

Six Modes for Digital Media in Design

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As a point of departure, through the use of Italo Calvino's *Six Memos for the Next Millennium*, I would like to establish a framework for my own research, teaching, and practice in terms of digital media and its role in design processes and productions. Calvino's six memos are *Lightness, Quickness, Exactitude, Visibility, Multiplicity, and Consistency*.¹ It is through these *memos*, [which I would like to term *modes*], that I propose to investigate digital media and design within a critical framework for research, teaching, and practice. Through this rigorous yet potentially unbounded framework I will attempt to provide for a continuous reworking and redefining of the understanding of the role of digital media in design. Hopefully this strategy will develop a multiplicity of potential lines of inquiry in terms of increasing creative and agile use of digital media in design. For this particular presentation I will refer to examples of digital media in design teaching and practice that I feel exemplify these modes explicitly as well as implicitly and help to further this particular investigation, although not to propose a particular teleological condition.

It is through these modes, *Lightness, Quickness, Exactitude, Visibility, Multiplicity, and Consistency* that I intend to develop a poetics of digital media and design. Below I have formulated a working definition of the term *mode* in terms of quality and operation which I use instead of *memo*. This formulation is intended to locate 'mode' more specifically within the context of this particular investigation, as well as enable the investigation to move back and forth between all three terms.

Quality - "An attribute, a property, a special feature or characteristic. A manner, a style."²

Operation - "An action. Exertion of force or influence; working, activity."³

Mode - "A way or manner in which something is done or takes place; a method of procedure; a means."⁴

Quality + Operation = Mode

¹ Italo Calvino, *Six Memos for the Next Millennium*.

² *The New Shorter Oxford English Dictionary*, vol. 2, p. 2438

³ *Ibid.*, p. 2005

⁴ *The New Shorter Oxford English Dictionary*, vol. 1, p. 1802.

Lightness

*“Whenever humanity seems condemned to heaviness, I think I should fly like Perseus into a different space. I don’t mean escaping into dreams, or into the irrational. I mean that I have to change my approach, look at the world from a different perspective, with a different logic and with fresh methods of cognition and verification. The images of lightness that I seek should not fade away like dreams dissolved by the realities of present and future...”*⁵

*Lightness – “The quality or fact of having little weight; agility, nimbleness, quickness; ease, facility, readiness, esp. of belief; grace, elegance, delicacy.”*⁶

Lightness, in terms of quality is digital media’s ability to explore light with all of its ephemerality and permutations. Through digital 3-D modeling, one can experiment with an infinite variety of light qualities. Also through the many degrees of transparencies and reflections one can experiment with different materialities in tandem with specific light qualities with an agility and ease that may not be possible through large scale physical models, many of which gain a certain personal attachment merely through the time and labor that inevitably taints one’s experimental attitudes toward lightness and poetics. Even less sophisticated software, such as Photoshop, has the ability to create an infinite variety of creative images through varying degrees of transparencies, opacities, brightnesses, contrasts, colors, etc., and through various light processes and filters. In addition, video and digital editing software capture light and shadow with an accuracy and an immediacy less attainable through physical drawing.

Lightness, in terms of operating with digital media and design, comes with a paradoxical balance of experience and naiveté. As a teacher and practitioner of design I personally do not have a vested interest in learning all the technical language of the computer or the thousands of commands that it performs. But through experimentation over time I have been able to develop a familiarity with many of these commands and a menu of operations that I am able to continually expand upon. For example, when one sits in front of the computer with a sketch and says, ‘this is what I want to draw, build etc...,’ one automatically falls into a weighty attitude of operating that has nothing to do with the reciprocity of digital media and the design; only with what that designer wants to do a priori with little room for learning, growth, or experimentation. Can we use digital media with the lightness of a gestural sketch, and yet with the precision of the constructed drawing? How can digital media afford us that “different perspective, with a different logic and with fresh methods of cognition and verification?”

⁵ Calvino, *Six Memos for the Next Millennium*, p. 7.

⁶ *The New Shorter Oxford English Dictionary*, vol. 1, p. 1587.



Fig. 1

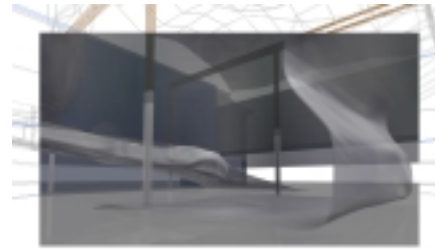


Fig.2

Quickness

“Speed and conciseness of style please us because they present the mind with a rush of ideas that are simultaneous, or that follow each other so quickly they seem simultaneous, and set the mind afloat on such an abundance of thoughts or images or spiritual feelings that either it cannot embrace them all, each one fully, or it has no time to be idle and empty of feelings. The power of the poetic style, which is largely the same thing as rapidity, is pleasing for these effects alone and consists in nothing else. The excitement of simultaneous ideas may arise either from each isolated word, whether literal or metaphorical, from their arrangement, from the turn of a phrase, or even from the suppression of other words and phrases.”⁷

Quickness – “The quality of being quick, rapidity.”⁸

What could be a better mode to discuss in terms of digital media and design than quickness? The computer’s quickness, its ability to render, construct, and visualize with the click of a mouse, affords a more fluid and less cumbersome attachment to a particular design. The deftness of moving back and forth through different views, colors, reflections, etc. affords an array of design options quickly. This ‘simultaneousness’ of images initiates a quickness of ideas and evocations of space and material with a fluidity that keeps the designer from being bogged down within an overarching a priori static position. Through the quickness of digital media, one encounters an apparatus that extends and opens up other visions and perceptions. This is not to say that quickness is always better, however, there is something about an image emerging so quickly and effortlessly that it may precipitate a eureka moment within the process and production of design ideas.

Video and video editing software also have tremendous potential when using quickness as a mode of representation. Through accelerating video with the aid of digital editing software, unforeseen patterns may emerge that may not have otherwise been noticed by the human eye or ear. It is through the quickness of digital media’s apparatus and modes of representation that the possibilities and potentials open up other lines of design inquiry that may not have been obtained through the slowness of more physical, static modes of representation.

Fig. 1, 2 – Flexible “skin” design for an art gallery interior by author’s student, Catalina Victoria. Through the use of digital 3D modeling and Photoshop the student was able to experiment with “light” and “gestural” non-normative geometries, as well as the effects of “light” on different translucent materials.

⁷ Calvino, *Six Memos for the Next Millennium*, p. 42.

⁸ *The New Shorter Oxford English Dictionary*, vol. 2, p. 2448.

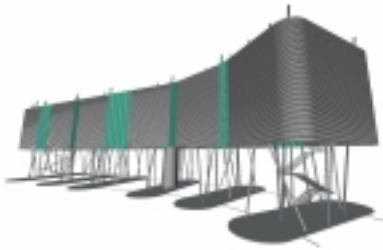


Fig. 3



Fig. 4

Exactitude

“From the moment I wrote that page it became clear to me that my search for exactitude was branching out in two directions: on the one side, the reduction of secondary events to abstract patterns according to which one carry out operations and demonstrate theorems; on the other, the effort made by words to present the tangible aspect of things as precisely as possible.”⁹

“For example, Giacomo Leopardi maintained that the more vague and imprecise language is, the more poetic it becomes. I might mention in passing that as far as I know, Italian is the only language in which the word vago (vague) also means ‘lovely, attractive.’ Starting out from the original meaning of ‘wandering,’ the word vago still carries an idea of movement and mutability, which in Italian is associated both with uncertainty and indefiniteness and with gracefulness and pleasure.”¹⁰

Exactitude - “Accuracy; attention to small details.”¹¹

What is interesting about this particular mode is its multivalent definition. In terms of exactitude, digital media has tremendous capabilities of moving back and forth between abstraction and detail instantaneously. For example, through the operation of the zoom in many computer aided design programs one can understand the design as an abstract diagram or as a precise detail. Micro worlds are embedded within macro worlds in the space of digital media. It is this ability to move back and forth between these two worlds precisely without losing information along the way that facilitates design from conceptualization, to the final detail; from initial generative seeds to full fruition of a design. It is precisely the movement and mutability between these worlds that allows a poetics to emerge, through an ‘indefiniteness’ and ‘tangibility’.

Fig. 3, 4 – Fast food prototype design by author’s student, James Fullton. Through the use of digital 3D modeling the student was able to “quickly” manipulate the prototype into many different configurations.

⁹ Calvino, *Six Memos for the Next Millennium*, p. 74.

¹⁰ *Ibid.*, p. 57.

¹¹ *The New Shorter Oxford English Dictionary*, vol. 1., p. 869.

Video and video editing software also afford exactitude through operating back and forth between haptic worlds of abstraction and hyper-realization. Both of these are very different perspectives, but nevertheless no less ‘exact’ than the other in terms of use. Again, it is digital media’s intrinsic potential to be both vague *and* precise simultaneously and instantaneously that gives it an exactitude.



Fig. 5

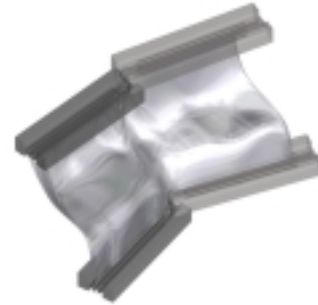


Fig. 6

Visibility

“In devising a story, therefore, the first thing that comes to my mind is an image that for some reason strikes me as charged with meaning, even if I cannot formulate this meaning in discursive or conceptual terms. As soon as the image has become sufficiently clear in my mind, I set about developing it into a story; or better yet, it is the images themselves that develop their own implicit potentialities, the story they carry within them.”¹²

Visibility – “The condition, state, or fact of being visible; visible quality; ability to be seen; sight; the exercise of visual perception.”¹³

Visibility is probably one of the most important modes within design. I am not just referring to final visualizations through photorealistic renderings of a design. I am particularly interested the creative processes and potentials through imaging and visualization as “eidetic operations.” James Corner in his article “Eidetic Operations and New Landscapes” states: “Imaging has a metaphoric agency in that the [mostly arbitrary] bringing together of two or more elements fosters a host of associative possibilities... Such eidetic images are fundamental stimuli to creativity and invention;”¹⁴ What is particularly interesting is how these operations act as catalysts, initiating and enabling one to think about how an image may translate and transform into a physical

Fig. 5,6 – Bus stop prototype design by author’s student, J. C. Elder. Through the use of digital 3D modeling the student was able to show detail with “exactitude”, as well as the overall design within the same model/drawing. Digital modeling also enabled him to experiment with “exactitude” the different reflectivities and transparencies of materials in order to “visualize” many different design possibilities.

¹² Calvino, *Six Memos for the Next Millennium*, p. 89.

¹³ *The New Shorter Oxford English Dictionary*, vol. 2., p. 3588.

¹⁴ James Corner, “Eidetic Operations and New Landscapes”, *Recovering Landscape*, ed. James Corner, p. 163.

construction. Digital media's ability to render many different atmospheres through light and material simultaneously and instantaneously enables the designer to visualize more accurately the repercussions of such design choices. This fluidity and agility again facilitates the design process as well as opens up other potentials and possibilities that may not have been as easily acquired through physical drawing and modeling.



Fig. 7

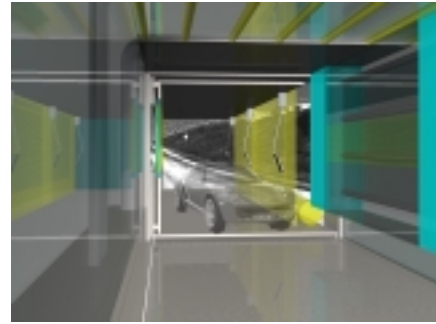


Fig. 8

Multiplicity

“What tends to emerge from the great novels of the twentieth century is the idea of an open encyclopedia, an adjective that certainly contradicts the noun encyclopedia, which etymologically implies an attempt to exhaust knowledge of the world by enclosing it in a circle. But today we can no longer think in terms of a totality that is not potential, conjectural, and manifold.”¹⁵

Multiplicity – *“The quality or condition of being multiplex or manifold; manifold variety.”¹⁶*

Digital media's intrinsic quality to produce many different variations of a design affords a more open ended process. These many variations enable one to think in terms of an 'open encyclopedia,' or a series of ideas versus an over arching 'totality,' or an end all solution. Through the operations of iteration, permutation, and reproducibility that digital media affords, multiplicity as a mode for digital media makes perfect sense. Multiple views, multiple colors, multiple materials, multiple sites, etc. are produced and reproduced through the aid of digital media more quickly than physical drawing and modeling.

Fig 7, 8 – Fast food prototype design by author's student, Dara Douraghi. Through the use of digital 3D modeling and Photoshop the student was able to “quickly” “visualize” different scenarios and perspectives during the entire design process of the drive thru prototype.

¹⁵ Calvino, *Six Memos for the Next Millennium*, p. 116.

¹⁶ *The New Shorter Oxford English Dictionary*, vol. 1, p. 1857.

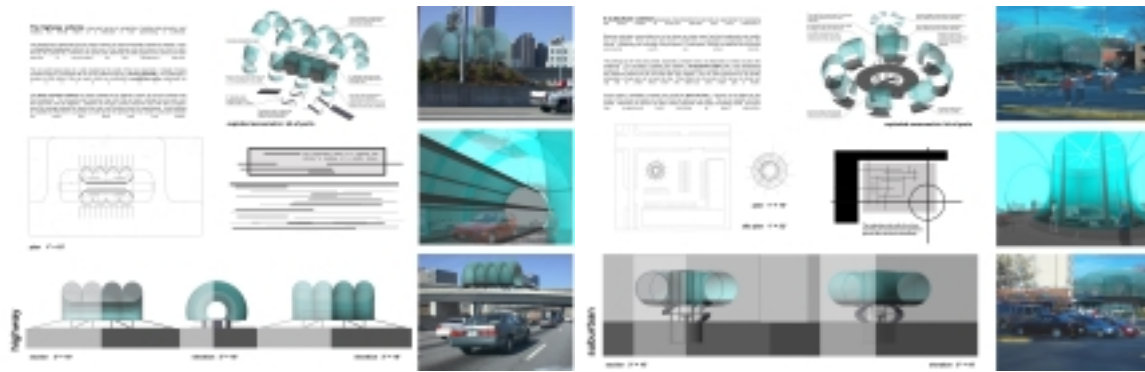


Fig. 9

Fig. 10

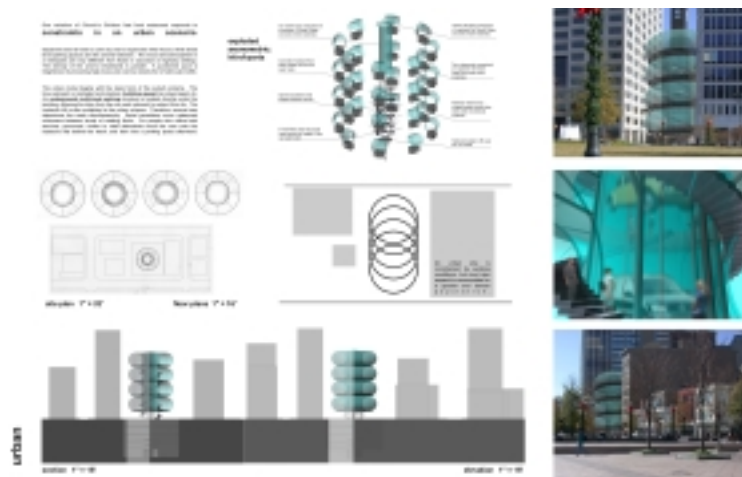


Fig. 11

Video and video editing software are also modes of multiplicity. For example, Diana Agrest in “Representation as Articulation: Between Theory and Practice” states: “Given the nature and the characteristics of the contemporary city, and urban culture, the mode of its representation needs to be rethought. There need to be different modes of representation in order to account for the multiplicity of the contemporary city, the complex and fragmentary quality of the urban realm. Some aspects can be represented by a drawing, or even a model or a particular notation; other aspects require transcending the exclusivity of the visual, so that other media, like film and video, become necessary.”¹⁷ Video and video editing software have tremendous potential and possibilities of “representation as articulation,” as Agrest states, precisely through capturing light, sound, time, and movement, all of which are tremendous contributors to our experiences of space. Thus these qualities should be intrinsic to the design process and production of space.

Fig. 9, 10, 11 – Fast food prototype by author’s student, Christina Luu. Through the use of digital 3D modeling and Photoshop the student was able to design “multiple” prototypes “quickly” because of digital media’s innate quality of “multiplicity” through reproduction.

¹⁷ Diana Agrest, “Representation as Articulation”, Practice: Architecture, Technique and Representation, ed. Stan Allen, p. 174.



Fig. 12

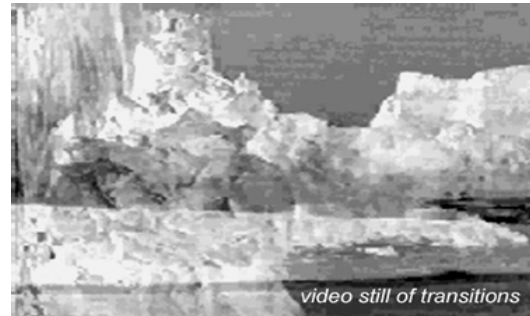


Fig. 13

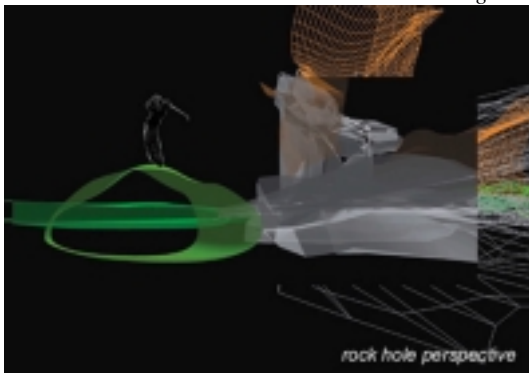


Fig. 14

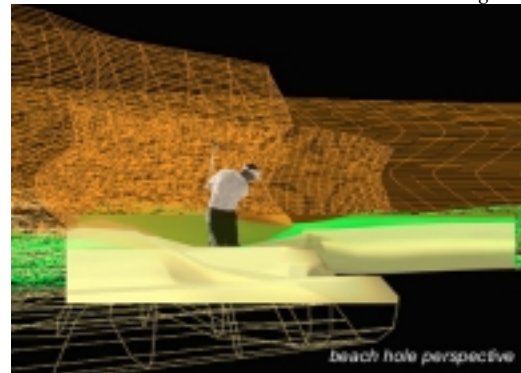


Fig. 15

Consistency = Conclusion

Consistency – “The agreement of parts or elements with each other, esp. as a personal attribute in life or conduct; constancy of principle.”¹⁸

Calvino did not write on the sixth memo ***Consistency*** before his death, but...this ongoing investigation can be described as an attempt to develop a ***consistency*** of poetic practice in the use of digital media as a designer and a teacher. I believe that the modes I have outlined will continue to provide a critical framework within which I may continue to operate. These new media are alternatives for a designer and a teacher in the conceptualization and construction of space within the complexities and multiplicities of the design process and production; especially within our contemporary built landscapes.

The use of these new modes of “representation” is intended to transcend, not dismiss, nor merely extend, more conventional modes of representation such as physical modeling, sketching, drawing, etc. It is also intended to move beyond “representation” in that it acts as a catalyst within the design process rather than simply as “representations” of a final product, and, may perhaps be valid as a project and/or a production of space in and of itself; not necessarily just a “representation” of something else.

Fig. 12, 13 – Video stills by author, Wanda Dye. The video titled “cityscape/landscape” documented from the car, the landscape of the highway juxtaposed and superimposed with the cityscape of the city.

Fig. 14, 15 – Digital 3D models by author, Wanda Dye. The golf course program and design ideas emerged from the video “cityscape/landscape” aforementioned. Through the use of digital modeling I was able to more easily construct topological/landscape forms and spaces, as well as visualize and move through them through the unlimited generation of perspectives and animation.

¹⁸ The New Shorter Oxford English Dictionary, vol. 1, p. 486.

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