which creates beautiful presentations by default. It's quite easy to use, so you always feel in control, but the end result is compelling enough that you get the feeling that you've really outdone yourself; that you've reached a tremendous achievement.

That's how most games work, and it's how applications should work, too.

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August 18th, 2009 at 10:06 am

[...] The iPhone is Not Easy to Use: A New Direction for User Experience Design (tags: iphone usability design ui Dogear-Nation process) [...]

[Giles Colborne](#) **says:**

August 18th, 2009 at 10:43 am

Good stuff.

Gestural interfaces are always going to present this kind of 'affordance' / 'cues' problem though. And they always have.

Drag and drop has been around for a long time - but there are no cues on screen to suggest what the user should do. Yet for organising folders (for instance) drag and drop is a very satisfying solution.

The same goes for other gestures which you mention, such as pinch and zoom.

Touch screen devices are not the same as WIMP devices and they need to be judged by their own standards.

What I'm most concerned about is that gestures are being patented, effectively preventing UI designers from creating a common language which users can understand.

We should all be concerned about that, and the industry needs a campaign to put a core set of gestures in the public domain to ensure learnability and ease of use.

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[dude](#) **says:**

August 18th, 2009 at 2:25 pm

Ok so just because you're too clumsy with your fingers the iPhone isn't easy to use? Of COURSE the round arrow is refresh (like every refresh button in history) and the left arrow is reply (like every reply button in history). You're grasping at straws here. Do you think the iPhone would have the market share and widespread appeal that it does if it wasn't easy to use? I've never seen an app (especially Apple apps) that wasn't mind-numbingly obvious. Time to get your head out of your ass 'designer'-man.

[Joe Ganley](#) **says:**

August 18th, 2009 at 2:33 pm

I remember when ST:TNG started, looking at their consoles - flat glass touchscreens covered with 'buttons' - and thinking: Seriously? After 400 years, that's the UI they came up with to control a starship? And now, our revolutionary 21st-century UI is ... a flat glass touchscreen covered with buttons.

[Twitted by nicholasdr](#) **says:**

August 18th, 2009 at 2:34 pm

[...] This post was Twitted by nicholasdr [...]

[Twitted by UsefulTheory](#) **says:**

August 18th, 2009 at 3:46 pm

[...] This post was Twitted by UsefulTheory [...]

[Fun is the new user experience direction - Chance Bliss](#) **says:**

August 18th, 2009 at 4:25 pm

[...] The iPhone is not easy to use: A new direction in user experience design [...]

[Sherrod](#) **says:**

August 18th, 2009 at 5:06 pm

I certainly enjoyed the sections relating gaming to UX. I think your ideas there are spot on and are really what make the iPhone such a huge hit. But I think your argument in that the iPhone is difficult to use for the majority of people and that the majority of people "just" want to do this and that is invalid. You neglect to identify your audience, so let me help.

The iPhone is firmly planted in the smartphone industry, but its audience base has evolved greatly over time. It started with the feature geeks and Apple fanboys buying the \$600 first-gen. Then it spread to power, corporate, government users, and most importantly, developers. Now, we're seeing it in use by just about everyone willing to put up with AT&T.

Knowing this, one must consider how it spread: advertisements and word of mouth. The only ads I've seen for the iPhone are TV ads. And what are those TV ads about? "This is how you turn it on. This is how to make a call. This is how you send an email. Want to play golf? Want to take notes? Want to find your way? There's an app for that." The ads

themselves are the instruction people need. Then people get their phones and, as you pointed out, discover all these features and quirks and ways of doing things. And what's the first thing they do? "Hey, look what my iPhone can do! Yeah, you just swipe!"

I've taken the long way around to say that the UI or even a tutorial is not the only thing that can teach one how to use something. Saying the iPhone has so few affordances as to be unusable by most people is ignorant to the many other avenues of user interaction.

KT says:

August 18th, 2009 at 5:06 pm

What works 11 years ago might not have worked today. Same for user interface design for the web. No one recognizes the drop down suggestion. User interface evolves like technology, and without doubt, the iPhone is a class of device of it owns that have never existed before any other. So I would give Apple the thumbs up for creating an user interface that not only is fun but usable on a revolutionary device.

Twitted by jlgosse says:

August 18th, 2009 at 5:13 pm

[...] This post was Twitted by jlgosse [...]

Johnny Holland - It's all about interaction » Blog Archive » The iPhone is Not Easy to Use: A New Direction for User Experience Design says:

August 18th, 2009 at 6:48 pm

[...] Read the original here: [Johnny Holland - It's all about interaction » Blog Archive » The iPhone is Not Easy to Use: A Ne...](#) [...]

Rachel says:

August 18th, 2009 at 7:21 pm

Some excellent insights in this article. I adore my iPhone, but I do have to agree that it's the 'fun' of the device that makes it appear to be so usable. There's a difference I think in actual usability vs apparent usability. The addition of a playful, entertaining interface can mask the actual usability and apparent usability rises a great deal.

That said, I too make that mistake of clicking the name in the recent call list expecting to get to the details and end up accidentally returning a call. That I want them to fix :)

Jeremy Olson says:

August 18th, 2009 at 7:22 pm

"Maybe fun doesn't need to be intuitive." You can see this in the success of Tapbot's apps (<http://tapbots.com/>). In terms of discoverability, these apps are awful. They break all the conventions. You would think this turns people off.

The reason it doesn't, and the reason the Tapbot's folks have been able to quit their jobs, is that these apps are fun.

The designer at Tapbots is mindful that his apps have a learning curve but, as their designer says in a blog post, "we don't see that as a bad thing. Our apps are designed more like a game. Whenever you play a new video game, you need a little time to learn how the game works and how it controls." (<http://tapbots.com/blog/design/designing-converbot>)

They are also present a solid example of your tutorial idea: "We also added an auto-playback demo for users to learn how it works which is a lot like in-game tutorials in today's video games."

As Tapbot's case proves, fun sells.

Twitted by wbroek says:

August 18th, 2009 at 9:05 pm

[...] This post was Twitted by wbroek [...]

Mario Bourque says:

August 18th, 2009 at 9:47 pm

I was speaking with someone last night who said they love developing for hardware and particularly the iPhone, because they know exactly what to design for - limitations and all.

It's also considered to be a sexy piece of jewelry.

Christopher Fahey says:

August 18th, 2009 at 10:06 pm

The iPhone, despite the many legitimate and insightful problems you cite, is still in my and many other people's also-legitimate opinions a vastly better (that is, easier to use) than any other phone UI.

People don't praise it for being perfect, they just like it better than anything else they've ever used. "They" being the bajillions of iPhone lovers out there, people who switched not just phone hardware and phone companies just to use the iPhone, but people who switched their whole UI paradigm from buttons to touch. I mean, the iPhone's numbers speak for themselves. The iPhone is empirically an insanely successful product. Are you contending that all the people who "say" they like it are actually suffering and don't know it, or won't admit it? I doubt that.

You may simply be letting perfect be the enemy of good. I think this post should have been titled "Let's not let our admiration for the iPhone prevent us from calling attention to the problems it has". I mean, if the iPhone isn't easy to use, well then I can't think of anything that is.

iPhone is all Fun and Games | Konigi says:

August 18th, 2009 at 11:18 pm

[...] is all Fun and Games Fred Beecher wrote the excellent article "The iPhone is Not Easy to Use: A New Direction for User Experience" on Johnny Holland to talk about why the iPhone is not easy to use (at first), and why it changes [...]

Ram says:

August 18th, 2009 at 11:39 pm

Hmm very interesting view and your observation reflects the freedom of speech. IMHO, I think iPhone is great and very user friendly. Shaking the device to undo what you have done is pretty cool feature. But the way you are getting a message on the main page is kind of retard. It must be a bug. It doesn't happen to me. And swiping for deleting is also cool. But it's not immediately deleting for you either. You have to press the delete RED button. So what's the worry?

Having said, I have a big issue with with iPhone. It's all about the overall memory consumption and a poor design on the Garbage collection. It's closer to pathetic. They should work on it. Why pay so much for such a device and expect so little RAM? It doesn't make any sense. Why can't they have more temporary memory?

Henry Kuo says:

August 18th, 2009 at 11:50 pm

I'm sorry. As a Senior User Experience Consultant, you waited 2 years to pick up an iPhone to see how it works? Seems kind of um...part of your responsibility to keep abreast of new technology.

Darrel says:

August 19th, 2009 at 12:06 am

Some very valid points.

That said, my 7 year old picked mine up and figured it out in a matter of minutes. He finds features I didn't even know existed.

Perhaps there's a generational aspect as well. :)

Twitted by bnunnally says:

August 19th, 2009 at 12:28 am

[...] This post was Twitted by bnunnally [...]

Fred Beecher says:

August 19th, 2009 at 3:42 am

Wow. Lots of good insight from lots of smart people. My apologies in advance, but this response (trying to get to everyone) will be epic in length.

Seppo: So did you prototype your tutorial? Or did you develop it and beta test it iteratively? I would love to hear the story of prototyping it. Email me!

LKM: Your point about the iPhone commercials is quite valid. The fact that you can sell a "smartphone" just by showing what it's like to use it (as opposed to what features it has) really shows that the iPhone is a new breed of device. However, not everyone sees the ads and they're usually out of context. I do think, though, that the ads encourage people to explore the device.

Sherrod: It seems like you & LKM are saying similar things regarding the ads. That's a great way to think outside of the tutorial box, or any other boxes that constrain the designers of learnability aids. Regarding drag & drop, you're right, that's considered intuitive in many situations now. Maybe in a few years other non-obvious gestural UI interactions will become so common that the same thing will happen.

Jeremy: Tapbots is a great example! I just recently downloaded Convertbot but haven't played with it much. At first, I expected to be able to convert more units (like millimeters to parsecs, I know, I need help) until I eventually found the preferences. I'll go back to it and pay more attention, and I'll definitely check out those links you posted. Thanks!

Chris: You're right, the sales numbers speak for themselves. The iPhone is far better than what's out there. (And no, I'm certainly not saying that people are secretly suffering.) The iPhone is rightly hailed as a pinnacle of user experience, but to me, it's imperfections that are interesting. It's not "the" pinnacle of UX and its imperfections point to the design problems we'll need to solve in the immediate future.

Henry: So to be a real UX designer you need to have an iPhone? Ooo. Ouch. While I did indeed wait two years, not a day in those two years went by in which I didn't obsess over the thing. :)

Darrel: Hey man! And yeah, kids are pretty much hard-wired to explore things. When you're a kid, your life revolves around fun and you actively seek it out. Once you become an adult, you're just happy to find it lying around somewhere once in awhile. :)

Items of interest » Blog Archive » Bookmarks for August 18th from 12:24 to 12:24 says:

August 19th, 2009 at 12:43 pm

[...] Johnny Holland – It's all about interaction » Blog Archive » The iPhone is N... – [...]

Erik van de Wiel says:

August 19th, 2009 at 2:10 pm

Thomas said:

"I truly don't understand the point of an article like this, except as an attempt to take an academic theoretical framework and to try to nitpick a design to see where it fails. Again, it's mostly frustrating because you've ignored the obvious real-world evidence that the iPhone isn't difficult and is easily learned."

I'm glad you found your utopia :-)

Twitted by miksago says:

August 19th, 2009 at 3:31 pm

August 19th, 2009 at 9:07 pm

[...] This post was Twitted by miksago [...]

Matt! says:

August 19th, 2009 at 7:07 pm

Another important aspect of game design that is key to making fun UI experiences is the notion of "feedback." Specifically, letting the user know immediately, in a satisfying way, what they have just accomplished, and if it is "good" or "bad."

People love to feel a sense of accomplishment, even if it is a very small one.

Jesper says:

August 19th, 2009 at 9:09 pm

Your points are quite good. Though in some of them you seem to use personal taste instead of actual science (recent calls, clicking the contact name should bring up information? That's breaks the learned model).

But you are somewhat missing the point, the iPhone is a gamechanger not because it's the perfect HCI device. But because it's the best. And far ahead of the rest.

Still, your points are really good and I look forward to more insights.

Mark says:

August 19th, 2009 at 11:08 pm

"...where the iPhone differs is that the nature of traversing that curve is more fun than frustrating. You swipe and pinch and tap and shake your way to familiarity instead of pressing awkward buttons and navigating byzantine menu structures..."

To your point on playfulness: I'm sure we'll see gestural interfaces evolve as a result of a more 'common language' requirement for using newfangled devices, but I think the aspect of 'playing' with the iPhone is a function of it's novelty. We're willing to work through a crisp, new experience because we are so intrigued by it. As our user experiences mature, however, these novel interactions that require some amount of work will become more mundane and less interesting.

Andrew says:

August 20th, 2009 at 2:34 am

Thomas:

"The iPhone is difficult to learn? Can you prove it?"

... and ...

"But this means that the difficulty doesn't matter. If something doesn't feel difficult to learn, it is in fact not difficult to learn (vis your point about studying video games, also difficult but which feel easy to learn)."

If it takes ten minute to learn to do something on an iPhone, but one minute on some other device, then it is in fact difficult to learn. If that learning time is fun, people may not care.

Fred's point is that the iPhone is difficult to learn, but people don't care because it's fun.

"I truly don't understand the point of an article like this..."

UI designers have a choice - if you can't make it easy, you can make it fun instead. It may even be better to make it harder but more fun. Many people may not realize this; it's not an obvious point. It wasn't obvious to me.

As for your rant about the word "just"... lighten up, man! Even unix gurus sometimes just want to write an email.

Force10x says:

August 20th, 2009 at 3:01 am

Interesting article.

I had similar thoughts when I got my iPhone and used it the first time.

<http://force10x.com/blog/design/my-new-apple-iphone-3g/>

Now, I am so dependent on it;-)

Kate Walser says:

August 20th, 2009 at 4:35 am

As a fellow UX designer, sure, I notice things that didn't work the way I thought they would. (I.e., I usually accidentally call someone back when trying to get to voicemail) The bigger love factor for me though is how the iPhone anticipates what I might want to do and then sets up the simplest path to do it - that's a true mark of a great user experience in my mind. Example: I can add people quickly to Contacts just by tapping their name in the From / CC line of an e-mail and choosing an option. And if I'm fat-fingering a name that's in my To / CC line, the iPhone auto-suggests the correctly spelled name.

Anticipating and making things you want to do easy is much more valuable than fixing little things that are only a tiny bit odd / surprising and really don't impede your work / life. (Like the accidentally calling back people when you just meant to check voicemail :))

And incidentally - that circular reload is handy in the context of a message when you manually fetch e-mail or didn't download the whole message.

Cell Phone Plans/Brands in Japan - Page 20 says:

August 20th, 2009 at 1:09 pm

[...] here's a link to an article that a game designer friend of my posted recently. Johnny Holland - It's all about interaction Blog Archive The iPhone is Not Easy to Use: A New ... Which makes some interesting points about the iphone. I find it interesting that the iphone was [...]

Tom Voirol says:

August 21st, 2009 at 6:38 am

So the iPhone is difficult to learn.

Compared to what?

Fred, you point out a few inconsistencies in the iPhone UI which, surprise surprise, prove it is "not perfect". I doubt anyone but the most blinded fan would claim it is.

Apart from that though, your claim that it is difficult to learn fails to provide the comparison you base it on. I would maintain that of all the mobile device interfaces I have come in contact with (starting with the Newton MessagePad) the iPhone is the "easiest" to learn without written instructions or prior knowledge (e.g. which menu the options dialog is typically hiding behind).

It certainly is head and shoulders above any contemporary mobile OS I've used or played with. It is - of course - not perfect, but by freeing a mobile OS from most of the old interface patterns Apple has opened the door to the exploration of new ones.

The only risk I see in this is that everyone else now simply plays the "copy iPhone with a twist" game thus replacing the old shackles with new ones.

The week in links 21/08/09 - Craig Baldwin's Blog says:

August 21st, 2009 at 1:02 pm

[...] The iPhone Is Not Easy To Use: A New Direction For UX Design (johnnyholland.com)
[...]

Eric says:

August 21st, 2009 at 11:46 pm

Just a quick note about one of the listed inconsistencies:

Toolbars have no button labels, Tab bars do have button labels. These metaphors are consistent within all of Apple's shipping apps, and thereby set expectation of behavior.

Any UI variation outside of the HIG that third parties decide to come up with, is their burden to explain, not Apple's.

Dogear Nation - Episode 117 - Avatar Playboys | Dogear Nation says:

August 23rd, 2009 at 3:15 pm

[...] Why AT&T killed Google Voice (kiambogo) iPhone is not easy to use [...]

New Article on Johnny Holland says:

August 24th, 2009 at 7:44 pm

[...] The iPhone is Not Easy to Use: A New Direction for UX Design [...]

Putting people first » The iPhone is not easy to use: a new direction for UX Design says:

August 24th, 2009 at 11:17 pm

[...] Read full story Leave a Reply [...]

Sean Beason says:

August 25th, 2009 at 12:25 am

I can't believe this article. My mother and father cannot operate a microwave but they can use their iPhones. The iPhone doesn't even come with an instruction manual and MY PARENTS continue to teach me little things the phone can do that I didn't know. Whether we like it or not, the iPhone IS easy to use.

Twitted by jontobey says:

August 25th, 2009 at 1:27 am

[...] This post was Twitted by jontobey [...]

Ramp Champ - Combining iPhone Play with In App Purchases and Virtual Goods -- TECHNOSIGHT says:

August 25th, 2009 at 2:18 pm

[...] it's been stated that the iPhone and iPod Touch are actually not easy to use (or perhaps more apt, not easy to design for), clearly they offer a paradigm that's resonated with 60M+ consumers worldwide. There's [...]

Ramp Champ - Combining iPhone Play with In App Purchases and Virtual Goods | Business News says:

August 25th, 2009 at 3:19 pm

[...] it's been stated that the iPhone and iPod Touch are actually not easy to use (or perhaps more apt, not easy to design for), clearly they offer a paradigm that's resonated with 60M+ consumers worldwide. There's [...]

Twitter Trackbacks for Johnny Holland - It's all about interaction » Blog Archive » The iPhone is Not Easy to Use: A New Direction [johnnyholland.org] on Topsy.com says:

August 26th, 2009 at 1:31 am

[...] Johnny Holland - It's all about interaction » Blog Archive » The iPhone is Not Easy to Use: A Ne... johnnyholland.org/magazine/2009/08/the-iphone-is-not-easy-to-use-a-peek-into-the-future-of-experience-design - view page - cached The iPhone is Not Easy to Use: A New Direction for User Experience Design - From the page [...]

Toronto says:

August 26th, 2009 at 4:50 am

I agree that Apple's iPhone buttons sometimes lack descriptions (so you are unsure what would happen if you click it) and sometimes features are hidden until you accidentally stumble onto them.

This has an added benefit - it encourages the user to click and play and discover. (For example, viewing a photo and then accidentally rotating the screen and then watching in amazement as the photo rotates as well). When was the last time a Windows user was excited to click and play and discover with Microsoft Office or Outlook? With the iPhone, the user interface welcomes and encourages people to interact. Apple has put fun into every action. For example, deleting an app from the iPhone (a remarkably boring task) is made fun with an interface that dazzles as all your icons shake.

Many companies have tried to duplicate Apple's user interface formula and failed, but I think the killer formula is Fun + Easy = Insanely Great.

Twitted by Stutger says:

August 26th, 2009 at 10:39 pm

[...] This post was Twitted by Stutger [...]

Sometimes I don't want an "Experience." | CoFactors says:

August 29th, 2009 at 1:56 pm

[...] I read Fred Beecher's most excellent piece in Johnny Holland Magazine. The gist of the article is that the iPhone interface is hard to learn and use (space constraints, [...]

DesignNotes by Michael Surtees » Blog Archive » Link Drop (8-28-09) says:

August 29th, 2009 at 6:56 pm

[...] The iPhone is not easy to use: a new direction for UX Design [...]

Joe Clark says:

August 30th, 2009 at 8:58 pm

Hold on. iPhones are clearly not "difficult to learn." Certain features, like reverse-swipe to delete and shake to shuffle, are underdocumented. It is manifestly clear that typical iPhone and iPod users learn their devices quickly, and enjoy the experience of learning them.

To reiterate, you've got two counterexamples that don't even prove your point and could be remediated by a help screen. This is not stopping people from linking to your post, of course.

Johnny Holland - It's all about interaction » Blog Archive » Engaging the User: What We Can Learn from Games says:

August 31st, 2009 at 12:21 pm

[...] to contextual information/ help content is probably the most common application here. (see als: The iPhone is Not Easy to Use, by Fred [...]

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