

# WHAT'S AFTER THE "TRANSFER" MODEL? CONSTRUCTED STORY ENVIRONMENTS AS A NEW METHOD FOR COMMUNICATING DESIGN

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## ABSTRACT

As designers grapple with the increased complexity of today's problems, traditional presentation techniques used to effect knowledge transfer to client organizations are proving inadequate. Traditional presentation conventions have their roots in the transfer model—an academic-style practice that presumes stakeholders in the decision-making process come to the interaction with shared levels of expertise, context, content, language and objective. In this paper, we argue we have a new communication context, where many more individuals are exchanging information with low-context audiences with differing objectives. This shift in context and purpose demands a shift in mindset from a transfer model of communication towards an experience model, where the design of shared experience and emotion play an equal role in connecting stakeholders with the information and concepts. We show how designers can instead create *constructed story environments* that help stakeholders establish a sustained and actionable connection with the information—a connection that fosters emotional and intellectual contact with important work.

**Keywords:** communication theory, design process, emotion, information, experience design, storytelling.

## INTRODUCTION

Design is an increasingly complex profession today, in large part because technology has reshaped the way clients sell goods and services, build brand, and connect to consumers. As a result, designers are

faced with the problem of envisioning diverse user experiences in products, services, interactions, communication, and messages—in short, everything that an organization has to offer. Not only do these design projects require more strategic integration, they expand the number and variety of stakeholders who need to understand the output.

One benefit of design's expanded role is that designers can leverage their sensitivity to the intangible aspects of even pragmatic interactions, like banking, and re-conceive them in the context of rich user experiences. The ING Café (*ING Cafe*), for example, implies that banking and saving money should be as simple as having a cup of coffee. On the face of it, coffee drinking has nothing to do with saving money. Yet somewhere in the design of the ING Café, with its cozy environment and free internet access, an emotional attachment with the warm experience of drinking coffee foreshadows the intellectual and pragmatic attachments we have with managing money.

The design profession is well-suited to this kind of lateral thinking in connecting to end-users. Designers are already persuaded of the importance of connecting emotionally with consumers and, in practice or through formal education, have developed methods and tools to bring rigor and discipline to their development processes. But these development processes often lead designers into unexpected territory that is particularly foreign to organizational stakeholders: How does a designer start a discussion around banking and coffee with a finance client? How might a banker be encouraged to explore the coffee

drinking experience? Clearly, communicating design is as critical as the design itself.

While designers utilize a rich set of design methods to guide concept development, the process of communicating design has converged into a limited set of practices: it is now standard to deliver creative work to diverse audiences in the context of a standing presentation with projected materials. The critical act of communication—the surfacing of the working team’s tacit knowledge and formalizing it into the explicit knowledge required by the client to carry the work forward—is bound into a pro forma experience that was not designed to foster deep contact with complex work. Designers are not without tools in this context. They are trained to use visualizations to resolve complexity. They understand the role of images in reducing abstraction. And they are increasingly heeding the advice like that of Business Model Generation authors Osterwalder and Pigneur to tell good stories to help make the unfamiliar more tangible and to reduce resistance to novelty (Osterwalder and Pigneur, 2010). But is this sufficient? We argue that embedding visuals, images and good storytelling into current presentation

conventions fails to address a fundamental conceptual problem with our collective communication model.

**OFTEN HEARD BUT LARGELY UNSEEN: THE “TRANSFER” MODEL OF COMMUNICATION**

Communication theory suggests that most people have a conceptual model of communication that directs their behavior and shapes their expectations. Theorist Robert T. Craig describes the predominant model—waning in academia but still active in the broader cultural context—as the “transfer” or conduit model (Craig, 2001). Craig notes that the transfer model, having evolved from the famous engineering model crafted by Claude Shannon and applied to interpersonal interaction by Warren Weaver, “assumes that the essential elements of communication—distinct individuals, their private thoughts and feelings, and technical means of communication (shared codes, channels of transmission, etc.)—must all be fixed in place before the act of communication occurs.” While presuming such elements are in place, the model suggests the “sender” of the communication should focus on careful message encoding and accurate transmission to

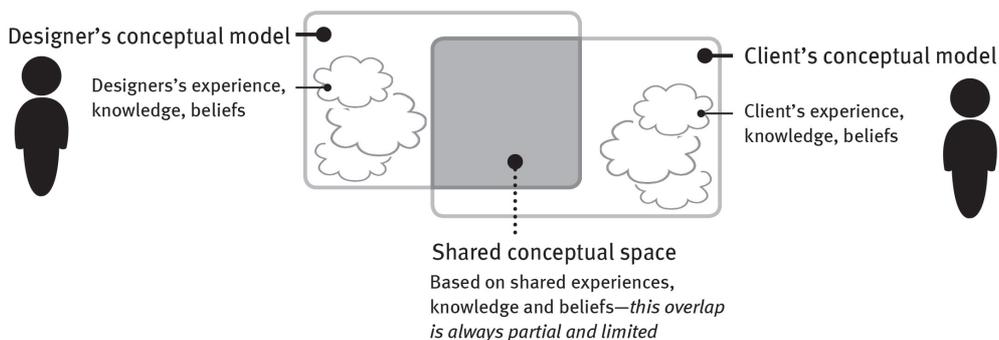
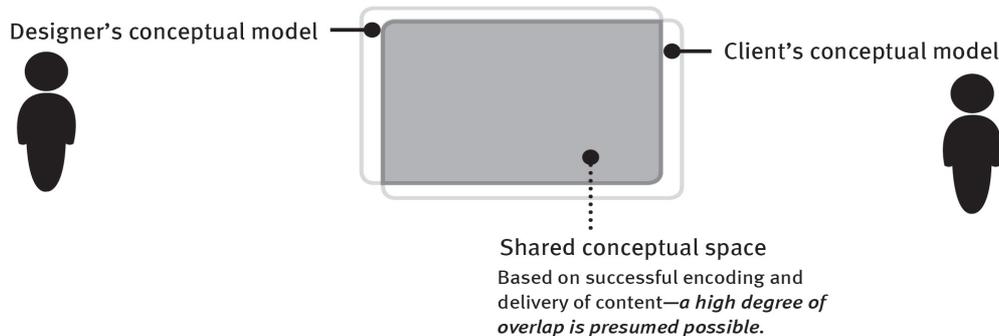


Figure 1 (top): Presumed outcome of communication

Figure 2 (bottom): Pragmatic outcome of communication

ensure a communication is delivered intact to the “receiver.”

The transfer model, then, is about perfecting the delivery of the message. It presumes that what is in the sender’s mind can be transferred accurately and in its entirety to the receiver’s mind. However, this conception of communication fails to factor in what theorists in education, social psychology and other academic traditions know to be influential in knowledge acquisition: that individual experiences, objectives, biases and beliefs strongly influence how new information is received, processed and integrated into an individual’s conceptual model of a given topic (see Figures 1 and 2) We argue that because of differing conceptual models, an accurate transfer is not just difficult but impossible—the overlap of conceptual models between the designer and client will always be partial and limited.

#### **CONVENTIONS IN PRESENTATION: PRACTICES THAT LIMIT THE IMPACT OF DESIGN**

To communicate all they have learned, designers often take complex information narratives and present them through highly orchestrated presentations, reflexively relying on the information transfer model.

The very notion of “presenting” to an audience comes from the academic context, where knowledge transfer is the dominant paradigm. We use academic here in the broad sense of the word—the development of knowledge by experts that is ultimately transferred to a primed audience with a similar frame of reference. Within an academic context, the knowledge base of the audience was relatively homogenous. As a result, presentation conventions emerged that succeeded in creating data transfer: they opened a direct connection between the audience and findings, with the presenter organizing and sequencing the material logically and accessibly. Academic presentations are useful and appropriate in their context because both the presenter and receivers of information share high expertise and commonality of professional context, training, language and objectives.

Today, conventions formerly restricted to academic and advanced professional contexts are now carried out by non-academic presenters in a widening number of settings with highly disparate audiences—and with

greater frequency. While the context for presenting has clearly changed, the presentation conventions have not.

The transfer model focuses on one-way information flow and on reducing complex concepts into smaller, bite-sized chunks of information that can be sent and received more easily. This has generated a set of presentation behaviors that are worth careful examination. We can chart these conventions into four basic categories:

1. Content
  - linear in structure, requiring participants to be present from start to finish to gain full access to the work
  - bullet points that assume shared meaning from a few words, many of them ill-defined and ambiguous (“innovation,” “research”)
  - abstractions like frameworks and diagrams that require context and first-hand experience to interpret fully
  - special code, including acronyms and abbreviations that require familiarity and shared expertise to decipher
2. Materials
  - presentation decks
  - handouts, reports
3. Interactions
  - seated, with single presenter
  - speaker, standing and controlling the pace of story
4. Environment
  - seats facing the presenter, lecture style
  - single projection
  - spotlight on presentation

The reflexive use of presentation conventions can result in predictable outcomes of particular importance to the design context. First, we observe reflexive behavioral patterns on the part of the “receivers” in response to presentations: they pay partial attention, they come and go during the presentation, and they limit their input. Their passive role in the transfer

model allows for selective investment in the content and outcome.

Second, and of significance to design, are reflexive cognitive responses to presentation conventions: the positioning of new ideas in an old format can dim the novelty of the work. The predictability of this communication channel can mask subtle but significant aspects that might come alive in another experience.

Lastly, these conventions promote intellectual, rather than emotional, contact with the work. Intellectual contact with information may be all that is needed to process and transmit data in an academic context. However, in a design context, the addition of *emotional contact* can influence important new behaviors. Research from the cognitive and neurological sciences shows that combining emotion with information catalyzes recall; it allows memories to endure more vividly and for longer periods of time for better decision-making. Dolan's work (Dolan, 2002) demonstrates that emotion exerts a powerful influence on reason and, in ways neither understood nor systematically researched, contributes to the fixation of belief. The design profession, too, has been exploring the role of emotion in experience: Don Norman, in his book *Emotional Design* (Norman, 2003) offers three types of emotional responses when it comes to interaction experience, namely the Visceral, Behavioral and the Reflective. Desmet, through his various studies and experiments (Desmet, Overbeeke, and Tax, 2001; Desmet and Hekkert, 2007; Desmet, 2004), shows that experiences of products can effect emotional responses in people. In sum, emotional stimuli help us internalize new information in ways that are more native to our cognition and use—they feed our intuition, a core source of decision-making. Yet the conventions of professional presentation focus our attention and practice almost exclusively on creating rational, intellectual attachment to important findings.

### **IF NOT “TRANSFER”, THEN WHAT? THREE FACTORS TO INFORM A NEW COMMUNICATION PRACTICE**

Communication theorists have shifted from “transfer” communication models to “constitutive” or

constructivist models, where communication is conceived of as a process of shared sense-making that emerges from social interaction and the building of shared context *in the act of the communication itself* (Desmet, Overbeeke, and Tax, 2001; Forlizzi and Battarbee, 2004). The shift reflects the influences of the social sciences and learning theory and has impacted other fields like knowledge management, which now includes the social sense-making model in their systems thinking (Ikujiro and Noboru, 1998).

What is design to make of this new point of view? How might we bring this new social model to bear on the complex job of communicating design? First, we need to shift our language from “the audience” or “viewers” to “*participants*” to better inform our thinking. Second, we need new inputs to inform our communication practices, and these inputs should both advance the social sense-making agenda and fit the strengths of design. We offer three such inputs:

#### **EXPERIENCE**

Situated Cognition Studies (Gee, 2009) suggest that our understanding of information depends on more than just the “private mind” of an individual. Rather, it depends on the world of experience—almost always shared in social and cultural groups—as the core of human learning, thinking, problem-solving and literacy. Experiences, these studies suggest, provide a powerful platform for shared context that in turn directs the interpretation of information; such experiences also create the conditions for emotional connection to information, as emotion is a resource for understanding the content of an experience. Experiences are also important to the understanding of information because they endure: experiences may be lived in the moment, but are relived over and over through our narratives and stories.

The work of Forlizzi and Battarbee (Forlizzi and Battarbee, 2004) adds clarity to the concept of experience by suggesting designers should consider three variations:

1. *Experience*: the constant stream of everyday activities; we use these experiences to assess our goals relative to the people, products, and environments around us.

2. *An experience*: a named event with a beginning and an end; it often inspires emotional and behavioral changes in the person who experiences.
3. *Co-experience*: co-experience is about user experience in social contexts. Co-experience takes place when experiences are created together, or shared with others.

It is this last variation—the co-experience and its influence on meaning-making—that we believe offers the most guidance to designers looking to create powerful connection to their work.

### **EMBODIMENT**

Traditional presentation conventions generate a passive, voyeuristic relationship to the content, where viewers sit back and witness the information that is presented to them. However, theorists in phenomenology tell us that our physical environment and our body, in addition to our cognitive processes, are equal and critical actors in our learning system.

This perspective is called *embodiment*, and refers broadly to the social and cultural context in which the body, cognition, and language are jointly and perpetually situated. Pérez-Gómez (Perez-Gomez, 2006) uses the notion of embodiment to contrast two kinds of possible experiences, both relevant to communicating design:

- *Corporeal experiences* that include the actual presence of the participant within itself: living in our homes, walking in the city of London.
- *Voyeuristic experience*, or “visitations” that can be either virtual or physical, to a place or event characterized by its ephemeral qualities: visiting a building as a tourist, viewing a city (virtually) on the computer.

The challenge in the design context is to move participants from a passive, voyeuristic experience of the work that limits learning to an active “corporeal” experience, where participants can engage with important information with their whole body, not just their eyes and ears.

### **EMPATHY**

In *Wired to Care*, author and design strategist Dev Patnaik (Patnaik, 2009) draws together important cultural and biological threads to make the argument

that empathy is the enduring source of innovation. When producers understand at a gut-level the needs and circumstances of the people they are designing for, they see opportunities faster, are more invested in the outcome, and possess a certitude that allows them to make better and more refined decisions. Building empathy, Patnaik argues, not only promotes better decisions, it gives us the courage and endurance to stay true to the vision throughout the long months and years leading to implementation.

Engaging these three inputs in a new kind of presentation design can allow both designers and their clients to leave the experience with tangible connections to important information, and enable meaningful action as a result of such connections.

### **A NEW MODEL FOR THE PRESENTATION EXPERIENCE: CONSTRUCTED STORY ENVIRONMENTS**

Here we come to the pertinent question—if designers are to break with presentation conventions and models that no longer fit, what might take their place?

We propose an experience-based model that uses *constructed story environments* to bring participants—with their varying knowledge, experiences and objectives—into an exchange with new information and individuals to transform their thinking (see Figure 3). Story environments are open but thoughtfully designed environments where stories can be told, exchanged and built. Constructing such environments allows the group to collaborate, to internalize problems and externalize potential trajectories. By ensuring some stories are designed around end-users, designers can enable empathetic relationships between the participant and the end-user group.

When participants leave the constructed story environment, they are better prepared to act upon this emotional and empathetic connection and work with the designer to implement some of these externalized trajectories. And because they have internalized these stories, participants can now extend the narrative into their workplace by creating ad hoc story environments for others in the system.

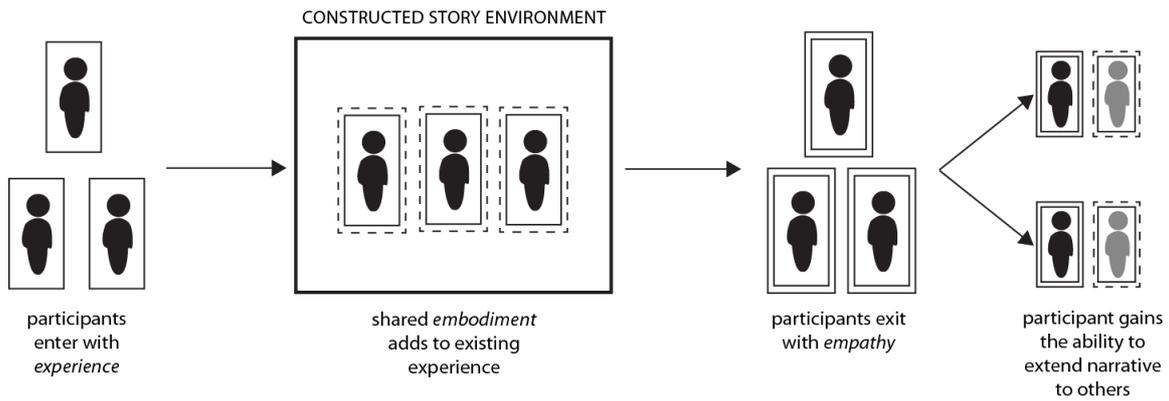


Figure 3: Participant trajectory through a Constructed Story Environment

**STORY ENVIRONMENTS IN PRACTICE:  
FIVE TACTICS**

Shifting from the presentation deck to story environment provides designers the latitude they need to create more effective shared conceptual spaces with clients. It would also support important *variety* in experiences that better expressed the work and to achieve *targeted outcomes* that better fit the client need. To substitute experiences for conventional presentations, however, would benefit from a rubric of sorts. The logical question, then, was, how many types of story environments might there be, and to

what end?

To develop a preliminary typology, we asked graduate students at the IIT Institute of Design to deliver their project findings while breaking at least two of the four presentation conventions—content, materials, interactions and environments. The resulting work (spanning over three years and multiple classes) has generated five generic tactics for constructing different experiences and outcomes.

**Tactic 1: Immersion**

Immersion environments use multiple sequential or



Figure 4: Immersive environments create multisensory experiences of data

simultaneous data streams (or media) to create a high-sensory experience. Immersion environments can flood the senses with parallel channels of information or provide multiple experiences of an activity to activate memories, emotions and senses in the participants.

In these examples, sound, print and even multiple projectors come together simultaneously to create a multi-sensory experience of user research data, context, or conceptual ideas. By presenting competing media elements and modulating elements, designers can simulate the experience of being in specific situations—the nightly guilt and pressures around feeding the family or the delight at finding local information while on a commute.

Immersive environments are useful when trying to bring clients into a future state that does not exist yet, or to reconstruct a state that clients cannot experience firsthand. In our studies, we observe that participants engaging in future state immersions experience new concepts through body, cognition and language. Participants in immersive reconstructions of events project themselves into the situation, stimulating empathic connections, because the environment triggers their own similar experiences. In both cases the resulting intensity of experience can be a powerful transition to understanding.

## Tactic 2: Engagement

Environments built for engagement use artifacts and large-scale installations to create a rich learning space—the environment becomes an active participant in the experience. This tactic often makes use of the whole room to create not just one but a series of specific embodied experiences, thus breaking from the traditional convention of single-presenter/multiple-audience formats. The presentation is non-linear, free-form and there is no set in and out point. Such environments encourage iterative, self-directed learning by allowing participants to progress at their own pace or to stop and dwell on elements of interest. They also lend themselves to guided tours by the design team.

Artifact-driven environments such as these are excellent platforms for shared sense-making. They require participants to stand up and negotiate the space with others. They generate spontaneous conversation among participants, invite group elaboration with the content, and act as ice-breakers for important conversations. These conversations can guide evaluation of the content, shape participant intentions and create enduring connection to the work. Environments built for engagement can be used to bring user-subjects to life and to act as a traveling road show. With their scale and drama, these environments can also function as *attractors*, drawing



Figure 5: Engagement environments use the whole room to set up large-scale data experiences



Figure 6: Hands-on interaction allows participants to get an in-depth view of data or concepts

attention to projects back at the client site or helping disseminate information across the client organization.

### Tactic 3: Interaction

Hands-on interactions and games are experiences that allow participants to get familiar with information *in stages* by physically interacting with it. Through kinesthetic exploration, participants are allowed to build their own mental models of the information, using their hands as a means to learning and thinking.

Enabling interaction with information or concepts allows participants to establish a deeper connection because participants are able to project the image of the subject area, user-subject or concept themselves. By playing with the information and ascertaining which goes where, participants can develop personal models of where the design is going or should go. The experimental nature of interaction also allows participants to test and refine their understanding, evolving a complete enough picture so that they might also evaluate their own role in the future of the project.

Because they occur in a shared space, interactions can help participants engage in shared sense-making. This makes interaction-based experiences useful when the goal is to spur plans and actions that require shared vision and shared effort to execute. Interaction-based experiences have the added advantage of being easily repeatable inside an organization because the intelligence is embedded in the design of the experience and the artifacts, rather than in the presenter.

### Tactic 4: Application

Workshops and toolkits allow individuals to engage new content in a learning-by-doing mode. Information embedded in the design of the experience and artifacts is accompanied by guidance and explicit objectives to generate new insights or concepts. The emphasis on the application of the data directs participant attention to the utility and potential of the content, rather than on familiarity or general knowledge acquisition.



Figure 7: Application environments allow participants to move from the role of consumer to producer of information

Application environments put participants in control – they can take existing information to create new opportunity areas or design ideas. In the design context, information is intentionally architected to bring clients into emotional contact with specific end-users,

while also providing structures to direct insights into generalized design directions. Because clients are encouraged to move from the role of a consumer to the role of a producer during the experience, they internalize the information better and are better

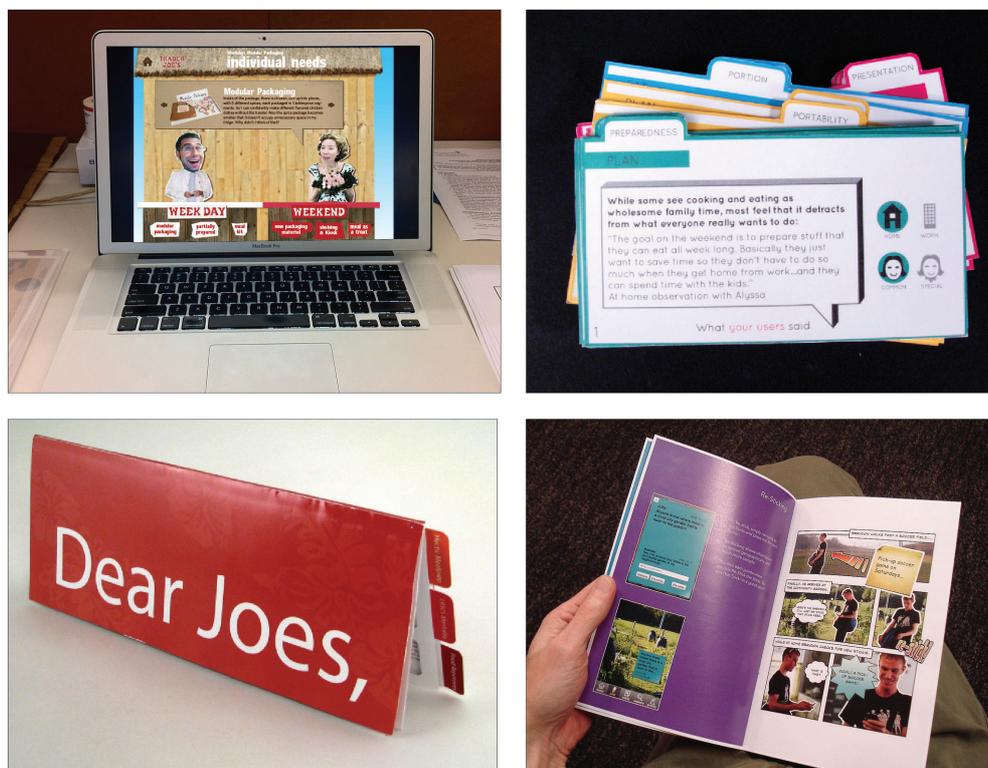


Figure 8: Extensions are artifact used in the presentation that participants can carry with them

prepared to act upon it in later stages of the project.

**Tactic 5: Extension**

Extension experiences focus on extending the learning experience using takeaways and tools that allow for self-directed, personalized exploration of content over time. These tools—comic books, information cards, videos and posters—call for data to be broken down into bite-sized chunks that can be “nibbled at” easily over time, aiding ad-hoc moments of discovery by individuals or by collections of people in group settings who may not have been part of the initial project. The bite-sized data treatment also supports random-access, non-linear browsing, which is particularly helpful as projects progress, new questions are raised and new team members are introduced.

Extension environments enable information to “go viral” inside an organization. Participants can not only carry these artifacts back to their organizations, they can bring them into meetings or work sessions for wider dissemination and use.

Extensions allow for *data persistence*—the information collected over the course of one project can be referenced as it progresses into implementation and then reused in the future for different projects. Extensions are excellent tools for keeping teams in touch with the initial insights and information and for providing high-fidelity decision-support as projects head into implementation or funding.

**COMPARING THE FIVE TACTICS**

The other question that comes up with regard to these tactics is how they compare to each other in the context of communicating design. Furthermore all five tactics break one or more of the traditional presentation conventions. In the following table (see Table 1), we summarize the five tactics, noting which presentation conventions are broken or extended as well as describe experiences that each tactic provides as outcomes useful for communicating information in the new context of design.

	CONVENTIONS BROKEN (AND RECONCEIVED)				OUTCOMES
	CONTENT	MATERIALS	INTERACTIONS	ENVIRONMENT	
<b>1 Immersion</b>		multi-media, multi-sensory props		full-stage, technology-aided	<i>simulations of user experiences or proposed experiences</i>
<b>2 Engagement</b>	non-linear, free-form	3D artifacts, visual and varied in scale	self-directed or small groups	full-room, large-scale installations	<i>rich learning spaces for iterative, self-paced discovery</i>
<b>3 Interaction</b>		3D artifacts, games	self-directed, tactile, experimental	stations and work spaces	<i>experimental experiences to build new mental models</i>
<b>4 Application</b>	self-organizing content	artifacts, worksheets	facilitated	collaborative work spaces	<i>build familiarity with data via problem-solving</i>
<b>5 Extension</b>	non-linear, bite-sized random-access	visual artifacts	self-directed or small groups		<i>extensible learning experiences to help data go viral</i>

Table 1: Comparing the five tactics for emotional experiences to traditional presentation conventions

## CONCLUSION

In this paper, we show how the transfer model for communicating design has become inadequate for design's new context of practice. In such contexts, disparate stakeholders must all deeply understand the context of the users, not just the concepts of the designers, so that the larger working team might successfully drive the ideas through the organization and into the world. In order for this to occur, designers must foster emotional connection to the work— brokering a deeper empathy with end-users' lives and converting that into a shared operational resource for the organization. In this expanded role, communicating design becomes as important as the design itself.

To replace the transfer model, we prescribe a new focus on experience, in particular *constructed story experiences*. We describe and compare five tactics for designers to consider. We believe that shifting to constructed story experiences can help designers create powerful new spaces for thinking that conventional practices inhibit. We believe these experiences will promote a sense of discovery, mission, and enrollment among the individuals in the client organization who need to execute, thereby increasing the project's chances of success. And we believe this new approach is a particularly good fit for designers because the field already excels at creating engaging artifacts and powerful experiences. While we've proposed five tactics in this paper, we're likely to see more emerge as the profession evolves new practices around this idea of *presentation as experience*.

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