Desire Line

Traces of use or wear that indicate preferred methods of interaction with an object or environment.[1]

Desire lines generally refer to worn paths where people naturally walk—the beaten path that trails off the sidewalk, usually as a shortcut to a destination—but can be applied more broadly to any signs or traces of user activity in an object or environment. The implicit claim of desire lines is that they represent an unbiased indication of how an object or environment is actually used by people, which is valuable information that can be applied to the design or, in some cases, redesign of the object or environment. For example, the reconstruction of paths in New York City's Central Park was based on paving desire lines that were created over many years by park visitors, versus simply repaving the existing paths.[2]

Landscape architects are increasingly embracing desire lines from the outset, allowing desire lines to emerge in parks and campuses over a period of many months, and then paving the lines to make permanent walkways. The approach is certainly preferable to the more common alternative: Attempt to predict how people will navigate a landscape, render the projected paths permanent with gravel or concrete, and then when it is discovered that real-world use differs from anticipated use, erect barriers or offer incentives to enforce the original errant design—a strategy that, aside from making a bad situation worse, often fails.

Desire lines have applications beyond the design of walkways. Traces of use or wear indicate frequency of real-world use generally, and are an important consideration in the design of any object or environment. For example, typing on a traditional keyboard forces the wrists into a position that often results in repetitive strain injury (RSI). To address this, several manufacturers have introduced keyboards that split in the middle, eliminating the need to cock the wrist and allowing each hand to assume a more natural position. In this case, the traces of use and wear are on the tendons and nerves of the user's wrists and hands, and the desire line is the natural position of the user's wrists and hands when typing. Other examples include text fields in a standardized form that are repeatedly filled incorrectly, usage activity on websites, and online voting systems where users can indicate their like or dislike for a particular item of information (e.g., Digg).[3]

Consider desire lines in projects that emphasize usability. When possible, use creative methods to detect desire lines prior to finalizing design specifications. When desire lines emerge after a design has been implemented, they do so due to an overriding user preference or improvement in efficiency. If the cost of the desire line is nominal, consider leaving it alone. If the cost is significant, it is generally more cost-beneficial to modify the design to incorporate and leverage the desire line than to attempt to subvert its use.

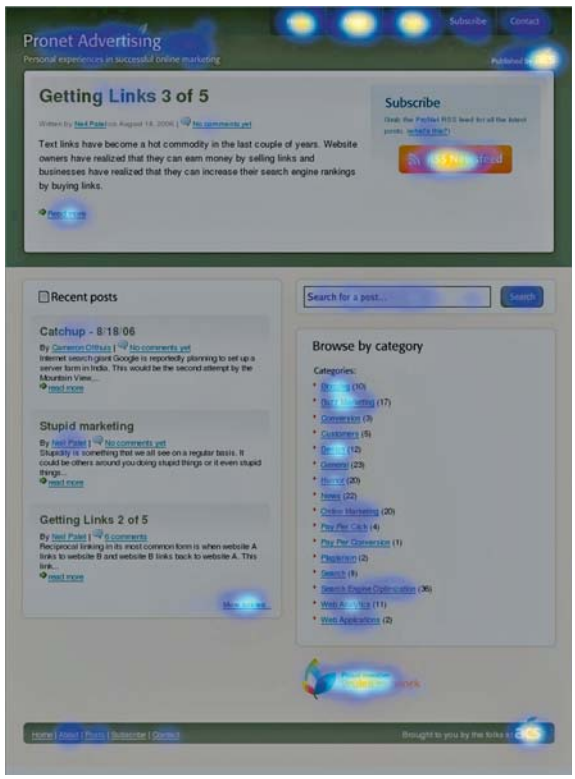
See also Affordance, Entry Point, Mapping, and Performance Load.

[1] Also known as *Desire Path*.

[2] The origin of the concept and term is disputed. An early use is found in the *Chicago Area Transportation Study, 1959-62, Final Report.* The application of desire lines in Central Park is documented in *Rebuilding Central Park: A Management and Restoration Plan* by Elizabeth Barlow Rogers, MIT Press, 1987.

[3] See "Commercial Success by Looking for Desire Lines" by Carl Myhill, in *Computer Human Interaction: 6th Asia Pacific Conference, APCHI 2004, Rotorua, New Zealand, June/July 2004, Proceedings,* by Masood Masoodian, and Steve Jones and Bill Rogers (Eds.), Springer-Verlag, 2004.

A "heat map" generated by the website



A "heat map" generated by the website tracking service Crazy Egg. The map indicates desire lines using a heat metaphor, showing which areas of a site are "hot" with activity and which areas are "cold" with inactivity.

A classic example of a desire line that cuts through a paved bend in a park.