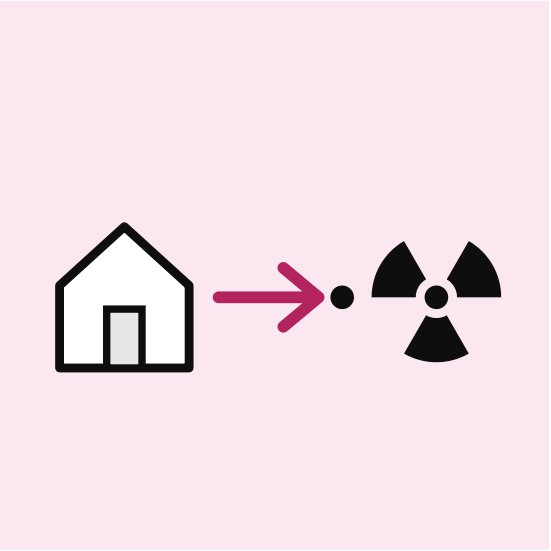
Model

Icon, index and symbol

Peirce's classification of signs by their link to what they stand for: the icon resembles it, the index is connected to it, and the symbol stands for it by convention.



In Spanish

Icono, índice y símbolo

Origin

Peirce (1868, 1885); developed further in later writings

What problem it addresses

It helps you decide how an icon, a sign, or a logo will be understood: by resemblance, by a clue or trace, or only after learning its meaning.

Components

Icon

Stands for something by resemblance: a drawing, a map, a diagram.

Index

Stands for something through a real connection: a footprint, smoke from a fire, a pointing finger.

Symbol

Stands for something by a learned convention: words, numbers, many logos.

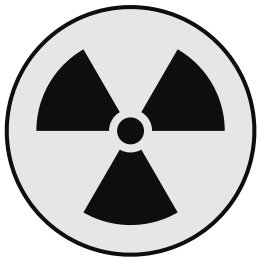
They combine

In practice, a single sign often mixes more than one type.

An example

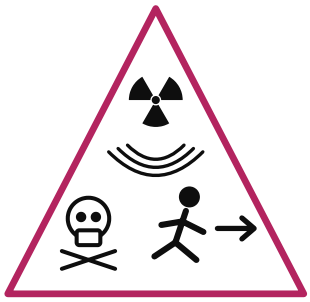
Two signs warning of a dangerous radiation source.

The trefoil



It is a symbol; its meaning depends on knowing the convention. **Without training, it says nothing.**

The 2007 sign



It surrounds the trefoil with drawings recognized by resemblance: radiating waves, a skull, and a person running away. **The danger is understood without learning it first.**

The new sign doesn't replace the trefoil: it supplements it for people who never learned what it means (IAEA, 2007).

How it works

1 

If it resembles something, it is understood without explanation: an icon.

2 

If it points or leaves a trace, it is understood through the connection: an index.

3 

If it is a convention, it has to be learned: a symbol.

Applications in design

✓ Use it like this

For new actions, prefer icons that resemble something familiar and pair them with a text label.

✗ Avoid

Assuming a symbol is obvious just because your team has already learned it.

Don't fall for it

If an icon needs explaining every time, it is working as a symbol: teach it or give it a name.

1,650 people

What the research says

The new radiation sign was tested in 11 countries before launch, because the traditional trefoil had no intuitive meaning for people who hadn't studied it (IAEA, 2007).

Connections

Used in

- Information design
- UI design
- Wayfinding design

Related to

- Auditory icons and earcons
- Signifier and signified

Authors and works

1868	**Charles S. Peirce**	Distinguished three kinds of representations by their link to the object: likenesses, indices, and symbols.
1885	**Charles S. Peirce**	Called the sign that stands for something by resemblance an icon, alongside indices and symbols, with examples such as the pointing finger or the diagram.
2007	**International Atomic Energy Agency**	Launched, with ISO, a radiation sign that adds recognizable drawings to the traditional trefoil.

Sources

Original sources

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- Peirce, C. S. (1931–1958). Collected papers of Charles Sanders Peirce (C. Hartshorne, P. Weiss, & A. W. Burks, Eds.; Vols. 1–8). Harvard University Press.
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Last reviewed: October 27, 2026

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