



Symbol Testing

Interim Report - Key findings from phase 3

20th February 2019

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What is this work about?

This work is about developing symbols that are easier for people to understand.

We use symbols to help us navigate our way around, and work out what to do and how. We see them in buildings, on street signs and on packaging and instructions.

Some symbols look like the thing they represent - but many are much more abstract. This means that we respond to them either because they resemble the thing we are looking for, or because we remember what they represent, or a bit of both. Sometimes they might have writing to go with them - sometimes they don't.

Take this symbol for example:

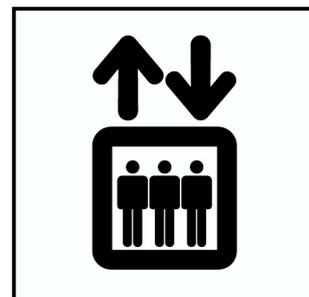
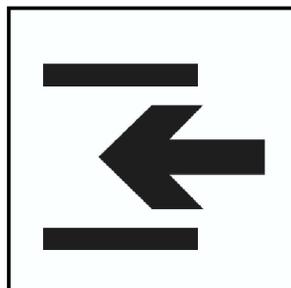


Most of us would recognise this as the symbol for a toilet. It doesn't look like a toilet though, does it?

We recognise it because we remember what it symbolises.

But what happens if people develop dementia and start to forget what symbols mean? Especially if they don't look much like the thing they represent.

Take these 2 for example:



We know that people can find symbols hard to understand, especially people with dementia. Earlier research had been done by Studio LR in Edinburgh - and had identified particular symbols which people struggled with, and why.

This can mean that people find it harder to find their way around, or understand instructions. This can mean people get lost or disoriented more easily or find everyday things harder to do. This can ultimately have a huge impact on self confidence, independence and wellbeing.

It's not just people with dementia either. Even if you don't think you struggle to understand symbols - the more thinking you have to do to make a connection between a symbol and thing you are looking for - the higher your 'cognitive load'. Cognitive psychology suggests that a higher cognitive load has a significant impact on our ability to carry out activities in the real world.

Our thinking is that by making symbols easier to understand, we will be able to make finding our way around, knowing where we are, and carrying out everyday tasks a little bit easier for everyone.

Who is involved?

The work is funded by **Life Changes Trust**.

Innovations in Dementia CIC (that's us!) do all the testing with people with dementia.

DEEP groups of people with dementia give their thoughts and expertise.

The kids from **Exwick Heights Primary School** in Exeter told us what they thought.

1145 people took part in an online survey.

Studio LR take care of all the design work.

What have we done so far?

At the beginning of 2018 we started to test a new draft set of symbols with people with dementia.

These new draft symbols were based on the learning from the earlier work carried out with people with dementia by Studio RL.

There were several stages of testing.

In phase 1 we took the new symbol set out to 6 groups of people with dementia. We showed them various versions of the new symbols and asked them what they thought they represented, and why.

We then made changes from what we learned.

In phase 2 we took redesigned symbols out to 6 new groups - with the addition of words this time - and asked what they thought they represented, and why.

We then made more changes from what we learned.

What did we do in phase 3?

So far - our question had been "*what is this*" - asking people to tell us what they thought the symbols represented.

In phase 3 we asked different questions, a reversal of those which we asked in the earlier phases. Rather than asking what the symbols meant to people, we wanted to find out how well they helped people to find what they were looking for

We also wanted to broaden out the audience to a larger number of people and include people without dementia.

Rather than working with people face to face in small groups, we did 2 things:

1. An online survey - to which we had over 1145 responses.

2. A large group survey with 3 assemblies at Exwick Heights Primary School totalling 590 kids.

The reason we wanted to work with children was to see if there was a difference between the way adults and kids understood symbols. Our theory was that kids might be more inclined to prefer symbols that resembled the target object, rather than because they knew and remembered what they were supposed to symbolise.

In the survey we tested 13 sets of symbols representing:

- Escalator
- Ticket machine
- Exit
- Stairs
- Hidden disability
- Toilet
- Emergency Exit
- Lift
- Priority seat
- Waiting room/seating area
- Information
- Parking
- Wheelchair/disability access

For each subject we tested:

1. How the existing British Standard Institute (BSI) symbol performed against 2 other commonly used or similar non-standard symbol.
2. How the new draft symbol performed against 2 other commonly used or similar non-standard symbols.
3. How the new draft symbol and the BSI symbol performed against each other and 1 commonly used or similar symbol.

In the work with the primary school kids we only looked at 3.

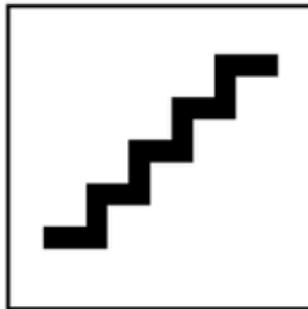
What did we learn in phase 3?

The Escalator

Here are the symbols we compared:



The BSI symbol



The 'Other'



The New Draft Symbol

Exwick Heights Primary School kids	
	86
	14
	1
Adults without dementia	
	50
	47
	1
Adults with dementia	
	50
	50
	3

The results

We found that while the kids preferred the new symbol by a significant majority, the adults were pretty evenly split between the existing symbol and the new one.

The BSI symbol performed slightly better than the New Draft symbol when tested independently against 2 'others'.

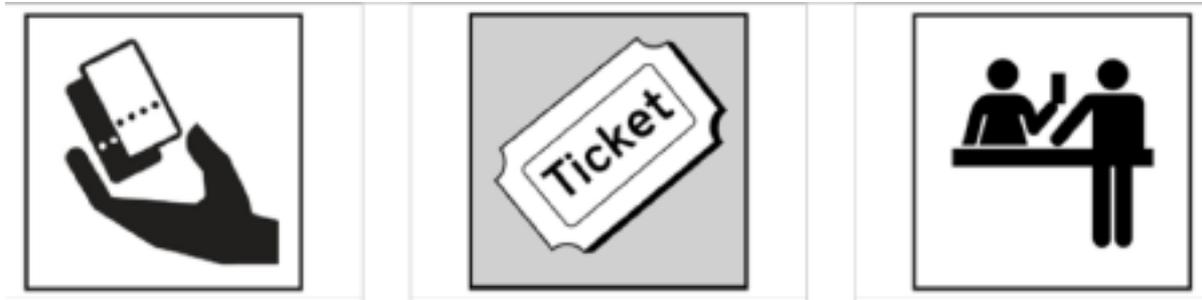
Observations

The kid's strong preference for the new symbol supports the theory that they are more likely to associate with the symbol that most clearly resembles the target.

The response of adults suggests that memory is playing as important a role as visual association.

Buying a ticket

Here are the symbols we compared:



The 'other'

The New Draft Symbol

The BSI symbol

Exwick Heights Primary School kids	
	92
	6
	2
Adults without dementia	
	73
	15
	12
Adults with dementia	
	75
	16
	10

The results

All groups preferred the new draft symbol, especially the kids.

The new draft symbol also performed better than the BSI symbol when tested independently against 2 'others'.

Observations

The kids preference for the new symbol supports the theory that they are more likely to associate with the symbol that most clearly resembles the target.

Adults also preferred the new symbol, although to a lesser extent. For this symbol adults are less influenced by the memory of the existing symbol than they seemed to be for some of the other sets.

The fact that this is a less commonly encountered symbol than some of the others is perhaps relevant. (see however the results for 'exit' below)

The exit

Here are the symbols we compared:



The New Draft Symbol

The 'other'

The BSI symbol

Exwick Heights Primary School kids	
	86
	10
	4
Adults without dementia	
	77
	17
	7
Adults with dementia	
	87
	7
	7

The results

All groups preferred the new draft symbol, especially people with dementia and the kids. Interestingly the existing, and very common symbol is the lowest scoring of all.

The new draft symbol also performed better than the BSI symbol when tested independently against 2 'others'.

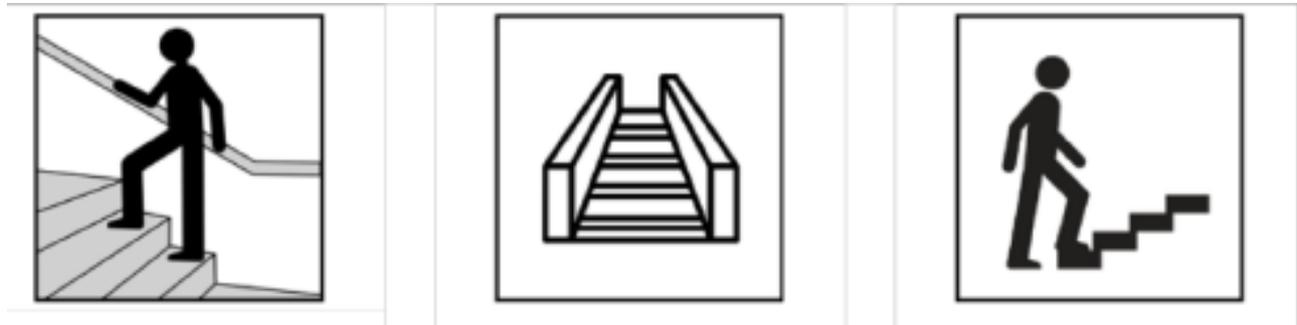
Observations

The kids preference for the new symbol supports the theory that they are more likely to associate with the symbol that most clearly resembles the target.

For adults - this seems to hold true here too - (though it is puzzling that the existing symbol scores so badly as it is commonplace)

The stairs

Here are the symbols we compared:



The New Draft Symbol

The 'other'

The BSI symbol

Exwick Heights Primary School kids	
	83
	12
	5
Adults without dementia	
	52
	48
	1
Adults with dementia	
	60
	38
	3

The results

All groups preferred the new draft symbol, especially the kids.

For adults, especially those without dementia though, the differences were less marked. Adults without dementia were only marginally in favour of the new symbol over the BSI symbol.

When tested independently against 2 others, the new draft symbol performed marginally better than the BSI symbol.

Observations

The kids preference for the new symbol supports the theory that they are more likely to associate with the symbol that most clearly resembles the target.

There is a big difference between the scores for people with dementia and those without - it may be relevant that during the earlier stages of testing people with dementia reported feeling uneasy about the lack of handrail in the BSI symbol.

Hidden disability

Here are the symbols we compared, we used 2 others as there is no existing BSI symbol for hidden disability.



The other

Another other

The New Draft Symbol

Exwick Heights Primary School kids	
	94
	4
	1
Adults without dementia	
	62
	23
	16
Adults with dementia	
	61
	16
	23

The results

All groups preferred the new draft symbol, especially the kids.

For adults, especially those without dementia though, the differences were slightly less marked.

The toilets

Here are the symbols we compared:



The other

The New Draft Symbol

The BSI symbol

Exwick Heights Primary School kids	
	56
	25
	19
Adults without dementia	
	55
	28
	17
Adults with dementia	
	61
	19
	19

The results

Both adult groups showed a strong preference for the new draft symbol.

It also performed significantly better against the 2 others in the independent test.

However - the kids reversed this - with a clear preference for the existing BSI Symbol.

Observations

We didn't expect this. It was the first time the kids **hadn't** shown a clear preference for the symbol which most clearly resembled the target. The younger the children, the more likely they were to vote for the BSI symbol.

One possible explanation is the fact that this might be one of the few symbols with which the children are familiar - and so were keen to give what they saw as the 'right answer'.

However it may also support the notion that memory of a symbolic representation is not always trumped by more literal representations.

The fire escape

Here are the symbols we compared:



The 'other'



The BSI symbol



The New Draft Symbol

Exwick Heights Primary School kids	
	53
	24
	24
Adults without dementia	
	45
	30
	24
Adults with dementia	
	59
	31
	10

The results

The most striking thing about this set is the fact that all groups preferred the 'other' symbol to both the new draft symbol AND the BSI symbol.

This is all the more striking when one considers that for an almost identical symbol - that for Exit - the new draft symbol was the unanimous favourite.

Observations

It was suggested by some people with dementia during earlier stages that the seemingly casual pace of the person in the new draft symbol was at odds with the urgency of his situation.

The 'other' symbol, of all the three is one in which the figure is most clearly 'legging it'.

The lift

Here are the symbols we compared:



The BSI symbol



The 'other'



The New Draft Symbol

Exwick Heights Primary School kids	
	64
	21
	15
Adults without dementia	
	49
	31
	19
Adults with dementia	
	65
	19
	16

The results

All groups preferred the new draft symbol, especially the kids and adults with dementia.

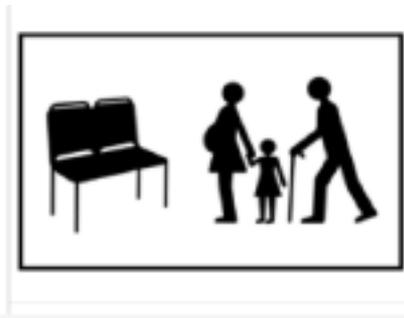
The new draft symbol also performed better than the BSI symbol when tested independently against 2 'others'.

Priority seating

Here are the symbols we compared:



The other



The New Draft Symbol



The BSI symbol

Exwick Heights Primary School kids	
	54
	30
	16
Adults without dementia	
	47
	33
	20
Adults with dementia	
	39
	39
	21

The results

A very mixed picture.

Adults without dementia preferred the new draft symbol. People with dementia were split between the new draft symbol and the 'other'. The new draft symbol performed better in the independent tests against 2 others.

But - and again very striking - the kids preferred the BSI symbol - which had scored lowest for both adult groups.

Observations

As with the toilet - we didn't expect this. It was the first time the kids hadn't shown a clear preference for the symbol which most clearly resembled the target. The younger the children, the more likely they were to vote for the BSI symbol.

One possible explanation is that again - this might be one of the few symbols with which the children are familiar - and so were keen to give what they saw as the 'right answer'. **However it may also support the notion that memory of a symbolic representation is not always trumped by more literal representations.**

Waiting room / seating area

Here are the symbols we compared:



The BSI Symbol

The New Draft Symbol

The Other

Exwick Heights Primary School kids	
	75
	14
	11
Adults without dementia	
	50
	40
	11
Adults with dementia	
	77
	23
	0

The results

All groups preferred the new draft symbol, especially people with dementia and the kids

The new draft symbol performed better than the BSI symbol when tested independently against 2 'others' for people with dementia, but not for adults without dementia.

Information

Here are the symbols we compared:



The New Draft Symbol

The BSI Symbol

The Other

Exwick Heights Primary School kids	
	53
	38
	9
Adults without dementia	
	61
	22
	17
Adults with dementia	
	61
	19
	19

The results

Both adult groups showed a strong preference for the new draft symbol, which also performed better in the independent test against the 2 'others'

Kids however preferred the 'other'. This shifted towards the new draft symbol as the kids got older.

Observations

It could be that as kids ability to read increases - so does the association with the 'i' for information. (though this may be at odds with Parking below)

Parking

Here are the symbols we compared:



The New Draft Symbol

The Other

The BSI Symbol

Exwick Heights Primary School kids	
	69
	30
	2
Adults without dementia	
	66
	32
	2
Adults with dementia	
	75
	13
	13

The results

All groups showed a strong preference for the new draft symbol.

Observations

One might have expected the kids to have plumped for the 'other' as it is the clearest representation of the car.

....and to have rejected the P in the draft symbol as with Information above - as the younger children cannot yet read as well as the older ones.

Could it be that even for younger children, "P is for parking", phonetically-speaking whereas "I is NOT for information"?

The wheelchair / disability symbol

Here are the symbols we compared:



The New Draft Symbol

The Other

The BSI Symbol

Exwick Heights Primary School kids	
	71
	24
	5
Adults without dementia	
	53
	34
	13
Adults with dementia	
	65
	29
	6

The results

Both adult groups showed a strong preference for the new draft symbol, which also performed better in the independent test against the 2 'others'

Kids however preferred the BSI symbol by a significant margin.

Observations

Could it be that the kids are lacking the ideological overlay that may influence the adults decision to favour the more 'active and independent' new draft symbol?

.....and favour instead that with which they might be familiar?