

THE MERGER OF PRINT AND INTERACTIVE DESIGN

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Print and interactive design are merging. The line separating the two is slowly blurring, and content developed for one is traversing into the other. As a communication medium, print has been one tool used for visual transmission, and digital interactive screen media another. The future is a blend of the two, where graphic design elements and procedures developed for print will be applied to interactive digital work, making a stronger medium for visual communication.

## **Environment**

Historically, print design has consisted of producing pieces of physical collateral to satisfy various goals. If different artifacts were needed for each goal, each would have to be developed specifically for the size and final output determined by the physicality of their respective printed format. Interactive design has been similar to print design in that pieces need to be developed to fit within the final format, which has historically been a computer screen. The major difference between the two has been the final tangibility of the work, where a print artifact can have a long shelf life but is not editable, whereas digital work could be modified as needed, making it not have a solid shelf life. A secondary, but still major difference has been in the graphical freedoms of each medium. Since print is static, the visual design is presented exactly as intended once it is in its final physical form. Interactive, however, has suffered from rendering issues from device to device. Some issues include limited font choices, limited color choices, and problems with the interpretation/rendering of the styling code that lays out the content onto the screen. Another difference between the two is how the recipient of the communication is perceived. In print, it is typical to consider the receiver as a “viewer” of the work, meaning that the person views the work and receives the communication. In interactive, a receiver of the communication is considered a “user” since they “use” the artifact through interacting with it. Lastly, it is important to note that interactive media has the ability to be modified on-demand, whereas print does not.

## **Aspects of Print Design that are being retained**

In the merger, many aspects of design for print are being retained. Graphic design elements, procedures, and rules such as color, balance, grid, and gestalt principles are being

retained and applied to interactive work. For example, a current trend in web design is to use a grid system called 960.gs to lay out the content on a web page, making the overall design of a page stronger, while providing design consistency across multiple site pages. Typography is another area of design that has been refined for print that is slowly being applied to interactive media. Print design's advancements in the area of communication, especially through the use of metaphors are also being applied.

### **Aspects of Interactive Design that are being retained**

Current interactive design focuses on the user and how the user will interact with an artifact. Because of this, considerations such as interactivity, usability, and accessibility are all major items that are being refined as the next generation of design progresses. Interactivity is important in that through its use, a piece can become more engaging for a user. Once engagement is considered, then usability becomes a concern. Usability essentially is the focus on having an artifact be useful and valuable for an end user. It pays attention to any issues the user will have with interacting with the artifact to reach the intended goals. Accessibility is the final major concern, and is a consideration because it is possible to use interactive media to communicate in forms other than visual (e.g., aural, tactile, etc.)

Another aspect of interactive design being retained is its ability to be defined on-demand from both a content level and a visual layout/use level. In regard to content, multimedia including visuals, text and layout can be delivered as an artifact needs them. This allows content to be updated as needed, while also modifying and molding the content to fit individual users. From a visual layout/use perspective, an interactive piece can adjust its visual aesthetics to fit a user's preferences. For example, a tablet computer (i.e., Apple iPad) can be viewed either horizontally or vertically, and thus design for it can be built to adjust to the user's preferred viewing mode.

### **The not so distant future**

Stronger visual communication is possible through the merger of print and interactive design. Besides the previously mentioned print elements, procedures and rules, having

interactive capabilities would further enhance an artifact for the viewer's benefit. For example, a piece can allow the user to select text they are not familiar with and then link to further information that would help clarify and deepen their understanding. This would be similar to having a glossary, appendix, footnotes and endnotes tied directly to the content where a user would need them. From an interactive perspective, applying print design's way of looking at the visual communication will strengthen it immensely by adding an additional layer of communication on top of the content focused structure that it currently uses.

Since the work is interactive, users will be able to adjust the artifacts to fit their needs and preferences. An example of a user preference that can be changed in an interactive piece is type size. This allows a viewer to make text the best size suitable for their vision needs. As much as this feature is a positive for usability and accessibility, it also creates design dilemmas for the designer. The major issue that changeable type size creates is how to handle the layout of text, especially how to handle text overflow once the text copy is made too large to fit within the bounds provided for it. The secondary issue in this is that if type is dynamically adjustable, it is impossible for a designer to lock in the perfect typographic layout. Furthermore, it is also possible for the user to override the font choice, which negates the type work of the designer altogether.

As mentioned previously, the ability of a user to change from landscape to portrait modes is an example of modifiable interactive user preference that affects design considerations. It is also an example of an option that will create issues for a designer when laying out the piece. To successfully handle this option, a designer will have to create design elements that can be shuffled on the page without changing the message being visually communicated.

Interactive pieces also allow the user to escape the page flip navigation of print, allowing for navigation via methods that have yet to be developed. The Adobe Digital Publishing Suite's navigation is an example of an alternative navigation system that has been derived from print design. Using their method, when a user is viewing a magazine on a digital device, they can swipe left and right to change articles, and up and down to change pages, which is a feature not possible with print.

On the other end of the spectrum of the merger is how digital interactivity will influence print design. Over time, print artifacts will be enhanced to connect into the digital world. One current example of this is QR Codes. QR Codes are a two dimensional square barcode that can have various information embedded into it, such as a link to a website, a saying, or a vCard (a digital file that holds your contact information). Once a QR Code is scanned, the user's device processes the information and then allows the user to take further action if necessary. Another example of this is interactive PDF's. Since they are a PDF, they can be printed and appear just as the image does on the screen. However, since the PDF is interactive, links can be clicked on, 3D objects turned, and embedded movies watched. From a user's perspective, this would be perceived as "enhanced" print design since the look of the piece would be formatted to be and is capable of being printed.

To take the example of the interactive PDF even further, since it is digital, it is possible to build it on-demand, filling it with content that is current and is tailored to the recipient. For example, a parts catalog could be generated for each viewer with the prices adjusted to fit them. It is also possible to generate the items that are in the catalog when the request is made. Each of these items could be viewed as a 2D object when printed, but be interactive 3D objects while the user views the PDF on the screen. Additionally, since the content being used to build the PDF would be contained in a database, it is possible to utilize the same content for output to other formats, such as websites.

## **Conclusion**

By merging the best aspects of print design with the best aspects of interactive design, stronger visual communication is possible for the future. However, the flexibility of the digital medium will make it more difficult to create effective design. Content will be deliverable over digital means, but will conform to print design elements, principles, and rules. Because the format is digital, it can be interactive, which will allow the user to adjust the artifact to their individual needs and preferences, while allowing the designer to develop deeper, more engaging navigation systems than print alone allows.

## Outline

1. Intro - Print and interactive design are merging
  - a. Merging
  - b. Print is one medium
  - c. Interactive is another
2. Environment
  - a. Historical print
  - b. Historical interactive
  - c. Viewers/Users
  - d. Content delivery
    1. Dynamic/ On demand
    2. Static
3. Aspects of Print that are being retained
  - a. Design elements, procedures, and rules
  - b. Typography
  - c. Communication
  - d. Metaphors
4. Aspects of Interactive that are being retained
  - a. Interactivity
  - b. Usability
  - c. Dynamic/ On demand
  - d. accessibility
5. Outcomes of the merger
  - a. Visual communication that fits a user's needs where they want it and in the format they want it in.
  - b. Stronger visual communication
    1. Interactivity can enhance piece for user's benefit
    2. Text can link to further information, like: glossary, appendix, footnotes, endnotes information.
    3. Print design looks at whole message being communicated visually - helps enhance interactive design
  - c. Adjustable preferences to fit user's needs and preferences
    1. Type size
    2. User can make it larger or smaller as needed
    3. Causes layout issues. Overflow.
    4. Font choice
    5. If user changes it, font no longer communicates as intended.
    6. Screen orientation
    7. Content needs to change to fit orientation
    8. Content needs to retain message even though design changes
  - d. Alternative navigation systems
    1. Print has single page flip system
    2. Interactive can have anything we dream up
    3. Adobe has a magazine system that uses a print like system, that is different
  - e. How interactive will influence Print
    1. "Enhanced" print pieces
    2. QR Codes
    3. PDF
      - a. Links
      - b. 3D
      - c. Video
      - d. Still printable
      - e. Can be built on-demand
      - f. Content can be reused
6. Conclusion