Through the Looking Glass

Reflections on smartphone use
A new framework for understanding behaviour and enhancing skills
### smart phones’ limitations influence software design and user behaviour

Users are drawn to passive consumption of content rather than active creation.

### Input is a problem...

Smartphones are fundamentally unbalanced when it comes to data transfer.

Although screens are small, they can display fast moving, full colour content at high resolutions and their audio capability is improving all the time.

In contrast input is absurdly slow, even compared to other digital devices.

Smartphones are optimised for consumption over creation.

<table>
<thead>
<tr>
<th><strong>Desktop or laptop</strong></th>
<th><strong>Smartphone</strong></th>
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<tbody>
<tr>
<td>~16 x 16px dimension</td>
<td>~1 × 1px</td>
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<tr>
<td>~32 x 32px dimension</td>
<td>~32 x 32px</td>
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### so functionality is limited...

Designers (and users) try to get around the input problem by creating shorthand communication and streamlining navigation and content.

Breadth and depth is compromised by the need to reduce the precision and speed of user input to fit the limitations of the device.

Users confronted with imprecise and relatively unresponsive controls will inevitably become frustrated by design and content that isn’t optimised for the device.

As users become used to flattened content and services, their input skills atrophy increasing their preference for streamlined solutions.

This creates a feedback loop that is difficult to combat. Even if designers want to deliver a richer experience, they will struggle in a market that offers ‘easier’, but ‘flatter’ alternatives.
**Smartphones’ versatility comes at a cost**

Users default to this ‘multi-tool’ for most tasks

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**Opportunity costs**

Using the wrong tool for a job results in an opportunity cost – in effectiveness, precision or speed.

If you only have access to one tool, a flexible, portable, multi-tool is likely to be your best option. A Swiss army knife would be invaluable if you found yourself stranded on a desert island.

In many cases, however, specialised tools will increase productivity and those who master their use and choose them when appropriate will outperform those who do not.

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**Default behaviour – smartphone as Swiss army knife**

Many users default to using their smartphones for everything, despite there being better tools available.

Every time someone uses their phone instead of a more effective specialised tool, there is an associated opportunity cost.

In some scenarios this is a price worth paying, but we find that users aren’t consciously evaluating their choice.

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**What people say**

Respondents often seem oblivious to the limitations of their chosen tool.

**“I’m too busy to see my friends in real life but I’m in touch with them all the time.”**

*The Illusion of connection*

Olympia, 17
Average phone usage: 5.8 hrs/day

**“I’m 40% fluent in French according to the app.”**

*Illusion of exploration*

Samantha, 23
Average phone usage: 5.0 hrs/day

**“When I make videos, I can edit them on the phone, it’s not like I need a laptop for it.”**

*Illusion of creativity*

Joanne, 20
Average phone usage: 6.4 hrs/day

**“My phone is great for organisation. I even sort my taxes out on it.”**

*Illusion of productivity*

Simon, 23
Average phone usage: 1.7 hrs/day
Users have illusions their smartphones meet all their needs
Significant opportunity costs go un-noticed and unchecked

Beliefs vs reality
Smartphone users often wrongly believe their phones are satisfying their motivations and meeting their needs.

- **Illusion of connection** – People believe they are maintaining and developing relationships via their smartphones, often at a direct cost to more meaningful contact.

- **Illusion of productivity** – People believe they are getting everything done on their phones, without considering whether there might be better tools. For example, using a smartphone to create a CV.

- **Illusion of exploration** – People believe they have access to a wealth of knowledge and ideas, without considering filter bubbles or whether there are more suitable ways to retain and compare information.

- **Illusion of creativity** – People believe smartphones give them the ability to create and share, but the limitations of smartphone functionality make creation and manipulation less effective than using other tools.
How can we better equip young people?

An expanded concept of ‘digital skills’ to educate and empower

The need for a more comprehensive framework

Most digital skills frameworks are understandably focused on the digital environment and are device neutral. They tend to outline the skills a user needs to make a device function at different levels.

Some do go further in linking tasks using digital services to higher order goals, writing emails for the purpose of communication, for example. Our research suggests that there is a need for digital skills frameworks that help people appreciate that any digital tool is one amongst many - including some that are non-digital.

Being digitally skilled requires the appreciation of a wider toolkit and the strengths, weaknesses and cost of using tools in any given situation.

The framework – the progression of users

Goal driven
A progression of mindsets
(Proposed extended framework)

- Skilled innovators
  Thinking big
- Selective specialists
  Making discerning choices
- Mindful operators
  Aware of the options
- Goal setters
  Purpose oriented
- Default users
  Basic operation

Statements and questions to assess capability

- Could better tools be created – how might they work and how might they look?
  User is able to conceive of, and ultimately create, alternative tools that are best suited to their goal

- Which is the best tool for my goal?
  User is able to evaluate the strengths and weaknesses of different tools and appreciates possible opportunity costs

- Is using this tool really helping me achieve my goals?
  User reflects on outcomes of tool use in relation to overarching goals

- Can I use it meet my goals?
  User is able to make use of the device’s functionality in pursuit of a goal or purpose

- Can I make it work?
  User has capabilities to make use of device functionality