

Telling A Design Story

Andre Murnieks

Abstract

Call it a movie trailer for a design idea—a time-based and descriptive narrative employed to convey the gist or complicated nature of a designer's intent. It tells the story of the design problem while including both the empathic and emphatic dimensions of the solution. Designers employ a variety of methods to explain their concept, but creating a motion presentation is not usually one of them. Every designer can benefit by the clarity of a well-structured narrative that showcases the benefit of the communication, object and/or environment. Rather than leave it to an expert in the domain of animation and video, designers are learning to craft narratives to complement the idea. The value of motion design is apparent through a series of student case studies that quite literally speak for themselves. Through story development, kinetic typography, and cinematic technique, the most incomprehensible design solutions can be brought to light.

Biography

Andre Murnieks is Assistant Professor of Visual Communication Design within the Department of Art, Art History & Design at the University of Notre Dame. He teaches in the areas of interactive and motion design, and his research concentrates on how these media can connect distant populations with information. Combining the research with pedagogy, Andre's students have experienced recent successes explaining innovative and complex design solutions taking advantage of motion design.

Keywords

motion design, information design, thesis project, design narrative, attention

Wicked design problems tend to require wicked design solutions. In other words, understanding the components of a proposed design solution and how they work together can be difficult to grasp. These proposed solutions are not necessarily complicated, but forming a mental model of the system is complicated. In our age of electronic, interactive communication, the issue of understanding the idea is further exacerbated by a lack of transparency concerning the inner workings of the various parts of the puzzle. The user interacts with an object here, but the result happens over there. Unseen mediating technologies take care of pesky barriers like time and space and deliver the desired result to the user. Which brings us back to user. How do we explain how it works for her?

The system model explains how it *actually* works. Engineers love these. However, the system models leave out the human component. Anytime a designer is presenting a solution, they are, in reality, translating system model into a mental model. Or, at least, that is the intention because the mental model belongs to the individual. No two mental models are alike, and there usually terribly inaccurate—at least compared to the systems model.¹ However, accuracy is not as important as is the gist. In other words, the designer must provide enough information for the audience to create a mental model that explains, contextualizes, and perhaps personalizes.

Often designers employ storytelling through a persona as a means to understand a design solution. Reciting a narrative and pointing to highly rendered visuals is one way for designer to tell the story, however this lacks a demonstration of the input, feedback and response of the interactive system. Static visuals are simply insufficient. While building an actual working prototype of interactive system would be ideal, it is rarely practical. Plus, if it is a prototype of something small or intangible (like coded logic or a social philosophy), the story is lost. A medium that can encapsulate and express all these presentation needs is motion design.

Presented here is a breakdown of the methods and processes employed to deliver an effective and persuasive motion piece intended to support and explain a designer's intent. Cited are a handful of motion design pieces that accompanied undergraduate and graduate thesis projects. In each of the examples, the motion piece is not the actual thesis project but a component of a presentation or thesis exhibition. It is also important to note that each of the students chose to use motion as an additional mode of communication because the benefits justified the enormous amount of additional work. Though the tools to create motion are easier to use and faster than ever, the skill set required is beyond graphic design. Most notably is the additional aspect of time. How can designers exploit their 2D and 3D acumen and translate those skills to the 4D realm?

Appeal To The Heart

Setting Up The Problem

Act one of the motion piece generally provides context for the design issue to be addressed. This may simply be opening with the thesis statement. However, with complete control over time and subtle movement, kinetic type reinforces the read by delivering the message in stylized well-paced chunks. The combination of motion

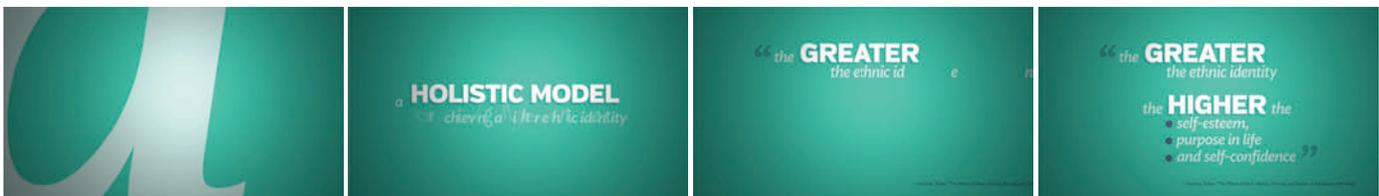


Fig. 1 Mayra Duarte, MFA, uses the first few seconds to set up the main argument of her thesis project: “the greater the ethnic identity the higher the self-esteem, purpose in life, and self-confidence.”

technique and typographic treatment demand the viewer read along. The effect is akin to a typical PowerPoint slide build, but the designer has complete control over the motions, pacing and cadence—not to mention type and hierarchy. The motions may be subtle, then jarring acting together to pull the reader through the sentence fragments building up to a complete thought.

Drawing In The Viewer

Time based media also allows for the addition of sound. A musical soundtrack adds a significant component to the motion experience appealing to the viewer on an emotional level. Although, it is not so important that the viewer likes or dislikes the music; in fact, it is better if the music recedes into the background though it is a layer lower down in the composition. Instead, the music is an undercurrent for the information; it is an auditory river upon which the visual information flows. Without the music, the information may appear chaotic, but with the music, the viewer tends to search for patterns and connections between the auditory and visual stimuli—even if the designer did not explicitly intend to make such connections (more on this later). As pattern seekers, humans are built to find order in chaos. As Colin Ware states in *Visual Thinking for Design*, “A design can be made visually efficient by expressing relationships by means of easily apprehended patterns.”² Extending his statement from the visual to the auditory, making connections between the two sensory modalities must also be possible. Thus the alignment of visual and audio cues can have a desirable affect, but so might the purposeful misalignment of the anticipated pattern. At the very least, music or other sound is a method to draw visual attention since the sense of hearing is omnidirectional. In other words, one does not have to direct ones attention to the stimulus to perceive it. In terms of exhibition and presentation, music is a powerful tool.

Fig. 2 Amanda Jonovski, BFA demonstrates the UX of her app TRAX using a green dot as an avatar to navigate the screens based on a

Creating A Scenario

Once the viewer’s attention is captured, the designer must explain the benefit of the designed system. Often this may be a hypothetical cause and effect. Or it may be like



a television commercial depicting before and after. Basically, these are stories (or scenarios) with a persona (or protagonist). The persona may be implied, and it is often you, the viewer, and you must imagine yourself in the situation. Personas also focus the story on our intended user. As Jesse James Garrett states in *The Elements of a User Experience*, “The personas help us keep our users in mind every step of the way.”³ In the case of an interactive system, an avatar is used to imply interactions with an interface. This not only shows a typical task for the interface, it also reveals the depth of the designed solution. It is no easy task to demonstrate an interface that is hundreds of screens deep. The complexity of the designed solution is lost unless the viewer is willing to traverse the screens of a prototype (if available) and understand the context of those actions. Depicting a scenario, on the other hand, has many benefits: it helps the designer think through the process, allows viewers to engage in the design thinking, summarizes a designed solution, and can be the perfect UI/UX model for development and production.

Fig. 3 M. Duarte, MFA; B. Keelean, BFA; A. Rantanen, BFA use video and photography to better understand the affect or benefit on the human condition.

Understanding The Cause

The desire to design for positive change is powerful. Design solutions that promote social, societal and political change for the better are often even more complicated to explain. Yet it is another example of systems design; however, the solution is likely to



integrate materials, processes and technologies both new and old. While facts and figures may suffice for an emphatic response, imagery and video can aid in obtaining an empathic response. In the aforementioned examples, motion design could be defined as animated information. With the inclusion of photographic and cinematic elements, motion design begins to morph into something else. It is part design

documentation and part documentary. The hybridization of these media tells a complete design story. At the same time, the carefully planned sequencing of these different media also adds to the visual interest of the piece. The transitioning in and out of these stylistic textures compels the viewer to be engaged.

Explaining It To The Head

Conservation of Information

As a time-based media, the delivery of a motion piece requires a commitment from the viewer. Time is both the advantage and the caveat. The designer must decide the appropriate length of the piece based on the viewer's location and situation. A captive audience may allow for a longer, didactic piece, but a design exhibition or a design presentation pitch must make the best use of the viewer's time and patience. In essence, telling a design story is a movie trailer for a design project. Movie trailers are short. Ironically, cadence, pacing and the chunking of information (with the help



Fig. 4 Brandon Keelean, BFA, explains the system's design with a series of fast-paced "nuggets" of information and iconography in roughly 14 seconds.

of music and/or narration) can elicit active participation from the viewer and a willingness to consume and process much more information than it seems possible. Rather than a passive narrative, there is a challenge to cognitively "keep up" with the unfolding story. Sentence fragments and informative nuggets are permissible and even encouraged. Eliminating superfluous language while also chunking the phrases transforms the content into a narrative form more suited for delivery over time.

Engaging The Research

It is undeniable that powerfully emotional story can capture and sway an audience, but the discipline demands that there are facts and figures to back it up. In many situations designers are able to present valuable data and research findings, but it is often presented first as a separate module packed with all the information gathered.

Conversely, the storytelling aspect of a motion piece affords a different flow of information. A raw, but important, statistic enhances the narrative; it can even build excitement and anticipation. Its place in the narrative sequence is one factor for the success of appealing facts and figures, but another reason is because the numbers

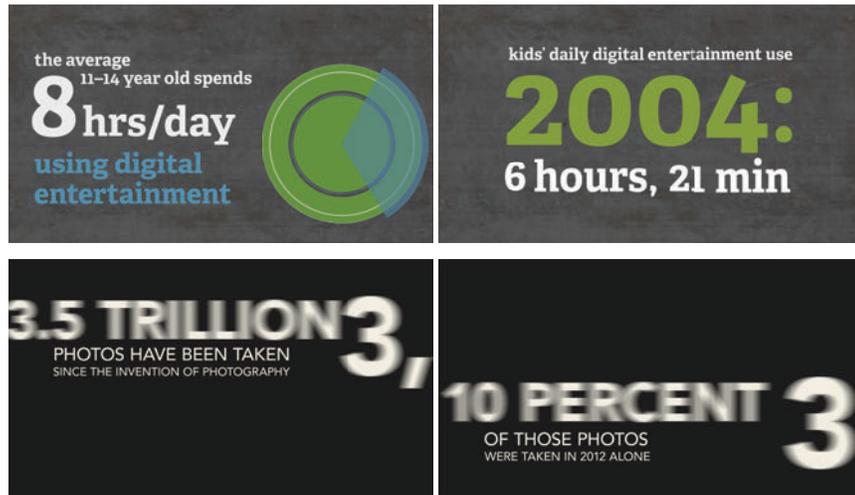


Fig. 5 A. Jonovski and A. Rantanen use data gathered to set up the design solution. Proportion, trending, spatial juxtaposition and linear translation contribute to the effect.

and figures themselves can be animated to show a variety of important relationships like comparisons (scale), trending (time), permanence (opacity), and relative speed (translation). Animating data carefully to draw the attention to the relevant points that support the thesis not only conserves information, but it

also allow for clever transitions that connect the data to the design solution. In *Visual Explanations*, author Edward Tufte argues that multiples, essentially keyframes lifted from an animation, “help us to access change and possibly rates of change within each image and between images in a sequence—and we do so at her own pace.”⁴ Yes, reading frames at our own pace is advantage, but Tufte acknowledges the trade off: “Sequences of still images suffer the obvious (though no less important for being so) loss of experience of the passage of time, loss of the rates and rhythms of actual motion.”⁵ If the information depends on the passage of time as in the case of trending data, motion is the ideal media. Of course, data that does not work with the narrative probably should remain in a process book or on a research panel. It only works if the research can be and integral part of the content structure.

Structuring Content

The hybridization of animation and video plus the addition of kinetic type and graphic data pose a different challenge to the planning and organization of a script.

While storyboards are still employed to plan keyframes, a different method is used to organize the script. Designers are more familiar with hierarchical organization in

2D space, so a method introduced by Paul Nini, Professor at Ohio State is used—a data-driven series of posters stressing orthogonal, diagonal and freeform layouts. Part script, part storyboard and part style guide, the posters serve to explore and perfect the content before the animation process begins. The trio of

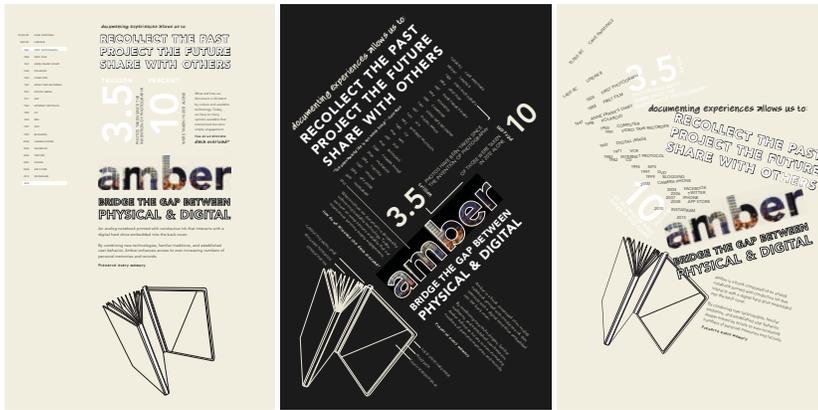


Fig. 6 Alisa Rantanen, BFA, packs a considerable amount of information into three different poster layout schemes.

layout constraints requires the designer to find hierarchical connections in space, which help make connections in time. While animation applications like Adobe After Effects are capable tools to finesse motion technique, these tools are not ideal environments for exploring crucial design concerns such as type, layout, structure and hierarchy. The posters serve as excellent pre-visualization tools and can be quite effective in their own right. However, the density of information pushes the limit of the large poster format. For the designer, this is a frustrating limitation of the poster, but a revealing advantage for the motion medium.

Music As Grid

The poster series provides an opportunity to follow a spatial grid, and in the instance of the freeform poster, violate it. The next step for a motion piece is to spread that spatial information over time instead. Naturally, music is the obvious choice as a temporal grid with its built in rhythms and structure. The subtleties and variation in a soundtrack can carry the visuals—if the designer can make full use the acoustic dimensions. Just as designers are not necessarily animators, nor are they necessarily musicians either. To visualize and deconstruct the music, designers can create a “map” of the musical selection. Though the designer’s message can follow a

predictable flow, fitting the narrative to a musical selection can create interesting alternatives to a prescribed order of information.

The Movements Of A Motion Infographic

With or without any musical training or knowledge, the designer uncovers the

innate capacity of a song's structure as a grounding element for the content. Key moments in the music define shifts in content as the narrative unfolds. Most intriguing is the revelation that the order of the temporal narrative can differ greatly from the 2D spatial hierarchy of the poster and still operate effectively. Like a Quentin Tarantino movie,



Fig. 7 A. Jonovski and A. Rantanen illustrate a reference graphic of the music selection aligning content to key moments and passages.

alternate orders of presentation are possible and can even build a kind of cinematic anticipation for what is coming next. The music map as an assignment is meant to encourage the designer to carefully analyze and dissect something she may never attempted before—music. The exercise intimately acquaints her with the song while also providing her with an opportunity to graphically express something as intangible as music. The liberating aspect of the assignment is that there is really no correct way to “draw” the song as long as the designer can see the texture and temporal relationships in their own work. It will serve its purpose as a planning tool along with a script and storyboard. Quite accidentally, the music map will also be beautiful in its portrayal of information. It is fascinating to see the range of solutions to visualize a phenomenon that is anything but visual particularly those designers who do not suffer the crutch of being able to read musical notation.

Sleight Of Hand

Motion For Attention

Both music and narration are very effective media in which to bind a motion piece. Without either, arbitrary decisions have to be made for the durations of the stage elements. As a side note, silenced motion pieces that were originally built around sound still express a rhythm that is perceivable—and are better for it. In the real world, audio may not be able to accompany the motion piece, or it is of inadequate fidelity to be useful. Luckily, motion is a very powerful attention device in the absence of omnidirectional acoustics. In fact, it shares its power with a host of other pre-attentive brain processes that designers are more familiar with such as making it bigger, bolder or redder. As Ware states, “The simple features that lead to pop out are color, orientation, size, motion, and stereoscopic depth.”⁶ He goes on to explain that a sea of similar motions is not going to pop out and gain the viewers attention. “The strongest pop-out effects occur when a single target object differs in some feature from all other objects and where all the other objects are identical, or at least very similar to one another.”⁷ It is important to motion carefully, if not sparingly. If the element stands out, it will garner a shift in attention. Consider a red element in a composition bathed in the same red. It no longer stands out.

Simulating Interaction

Touched on earlier is motion design’s ability to serve other areas of design. As opposed to traditional graphic design, and interaction design solution is difficult to convey in a static format. It also inefficient or wasteful to build out a working prototype for the sake of proving a concept. Granted that a moving simulation of an interactive experience lacks the tactility of the final product, but the hidden complexity can be demonstrated with a persona and narrative to go along with it. The student examples cited all benefitted by a motion piece that affectively opened the proverbial black box showing the inner workings of the design solutions including a web site, a mobile app, a futuristic notebook, and a model for self-

identity. Note that the interaction demonstrated may be for a mobile device, but it can also extend to a communication or production system, and even a social system.

Demonstrating Affect

Designers imagine future conditions based on a design solution they present. A story set in motion is a capable method for the delivery of that future. The interactions that the designer chooses to demonstrate in the motion pieces are not random sequences, but scenarios played out that support the design intent. Jon Krasner opens his aptly named chapter “Conceptualization” in his book *Motion Graphic Design*, he reiterates that animation has been tool for ideas since the



Fig. 8 Mayra Duarte, MFA, builds a case for the design intent and proceeds to show video of implementation.

beginning of the twentieth century, and “in more recent years, graphic designers have harnessed the devices of time and motion to convey their ideas and movie titles, network identities, Web sites, multimedia presentations, and environmental graphics.”⁸ Furthermore, Krasner generalizes that, “Developing concepts to communicate [designers’] ideas was the first challenge. The current challenge is developing *unique* concepts and communicate them by storytelling.”⁹ Wicked problems like child obesity (A. Jonovski) or violence as a result of xenophobia (B. Keelean) may seem insurmountable, but after viewing the designer’s motion piece, one is left with the feeling that the ideas, even in a small way, could affect positive change.

Notes

1. Nielsen Norman Group: Evidence-Based User Experience Research, Training, and Consulting, “Mental models and user experience design,” last updated October 18, 2010, last accessed August 31, 2013, <http://www.nngroup.com/articles/mental-models/>.
2. Colin Ware, *Visual thinking for design*, (Burlington, Mass. : Morgan Kaufmann ; Amsterdam : Elsevier Science & Technology, 2008), 58.
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7. Ibid, 29.
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