

Forgiveness

Designs should help people avoid errors and minimize the negative consequences of errors when they do occur.

Human error is inevitable, but it need not be catastrophic. Forgiveness in design helps prevent errors before they occur, and minimizes the negative consequences of errors when they do occur. Forgiving designs provide a sense of security and stability, which in turn, fosters a willingness to learn, explore, and use the design. Common strategies for incorporating forgiveness in designs include:

Good Affordances—physical characteristics of the design that influence its correct use (e.g., uniquely shaped plug that can only be inserted into the appropriate receptacle).

Reversibility of Actions—one or more actions can be reversed if an error occurs or the intent of the person changes (e.g., undo function in software).

Safety Nets—device or process that minimizes the negative consequences of a catastrophic error or failure (e.g., pilot ejection seat in aircraft).

Confirmation—verification of intent that is required before critical actions are allowed (e.g., lock that must be opened before equipment can be activated).

Warnings—signs, prompts, or alarms used to warn of imminent danger (e.g., road signs warning of a sharp turn ahead).

Help—information that assists in basic operations, troubleshooting, and error recovery (e.g., documentation or help line).

The preferred methods of achieving forgiveness in a design are affordances, reversibility of actions, and safety nets. Designs that effectively use these strategies require minimal confirmations, warnings, and help—i.e., if the affordances are good, help is less necessary; if actions are reversible, confirmations are less necessary; if safety nets are strong, warnings are less necessary. When using confirmations, warnings, and help systems, avoid cryptic messages or icons. Ensure that messages clearly state the risk or problem, and also what actions can or should be taken. Keep in mind that too many confirmations or warnings impede the flow of interaction and increase the likelihood that the confirmation or warning will be ignored.

Create forgiving designs by using good affordances, reversibility of actions, and safety nets. If this is not possible, be sure to include confirmations, warnings, and a good help system. Be aware that the amount of help necessary to successfully interact with a design is inversely proportional to the quality of the design—if a lot of help is required, the design is poor.

See also [Affordance](#), [Confirmation](#), [Errors](#), [Factor of Safety](#), and [Nudge](#).

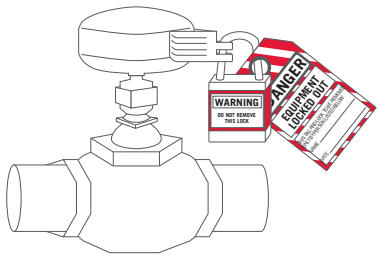


Road signs make roads more forgiving by warning drivers of impending hazards.

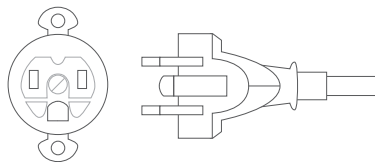
The Adobe Photoshop History palette enables users to flexibly undo and redo their previous actions.



In case of a catastrophic failure, the ballistic recovery system acts as a safety net, enabling the pilot and craft to return safely to earth.



Locking and tagging equipment is a common confirmation strategy to ensure that people do not accidentally engage systems under repair.



The good affordance of this plug prevents it from being inserted into the socket improperly.

