Communicative Interaction in the Use of Design Precedent

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ABSTRACT
Design precedent is used as a form of episodic memory to inform the design of future artifacts, and aids in the generation of a designer’s schema. The communicative structure surrounding a design case, a detailed form of design precedent, is analyzed within the framework of semiosphere. Implications of this framework for the rhetorical structure of the text is discussed, and potential overlap with digital culture in dimensions of participation, remediation theory, and intertextuality is evaluated.

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Design.

INTRODUCTION
Design cases as a form of precedent have been utilized in a broad range of design disciplines as a way to preserve and share design knowledge across space and time. Design precedent is often presented with minimal contextual cues, as in the case of plan books in architecture or logo reference books in visual design, but a design case offers a more in depth view into the process of designing a specific artifact, including the context of creation, successes and failures within the process, and important design decisions. While a holistic view of these design cases is an important use of this form of design precedent, extending the potential of use for this artifact to include fragmentary, privileged use of content and context within a design case leads to a richer understanding of the role of precedent in the building of personal schema and utilization of precedent in design practice.

WHAT IS A DESIGN CASE?
A design case is a way of storing, identifying, or preserving designed artifacts, including the process of creation and context of design, as episodic memory. While a design case represents a specific form of design precedent, the larger structure of precedent within the context of design depends on “processes of typification and generalization“ [13] to capture elements of designed artifacts to allow for future recall and use by design practitioners. This process allows designers to take advantage of dynamic and episodic memory [13] to inform future work, as well as a tool to analyze and understand past work.

Precedent in Design Research
While design precedent has enjoyed a historically-rich role from a designer perspective, the entrance of this form of knowledge generation and utilization in the formal design research literature is relatively new. Oxman [13] represents a seminal understanding of design precedent as a force in design reasoning and practice, and most research has followed this general direction in the succeeding years. More recent design research has focused on this seminal understanding of design precedent [9,15,16], with researchers seeking to understand the role of precedent from the perspective of praxis, without directly reconciling the role of precedent as a unique form of knowledge generation. More recently, within the field of instructional design, Boling [1] has sought to establish the role of researchers and practitioners alike in generating design knowledge, seen as separate from scientific knowledge, in a field that has a general absence of rich design precedent. Where fields of design lack adequate or proper sources of precedent, impetus from a design research perspective may be helpful in kickstarting this process or academically justifying the utilization of this unique form of knowledge by practitioners in the field.

Precedent in Design Practice
Precedent can be seen as informative of a designer’s process, in some limited, non-deterministic sense, including the opportunistic selection and incorporation of fragments of design precedent into highly- or tangentially-related design projects. A designer might attempt to solve existing problems by drawing on surrounding precedent, and then add to the pool of available precedent with the resultant designed artifact. In this sense, work that has drawn on precedent might then be incorporated into a collection of precedent, which may be incorporated in the creation of another designed artifact [9,14].

Designers see precedent all around them, in both formal and informal capacities. In fields with a rich history of precedent such as graphic design or architectural design, formal artifacts may present as design annuals or specimen books, while informal artifacts are available all around us in packaging, branding, digital interactions, and other everyday experiences [1]. All of these fragments of precedent inform the creation of schemata over time that allow an experienced designer to see a design features in a
given artifact as elements of a schema that are referent to other parts of their lived experience. This individual schema is comprised of a confluence of precedent which has been utilized or experienced by an individual in the past, and can include fragments from formal and informal sources. This schema can function as a way to understand and explain features of other design artifacts, either by adding or reinforcing the schema through identification of like or contrasting forms, or by selecting elements from the schema in a generative or synthetic sense as a foundation for new artifacts created by the designer [9].

According to Lawson [9], designers use “precedent and gambits” to create something new out of a confluence or schema of many existing design artifacts, which are constituted from lived experience and design judgment. In this way, precedent serves as episodic memory, storing experiences of the past in a way that can be used to inform future designs.

TWO EXAMPLES OF PRECEDENT IN INSTRUCTIONAL DESIGN

I will use two examples to discuss and demonstrate the role of design precedent in the creation and utilization process throughout this paper. Both examples were selected from the field of instructional design—where the creation and use design precedent is still nascent, and no clear historical basis of production and dissemination exists and no corresponding culture of precedent use by instructional designers is directly evident. This specific genre of design precedent is an especially interesting context, as the authorial intent in writing the design case and the intent of the designer in utilizing this precedent in a tractable way is still evolving.

The discussion of these concepts will be discussed in a double case study format, with two examples selected from a relatively new journal in the field of instructional design. These cases represent two issues released from the journal in the prior two years (2010 and 2011) [5]. While all articles in this journal have some relation to learning or instruction, these two represent a wide range of application—from the development of a “serious” game to the design of a new studio space in higher education. These selections also represent an important distinction in terms of authorship: the first is written by a member of the design team, while the second was produced as a documentary, including interviews by the design team, while the author had no interaction during the design process proper.

Enhancing an Existing Instructional Game

This case, based on the article entitled A Design Case: Developing an Enhanced Version of the Diffusion Simulation Game (hereafter, DSG) represents the design and development of an instructional game, and is written from the perspective of multiple members of the design team [8]. The design case describes the process of identifying potential changes to an existing “serious” instructional game that “teaches change management strategies aligned with Rogers’ diffusion of innovations theory.” [8]. The case documents a design process that included analysis, prototyping, initial development, usability evaluations, final design decisions, and future work.

![Figure 1. Main interface of the revised Diffusion Simulation Game [8].](image)

The game is structured around a fictional school, with the goal of influencing all members of the school to move through the three phases of diffusion of innovation (awareness, interest, and trial) and become an adopter. This portion of the main game interface shows the status of each member of the school in the center column, including their progress toward adoption. Tools on the left column represent possible actions that can be requested of each school member, and the right column shows any activity based on the action being requested. The goal of the game is to obtain as many adopters as possible, using Rogers’ theory, before the set amount of time expires.

![Figure 2. Main screen of the multimedia article [2].](image)
Documentary Describing the Creation of a Graduate Design Studio

This case, based on the multimedia article entitled A Design Case Featuring the Graduate Design Studio at Indiana University Bloomington’s Human-Computer Interaction Design Program (hereafter, GDS) represents a documentary describing the design of a studio environment within a higher education context [2]. This design case was written and developed by a third party as a student documentary project for an instructional design and development course, and was presented in a multimedia documentary format. The resulting interactive interface includes a main documentary that describes the design of the studio space, as well as additional resources to explore the new design studio, learn about key features of the studio in greater detail, and watch additional interviews with key stakeholders from the design process. The interface also includes access to the background of the producer of the design case, including requirements for the class project this design case was a part of, and information about the producer of the design case.

The design artifact that this documentary represents is reproduced below. The completed design space includes faculty offices and a variety of student workspaces. Particular attention is paid to describing the types of workspaces available, including the integration of whiteboards and the capabilities of collaborative viewing stations via MediaScape tables [2].

![Figure 3](image.png)

**Figure 3.** The “Explore Design Studio” section of the interactive multimedia article, including a floor plan of the designed educational studio space [2].

PRODUCING AND READING THE DESIGN CASE

The design case is a vehicle for describing a designed artifact, including the process of design, the context of production, the design team, and other pertinent details. The design case, as a text, mediates the physical and/or temporal experience and substance of the designed artifact between two individuals or sets of individuals: 1) the designer/author or documentarian/author of the design case; and 2) the reader of the design case. The relationship between these two entities is explored further using the semiotic relationship of the addresser and addressee.

In this case, we will address three potential interlocutors in the dialogue surrounding the design case: the utterer, the addressee, and the interpreter or addressee. While we are only referencing three interlocutors, Johansen [6] doubles this construct, allowing for hypothetical constructions that form of each interlocutors from the alternate position within the interpretative structure (i.e., the utterer’s conception of themselves as an utterer). For this application, I will use these definitions of interlocutors in the following way: the utterer references the statements or actions of the original designer, design team, or creator; the addressee is the writer of the design case itself (which may be different from the utterer), and the interpreter or addressee references the person consuming the completed design case. Each of these interlocutors will be discussed in greater detail, elaborating on their relationship to the overall communicative structure of the design case.

The relationship of each of these interlocutors and the designed artifact and projected user are visually depicted in Figure 4 and elaborated in the following paragraphs. These interlocutors can also be seen in a larger structure referred to by Lotman [10] as the semiosphere, which describes the “semiotic space outside of which semiosis cannot exist.”

**Utterer and Addressee**

The utterer and addressee often represent the same entity in the formation of a design case, but may be distinct as well. These roles “mutually influence each other, [but] are nevertheless distinct and often not in agreement with one another” [6]. In the DSG case, the design team who undertook the actual design process was the same group that eventually wrote the design case [8]. In contrast, in GDS, the utterer represents the interviewees who were contacted in the process of creating the documentary, while the addressee role was played by the documentarian, who mediated the responses of the utterer [2]. Whether the utterer and addressee represent a single person or group or separate entities, there is a natural distillation and curation of content, either in the case of explicit exclusion of data, or the implicit neglect of data.

Although this concept will be expanded in a future section, it is important to note that it is impossible to fully communicate the data from the utterer to addresser role within the discursive restrictions of a design case. The situated environmental, physical, and socio-cultural dimensions of the design process are impossible to reproduce in full, and some curation of this process is a necessary, although often implicit, part of writing the design case.
some level of familiarity with design process norms, the result may be similar to the case of a combined utterer/addresser, albeit with traces of the documentarian’s lived experience and understanding of the context of design and design process. In the latter case, the methodology of data collection has a significant affect on the congruity of the constructed design case and the actual design process. It is outside the scope of this analysis to address research methods for this type of reconstruction, but the methods that are selected for this process may alter the final design case in a significant way.

Addressee/Interpreter
The addressee and interpreter should, in ideal terms, identify the same entity. The addressee is the reader that is projected by the author or addressee in the process of writing the design case, while the interpreter identifies the person who is actually consuming the design case. The addressee/interpreter is an active consumer of the design case [12], constructing meaning in an opportunistic way based on their socio-cultural context.

Projected Reader of the Design Case
The reader of the design case, which may occupy the role of addressee and interpreter or just the interpreter, positions their reading of the case in temporal and socio-cultural space. Much as the writing of the design case is positioned in space and time, the reading of the resulting design case is understood in a syntagmatic and paradigmatic sense—in a sequence, positioned around designed artifacts of a similar time period and space (e.g., an adventure game built in the 1990s), and in contrast or similarity to other designed artifacts (e.g., a design studio in contrast to a lecture hall) [18]. Lotman [11] describes this syntagmatic and paradigmatic relationship within the structure of semiosphere, noting: “the state of literature at any one time is judged by the list of works written in that year, instead of by the works being read in that year.” The projected reader may vary widely based on the subject matter of the design case, or based on the projected use of the information contained in the design case as seen by the utterer/addressee. Within the two design cases being analyzed, the GDS case seems to be primarily projecting a reader who designs or studies learning environments, while the DSG case implies a reader interested in simulations and gaming in an instructional context. While other readers outside of these projected descriptions may derive value out of a design case, they would not be seen as the addressee projected by the utterer/addresser.

Projected Author of the Design Case
I propose that there is actually another backward looking reference within this structure of interlocutors. While the addressee clearly has a mental construct of a desired or projected addressee, in interpreting the design case, the interpreter also transfers their expectations and beliefs about the identity and context of the utterer/addresser as...
they read and interpret the text of the design case. In the case of GDS, I have personal knowledge of some of the individuals that were interviewed and spaces that were referenced, therefore my mental model is different (and more informed, in certain ways) than an interpreter that has little knowledge of the designed studio space or the participants in this multimedia design case. Likewise, with the case of DSG, those who had played the previous iteration of this instructional game may have a more in-depth understanding of the design process involved in enhancing the game as compared to interpreters that have not had that lived experience.

Artifact Referenced by the Design Case

The artifact that has been designed is described by the utterer/addresser and interpreted by the addressee/interpreter. The artifact represents the physical or digital object or space that was created or modified during the design process, and is conveyed through a combination of text, images, or other multimedia resources. Similar to the relationship of projected reader from the utterer/addresser perspective and projected author from the addressee/interpreter perspective, the artifact is subject to this form of interpreted and projected meaning. The constructed utterer/addresser relationship may project a selective view of the designed artifact, which does not match the physical interactive experience (either with malice/intent to deceive or unintentionally). The addressee/interpreter may also misinterpret the description of the artifact that was described by the author/designer, either neglecting salient details, or filling in details where rich description was lacking. In either of these cases, a lack of effective communication leads to a disconnect between the actual artifact and the perception of that artifact through the mediatedness of the design case.

In both of these cases, the utterer/addresser is projecting a mental model of the artifact that was designed through text, photos, or other resources, and the addressee/interpreter constructs a mental model to make sense of the artifact that is being described. This implied mental model creates an assumption of communication between text and addressee/interpreter, although the veracity of this communication may be suspect, as will be discussed in more detail shortly.

User/Audience Referenced by the Design Case

Every designed artifact presumes and/or constructs a user or audience that will use that artifact. The construction of this user/audience is subject to similar potential pitfalls as compared to the artifact (as discussed above). In this sense, the role of the user/audience is separate, but related to the artifact itself, and the addressee/interpreter may understand the projected user, the artifact, both, or neither. For instance, I, as a reader, might understand the game artifact implied by the DSG case, but if I misunderstand the projected user group this game was designed for, the context and details of the designed artifact are perceived differently. The difference between a game designed for high school students or graduate students represents a wide gulf in terms of potential use, and how the game might be perceived in an educational setting. Similarly, understanding the projected user of the design studio space is important to understanding its core functionality. If users from another field, such as security informatics, were to be substituted for human-computer interaction students, the interpretation and inscribed uses of the space would be significantly different from the actual use of the space by the projected users.

Socio-Cultural Contexts

The role of socio-cultural context infiltrates each of these elements of the communicative process that surrounds the design case, and precedent in general. The utterer/addresser, addressee/interpreter, the artifact, and the constructed user are all situated temporally in a socio-cultural context defined by either the utterer/addresser or addressee/interpreter. As noted in Figure 4, the socio-cultural contexts of these two entities may overlap, as they do in the middle section of the diagram, or they may not, in the case of the left and right thirds of the diagram. In terms of the semiosphere, these two competing socio-cultural contexts form two separate spheres of semiosis, which are united or divided [10]. In the former case, an intersubjective space is formed, where the addressee/interpreter understands the artifact, user, or process in the way that the utterer/addresser intended or in the way that the addressee/projected. In the latter case, an intersubjective space is not achieved, and miscommunication or a misunderstanding of the utterer/addresser’s intent results. This latter case most likely results when the artifact that is understood or projected back onto the addressee/interpreter is inaccurate due to lack of rich description, or due to a misunderstanding in the design case.

Life Worlds and Intersubjectivity

The socio-cultural context of both entities in the communicative process includes all of the situated aspects of an individual’s lifeworld, including: education, lived experience, particulars of their design judgment and design understanding, reference to theoretical constructs, and cultural and linguistic traditions. In this sense, no two individuals can share an identical lifeworld, but can share elements of another’s lifeworld, either through overlapping experiences or by expanding their horizons through new experiences. Ironically enough, design cases can serve as a mechanism to expand horizons, provided appropriately rich description for intersubjectivity to be achieved.

A lack of overlapping socio-cultural contexts explains, at least in part, a phenomenon where a design is viewed differently by someone who is on the design team and understands the design rationale and related decisions, as compared to someone analyzing or using the designed
artifact without an informed (or valid) conception of the design process. Within the design cases I have described, if I read the GDS case without any working knowledge of a design studio form of pedagogy, subsequent details about the design of this space would be superfluous or inadequately grounded to be meaningful to the interpreter. Similarly, if the reader lacks an understanding of the role of “serious” games, their judgment of the DSG case within the context of traditional games as entertainment would draw inaccurate conclusions about the situated design of the game, and the rationale behind design decisions during the design process. In both cases, vital clues that serve as a foundation for the design of the final artifact is carried in the socio-cultural context of creation of the addressee/interpreter, mediated through the design case, and understood within the socio-cultural context of the addressee/interpreter.

**FUSED AND BROKEN/DISCONNECTED HORIZONS**

With a set of terms to describe the communicative process surrounding a design case in hand, we can extend the concept of colliding lifeworlds in discussing how fragments of precedent derived from a design case might be used in design practice. In traditional academic literature, the creation of an appropriately intersubjective space is assumed as a primary goal. Discursive structures of journal articles revolve around establishing legitimacy in ways understood to academic communities of practice, terms are defined to assure precision of meaning, and results are described in primarily non-ambiguous terms. However, a design case, as with all design precedent, represents a different form of knowledge generation—a generation of design knowledge, seen as distinct from scientific knowledge.

Since the addressee/interpreter and utterer/addresser occupy unique socio-cultural contexts or lifeworlds which may or may not overlap, coupled with the curatorial process involved in generating a design case through the constructed relationship of utterer to addresser, these lifeworlds may not align in many cases. I posit, however, that a fused horizon—a case where lifeworlds overlap—is not a necessary component for design precedent to be helpful or even successful. Due to the fragmentary way that precedent is assessed and added to an individual designer’s schema, the underlying socio-cultural context of production is helpful knowledge, but not always germane to the transferability of the precedent. Because there is an almost inevitable heterogeneous relationship between the addresser and addressee, “then the whole semiosphere can be regarded as a generator of information” due to the semantic correspondence that develops in the creation and consumption process (Lotman, 1991).

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**Figure 5. Diagram of potential interactions between designer/author and reader when horizons are not fused.**

**Fused Horizons**

Fused horizons refer to the sharing of an intersubjective space between the utterer/addresser and addressee/interpreter in terms of the descriptive or contextually-situated nature of the designed artifact and/or projected user. An artifact will most likely never be completely understood, resulting in fully fused horizons, but fragments of the design case may result in fused horizons, or fragments could be selected in a privileged sense, based on immediate applicability or desired context. Fused horizons may be possible because of a close match between the lifeworlds of the utterer/addresser and addressee/interpreter, but may also be due to the inclusion of rich description of the design process, user, or resultant artifact, providing more details with which to construct an intersubjective understanding of the projected artifact, user, or process. The content of the written design case may serve to expand the horizons of the reader, which may increase the overlap of contexts, but this is not the primary goal of the design case.

**Broken/Disconnected Horizons**

Broken or disconnected horizons represent a lack of shared understanding surrounding a fragment of a design case. While a lack of intersubjective space is generally seen as a negative attribute, an opportunistic view of precedent selection and use suggests that this construction of communicative space is not always necessary in order for a fragment of precedent to be helpful.

**Understanding Fragmentary Precedent**

In understanding this distinction, it is important to recognize the use of precedent on a number of levels. From any given design case, a holistic picture of a designed artifact and projected user might be gained by the addressee/interpreter, but a fragmented view of the artifact is also likely, and can coexist with the holistic viewpoint. To demonstrate this fragmentation more clearly, we can look at the potential perception of the reader in the DSG case. While a holistic understanding of a specific implementation of an instructional game may emerge (an *ultimate particular*), it is also highly likely that elements of the design case (or fragments) may emerge as details that are salient to the addressee/interpreter. If the addressee/interpreter has an interest in user interface design, they may fixate on the prototyping of the game interface,
including the selection of UI elements, the display of specific types of information, and the connection between UI elements and game mechanics. In Figure 6, we can see an early paper prototype that outlines major action areas within the interface, including a timeline at the top of the screen, user status in rows on the left hand side, an action area on the right, and potential user activities highlighted in red across the bottom of the screen [8]. Assuming a fragmentary approach, an addressee/interpreter may interpret this holistic view of the artifact at an early stage, and elicit fragments of precedent—the organization of buttons, the tabbed interface, the method for displaying user status, the modular layout—and add or integrate these fragments into their schema of precedent. While viewing the design case as a holistic entity is legitimate, allowing privileged use of fragments by the addressee/interpreter is also a natural part of viewing and interpreting the design case.

Within the context of semiosphere, these fragments can be seen as a form of isomorphism between structures in the text, where the larger semiosphere “facilitates the conversion of the text into an avalanche of texts.” [10]. The utilization of these fragments is defined through an exchange between participants upon some semblance of mutuality, whether that mutuality is real or projected.

Using Fragmentary Precedent
The future use of precedent fragments through schematic organization is possible, even with broken horizons. For instance, a user interface element might be stored in the interpreter’s schema, either selectively (they recognize immediate value for that fragment based on current project work) or opportunistically (they recognize some future value for that fragment, either explicitly or implicitly) and integrated into existing schema based on intuitively understood characteristics of that fragment. As a specific example in the DSG case [8], an addressee/interpreter may notice the user status indicator (see Figure 7), and understand this as a more general way to indicate status or state of a given design element. They may store this element in their schema for future use, or incorporate it as a primary generator into a project that is already in progress. While the utilization of the precedent fragment may be impossible to recognize in the designer’s project later in the design process, even to the designer, an in depth analysis may reveal specific forms, structures, or design patterns that were implicitly or explicitly utilized in the design process. In this way, the use of derived or interpreted knowledge from a design case is not deterministic, but rather opportunistic.

Figure 7. User status indicator in the DSG case [8].

Causes for Broken/Disconnected Horizons
A broken horizon disconnects the interpreter from the designed artifact’s original or projected purpose, but still presents the interpreter’s conceptual understanding of the artifact as design knowledge in its own right, which can be instantiated in new designed artifacts. The cause for broken horizons may range from a lack of appropriately rich, thick description in being able to understand the artifact, to lack of requisite contextual knowledge to understand how the artifact was or is used by the presumed user or audience. Due to the constraints of space and the situated nature of any given designed artifact, it is impossible to provide consistent rich description in every detail of the designed artifact or the design context, but it is also possible that misunderstandings could develop at a deeper level—where fundamental differences in lived experience manifest as misconceptions by the interpreter in regard to the utterer/addresser’s intended message.

Ultimately, I propose that broken horizons are an inevitable component of design precedent, and should be embraced. Ambiguity can be helpful, in this fragmentary sense, to further the design process by strengthening or extending existing design schema separately from specific design context. In this sense, rich, thick description can be helpful to provide a deeper understanding of the situated design context [17], but it can also serve a role in this fragmentary view—rich, thick description provides more “hooks” that a designer may opportunistically use in future work, even if the holistic view is discarded or misunderstood.
STRUCTURAL ANALYSIS
Within the communicative context that has been discussed so far, the design case format utilizes rhetorical structures to highlight categories of relevance and focus. According to the journal site from which the DSG and GDS cases were drawn [5], a design case includes the following:

- Detailed description of the intervention as the central focus
- Critical and/or interesting decisions made during the design process and their results in the intervention
- Key aspects of the design process as they are relevant to the form of the intervention
- Transparent discussion of problems and/or failure analysis relevant to the intervention and its design
- Relationship of the author to the project being described
- Context or conditions under which the project was carried out

(quoted from [5])

While no specific rhetorical structure is required by this specific journal, design cases seem to generally utilize these primary categories to structure a discussion of the design process. The first four characteristics are often bundled together under a main structure of the design intervention or design process, while the final two structures represent the socio-cultural context of creation and writing, which is often presented within a structure of design context, background, or purpose. Each of these main categories—the design process and design context—will be discussed further in the following sections.

Design Process
The design process includes a discussion of critical design decisions, failure analysis, and the form of the final artifact [17]. The structure of this discussion may vary significantly based on the type of artifact being described, and the construction of the utterer/addresser relationship. The difference between these two approaches might be characterized as reconstructive versus narrative, as exemplified in the two design cases I am analyzing. In the documentary approach of GDS, the author of the design case is not a designer on the design team, and must reconstruct the process post hoc by interviewing members of the design team, and providing rich description of the final space [2]. A designer most likely provides a more narrative approach, as in the DSG case, where a chronological narrative of the design process leads the discussion, often from a first person position [8].

The difference between reconstructive and narrative approaches changes not only the discursive perspective—I/we versus they—but also alters expectations regarding the depth of knowledge that might be possible to distill and convey. In the GDS case [2], richness of description is dependent on the extent of data collection and the ability of members of the design team to recall key design decisions, while in the DSG case [8], richness of description is dependent on the amount of design process that has been preserved, and the ability to distill those artifacts in a logical, communicative way, including the development of context around these artifacts, both in a temporal and process sense.

Design Context
The design context describes the socio-cultural positioning of the design team, and the context in which the artifact was designed. As was discussed in the analysis of fused and broken horizons, the design context includes critical details that positions and situates the information being conveyed, and allows the addressee/interpreter to develop a projected view of the utterer/addresser and design team. In the two design cases I have selected, the approach to describing the design context is quite different. In the GDS case [2], the documentarian includes a section of the interactive site that describes their background, interest, and the role of this product as a class project (Figure 8). In contrast, the DSG case provides fewer details about the design team or the role of specific individuals in the design process [8].

Figure 8. Design case background, presenting the context of the GDS design case.

Beyond the design team context, the context of creation is also important. In the DSG case, the history of the game is presented first hand, but assumes some level of knowledge regarding the purpose of the game, the theory being taught or evaluated through the game mechanics, and the role of the design team in redesigning the existing game. For instance, context regarding the initial board game design that informed an earlier version of this game is missing. In the GDS case, the context of creation is already being curated through the documentary process, both in the selection of interviewees and source materials, which are readily identified, but also in the temporal sense, as the
building is already constructed and in use at the time the documentary was produced.

In the GDS case, a third element of design context is introduced—that of the original designers of the space, during the temporal space of planning and construction. In the DSG case, a socio-cultural history of game design and the history of this specific game is presumed by the design team, but the lack of full historical context by any one author limits the shared understanding of the source socio-cultural context, even by the design team.

**PRECEDENT USE IN DIGITAL CULTURE**

Deuze [4] notes three elements of digital culture that seem to be directly relevant to the creation and consumption of precedent as I have presented it in this paper, which position the user or precedent as:

1. Active agents in the process of meaning-making (we become participants).
2. We adopt but at the same time modify, manipulate, and thus reform consensual ways of understanding reality (we engage in remediation).
3. We reflexively assemble our own particular versions of such reality (we are bricoleurs).

(quoted from [4])

**Precedent is Participatory**

When precedent is created or consumed, meaning-making is occurring. The utterer/addresser relationship is inherently about negotiating and creating meaning in an episodic form with relative permanence, representing the transitory design process. The addressee/interpreter relationship is also distinguished by its participatory, meaning-making qualities, both in the overlapping of semiospheres or lifeworlds, and in the opportunist selection of fragments or wholes that then make meaning in relation to existing schema.

**Precedent is Remediative**

The use of precedent is inherently marked by remediation. Designers select, adapt, and manipulate fragments of precedent in an opportunistic way, adopting these fragments into their working schema, and then at a later point recreate those fragments in the context of their own work [7]. This concept of diverging from old media yet reproducing in new media over time is at the center of remediation theory [need Bolter and Grusin cite]. I posit that the use of precedent is undertaken within this larger framework, generating design trends, and reevaluating these trends in use patterns that span medium, design context, and design intent.

**Precedent as Bricolage**

The creation and use of precedent is shaped by the designer and design context, and this sense of bricolage—a purposive assemblage of objects or ideas from diverse sources—defines the elements that are manipulated in the process of designing. Bricolage, in this context, might elicit a quality of intertextuality in the way that a designer compares and contrasts forms and fragments of precedent from diverse sources in a discursive way. I use the term intertextuality in the sense that precedent forces an addressee/interpreter to “place a work in a discursive space, relating it to other texts and to the codes of that space” [3], and it is through this discursive process that a new artifact—a bricolage based on a designer’s schema and creative input—emerges. In the specific context of the communicative space of precedent, the addressee/interpreter is relating fragments of precedent in a discursive way with their existing schema, either extending or refashioning that schema in reaction to this fragmentary evidence. In the overlapping of semiospheres and lifeworlds, meaning is refashioned and reimagined in a reflexive way by the creator and consumer of design precedent. Fragments of design precedent are incorporated in an opportunistic and often intuitive way, simultaneously merging and shaping existing schema that will then propagate further work. This specific schema is unique to each designer, and it is precisely this unique view of reality that shapes future work in the milieu of precedent and socio-cultural forces.

Through these three forces of digital culture, precedent can be seen as a construct that pushes the designer toward generative and synthetic activity, imagining what could be within the schema of what has been. This imagining can be formed in continuation or opposition to previous work, extending or disrupting existing design trends. Remediating existing work in a new context or medium, or assembling meaning in a new way than has been previously understood.

**CONCLUSION**

I have discussed the communicative structure surrounding the creation and consumption of a design case, including the role of the author as utterer/addressee, the reader as the addressee/interpreter, and the constructed role of the artifact and user/audience. The socio-cultural context that surrounds the creation and consumption structure affects the ability of the design case to communicate, and implications for holistic or fragmentary understanding of the presented design precedent is seen to have a positive, complementary affect on the use of precedent in design practice. The rhetorical structure of the design case, centering on design process and the context of creation provides rich description, may allow a better holistic picture of the designed artifact, or conversely provide the addressee/interpreter with additional fragmentary “hooks” to incorporate into their schema.

Viewing the creation and use of precedent within the larger context of digital culture provides additional vocabulary to describe the remediation of content over time, and also informs the meaning-making and intertextual dimensions of
this use through an individual designer's schema of precedent and lived experience.

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REFERENCES