Written Assignments

Overcoming Noise
Due: Mon, Sept 19

1200–1400 words
word counts exclude references.

☞ Write an argument for how noise is overcome through good communication design. This should be done by first explaining in your own words Warren Weaver's concept of noise. Translate it into your own words for the reader, much as we did for ourselves in class. Then choose two or more examples of communication design that illustrate his claim. Wayfinding systems, documents, posters, data visualizations, infographics, identity systems, and others from the slides and readings are all possible to use. The examples can vary in degrees of success, but the point is to study and critique the various ways designers strive to "shorten the distance to understanding." In other words, map Weaver's concept to your chosen examples.

Use our other authors to support your analysis. For example, I would expect to hear Tufte's thoughts if you chose to present data visualization work. Don't lose the focus of your argument in your illustration of the examples. Your analysis of the chosen examples should support the argument that noise is overcome through good communication design. Additional advice: don't choose an advertisement as that runs you into tricky territory: there is an inherent conflict between commerce and information, thus noise is introduced through the commercial goals of the piece (although this could make for an interesting critique).

FIRST ORDER CONCEPTS: Visual and communication design; data visualization and information design; organization and the order of things; knowledge and information hierarchies; interpretation, composition, argument, narrative; synthesis of type, image, and meaning; truths in data presentation.

Looking at Campus
Due: Mon, Oct 10

1400–1600 words
word counts exclude references.

☞ Our campus is a comprehensively designed environment filled with objects, buildings, and spaces of all scales, employing a wide range of materials, all serving different purposes.

For this paper, you will choose one purpose to focus on and analyze how useful, useable, and desirable the environment is for that purpose, from the smallest scale to the integrated campus of Education City as a whole. Possible purposes that you can choose might be: learning, studying, productivity, research, collaboration, social activities, physical and mental growth, expression of values, expression of grandeur, expression of Qatar's vision.

Your overarching claim for this paper should be something like: *The design of the Education City campus is somewhat effective in its purpose of encouraging collaboration. It is more effective in this regard at smaller scales, such as in the selection of furniture and arrangement of study spaces, and less so at larger ones, such the relationships between buildings.*

You will analyze this environment with your selected purpose in mind. You will start by considering how useful, useable, desirable a single object (small scale) is for that purpose, how that object interacts with its immediate surroundings (medium scale), how this space is part of the entire building (large scale) and, finally, how the building is part of the campus as a whole (the integrated level). To carry out this analysis, you should carefully apply the useful, usable, desirable framework at each scale, always in terms of your selected purpose.

First, conduct a survey of campus objects and choose one repeated, mass-produced object. Gather as much information as you can about your chosen object, such as who designed it, and for what original purpose and context. Consider its materials, ergonomics, and structural integrity. Evaluate how effectively (or not) it embodies useful, useable, and desirable qualities for the purpose you have selected.

Second, consider where the object lives. How well does the object fit, both aesthetically and functionally, within the architectural space? Critique the building space (e.g., atrium, classroom, gym) for how well it serves the community of use your selected purpose. Spend time in the space observing how it is used.

Third, consider this space as it relates to the building as a whole. How well suited is the building to your selected purpose in terms of the useful, useable, desirable framework? In considering the building as a whole, you can think about its aesthetic and functional aspects, its materials, pathways, and space allocations.

Finally, consider the building as part of the broader Education City campus. Keep your selected purpose in mind and consider questions such as: How well does the building fit in, aesthetically and functionally? What is its relationship to its neighboring buildings and landscapes? How well is the movement of people and traffic mediated? How pleasant are the spaces to be in? How well considered are the public/private spaces? How well connected is the campus?

These various analyses should help you construct your evaluation of how effectively the object and the spaces embody useful, useable, and desirable qualities for a specific purpose. Don't lose site of your evaluation/argument by just describing the object or the building.

Cite our authors, frameworks, and external sources to support your critique. I would expect to hear from authors like Norman or Rams when critiquing the objects, Goldberger when critiquing architectural space, and perhaps Ekuan when addressing scalar relationships and expression of values. Concepts and material from the class slides would also be good to consider. External resources about objects and spaces include Legorreta books in the library, experts on campus, long-time inhabitants ("users"), the contemporary art catalogue at the reception desk, and 4ddoha.com.

SECOND ORDER CONCEPTS: The industrial revolution and mass production; The Bauhaus; industrial design and product design; architecture; embodiment of values and ideals in objects and architecture; modernism's values and its failings; wabi sabi; postmodernism; the component parts of holistic systems and environments; form and aesthetics; tangible interaction design and usability; material meaning; craftsmanship; Aristotle's Poetics; economies of design and doing as much as possible with as little as possible; "goodness" in design; pastiche vs authenticity; personal narrative in product ownership.

Interaction + Experience ☞
Due: Mon, Oct 31

1600–1800 words
word counts exclude references.

This assignment asks you to apply the skills that you have practiced in the previous papers: ¶ To illustrate the concepts of a difficult reading through an example of your choice (paper 1). ¶ To use a framework to analyze and criticize design products (paper 2). ¶ To use concepts from our readings to support your claims and provide depth to your analysis (papers 1 and 2). In this essay, you will demonstrate your understanding of the third order of design by analyzing and critiquing a design experience. To do so, you will use Dewey's theory of experience and Burke's Five Acts of Dramatism supplemented with some of the authors from our course.

As you have come to learn, the third order of design is a confluence of many disciplines focused on holistically shaping human interactions, behavior, and experiences through tangible and intangible products. The goal of this assignment is for you to make an argument about how designers shape interactions and experience, explicating the techniques they use and evaluating how effective these techniques are.

First, you will carefully select and narrate an example of an interaction or service experience that you can speak about from personal experience. It may include: • an experience within architecture,

e.g., an architected landscape • an experience with products or devices, e.g., an innovative digital device or app • a service experience, e.g., receiving healthcare or government services.

Selecting the design experience carefully is key to this assignment. The experience you select should be one that was deliberately designed. Going camping in the desert could, indeed, be considered an experience according to Dewey, but it lacks the props, processes, and touchpoints that constitute a designed experience. I would suggest picking something with a certain level of complexity, detail, and definition to it: the experience of air travel, receiving healthcare services, or an especially innovative device or app. You may run your idea by me before starting to write your paper.

Second, after narrating the experience, analyze it according to John Dewey's framework. You need to evaluate the ways in which the experience, from your vantage point, met his criteria of being a deliberately designed experience. In doing so, you may consider the following questions: What were the ways in which the designers of the product or landscape create triggers or nudges for you, the participant? How well did the overall experience flow?

Third, deconstruct the designed aspects of the experience using Burke's Five Acts of Dramatism. As you apply the framework to the experience, you will need to draw on other authors from the course to support your claims and provide depth to your analysis. If you are writing about an architected landscape or building, you will likely reference Lin or Goldberger; if you are writing about a digital product, you will probably reference Moggridge, Rams, or Shariat; in discussing the overall experience, you will likely reference Kolko, Clark, or Goffman. How did designers play a role in shaping the interactions and experience and how well did they do? What were the ways in which the designers of the products, touchpoints, or landscapes created triggers or nudges for you, the participant? How well did the overall experience flow? Be mindful that designers, by no means, have a hand in everything: weaker parts of the service or UX may be the result not of bad design but of a lack of consideration, things that came to exist simply by default. Sketching out the experience with all of its parts, wholes, and pathways may be helpful to get you started.

Conclude with a higher-level summary of the nature of designing in the third order and how your narrative has implications for the possibilities and limits designers face in shaping participant experiences.

THIRD ORDER CONCEPTS: Design for experience, sensemaking; the nature of experience and the shaping of living relationships; arts, methods, and techniques; human-centered design; design as facilitator; design-technology relationship; human-computer interaction; user experience design (UX); user interface design (UI); design as theatrical performance; emotion and reason; designing for service; pathways through systems; experience vs efficiency; design for behavioral change.

Wicked Problems ☞

First Deadline: Mon, Nov 14
Due: Sun, Dec 04

1800–2000 words

word counts exclude references.

This assignment asks you to apply the skills that you have practiced in the previous papers: ¶ To apply a framework to the analysis of an example of your choice (paper 2). ¶ To illustrate the concepts of a difficult reading through an example of your choice (paper 1). ¶ To use concepts from our readings to support your claims and provide depth to your analysis (papers 1, 2, 3).

Historically, the field of design has been conceptualized as a network of fragmented disciplines, but as we learned in the fourth unit of this course, addressing intractable, "wicked" problems demands a more holistic perspective. In this paper, you will argue for the importance of conceptualizing the field of design from a fourth order, holistic, human-centered perspective.

You need to select a "wicked problem" and argue how a holistic design perspective can help address this problem. You will make explicit reference to the authors, concepts, frameworks,

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theories, media, examples, and discussions from this semester. You will need to explain wicked problems in your own words and how specific examples relate to the focus of design. Make sure you acknowledge and explain the complexity of your selected wicked problems and proceed with caution in your analysis.

Your task is to argue for why a human-centered design approach is uniquely suited to address not just the artifacts and ornaments of life — posters and toasters — but also complex interactions and emergent systems. If you are going to argue that design does indeed deserve a seat, you will also want to consider some important counter-arguments: Hasn't design created some of the biggest disasters of all time? Don't we need disciplinary expertise to bring about change? Isn't so much of design just posters and toasters? If we just had an apoloclypse, shouldn't we be focusing on farming instead of design?

To get thinking, you may wish to listen to this segment from *This American Life* episode 402: The Life Raft Debate, starting at 41 minutes: http://tal.fm/402. Based on what you have learned this semester, does design deserve that seat? How might you make the argument?

☞ Before you meet with me, prepare your **introduction** including your **central argument** and the wicked problem you will address, **an outline** for the paper, and chosen **source material** to support your claim. Come prepared to discuss your ideas on human-centered design and how this approach can be helpful in making lives, communities, and the world a better place.

FOURTH ORDER CONCEPTS: Living, ecological, and social systems; systems theory; wicked/ill-structured/intractable problems; urban design and urban planning; planned vs. organic urbanism; sustainability; unintended consequences; design for future transformation; problem solving vs future visioning; worldview; complexity and emergence; part-whole relationships (scalar thinking); mechanistic vs. ecological paradigms; science-design symbiosis and dichotomy; constant change; pluralisms and perception; cultural and value systems.

Guidance for Design Writing

Interpretation and Argument: Each paper requires a clear central argument, which, in most cases, should be at the beginning of the paper. The papers also require you to interpret and present particular theories of our authors which, again, should come earlier rather than later. But these aren't rules: I've read great papers that begin with an engaging narrative, suspending the argument for a little later on.

Strong Central Argument ↓

"The generic TV remote control: cheap, ill-considered, and bloated with functions, will hardly be remembered in the history books of usability and human factors. Yet another device, sitting right next to the TV remote, offers some ideas for improvement — the game controller. Remote control designers could learn from the feedback techniques used to engage the user and skill them in how to use it. In his text The Design of Ev..."

¶ Issue/problem/solution. ¶ Presents two similar yet different objects. ¶ Sets the paper up for a more in-depth design critique. ¶ Uses design terms & concepts. ¶ Pulls the reader in by suggesting something mundane could be better. ¶ Introduces an expert.

Weak Central Argument ↓

"From contact lenses to rail systems, design is everything and everywhere. It helps people live more efficiently and have better experiences. As Don Norman says, 'It means starting with a good understanding of people and the needs that the design is intended to meet.'" Since the beginning of time, humans have been designing things that make...

¶ First of all, design is not "everything." ¶ Yes, design plays a role in better living but it's a very generic statement. ¶ The Norman quote doesn't seem to relate to what came before it. ¶ Where are we going with this paper? Helping people? Shaping experiences? Design process and meeting the needs of people?

Design Criticism: A design critique is best when it's fair, balanced, and constructive. Design criticism can get very nuanced but the heuristics we cover in class can help you approach the objects (e.g., the "cross of pain"). For instance, in comparing two car dashboards — say, a classic SAAB, which drew upon the ergonomics of an airplane cockpit, and a Tesla, which predominately depends on digital touchpoints — a weighed approach could be an analysis of the useful, useable, and desirable qualities of each. Each have strengths and weaknesses. Furthermore, a designer who is quick to offer criticism almost always does so with something positive to add, i.e., "I think this works really well, but such-and-such could be done a little bit differently, more like..."
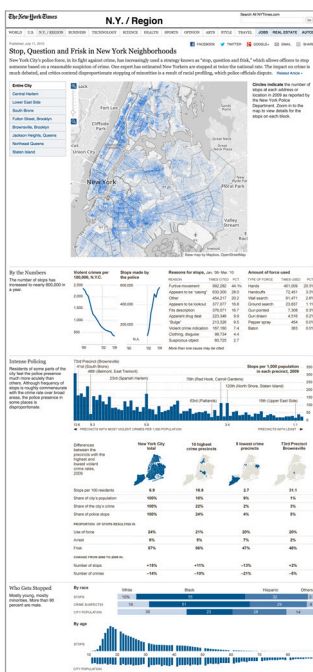
Strong Critique ↓

"This interactive media piece by the New York Times (left) is a comprehensive data representation of the police department's controversial stop-and-frisk policy. The thrust of the piece, as stated in the opening paragraph, is that minorities are disproportionately stopped as a result of racial profiling. The data was mapped onto a geographic map to show patterns and concentrations, with histograms and bar charts showing crime rates, stops based on age and race, and a breakdown by precinct. The map is fully interactive, allowing users to zoom in on their neighborhood or a place of interest. The visual presentation is engaging and simple for the user. Color is controlled and the map and graphs are clear. Quantitative data, as Edward Tufte suggests, is often times best presented in multivariate ways enabling the audience can reason with it. One problem, however, is that, while the piece suggests that racial profiling is directly connected to stops, the map fails to incorporate racial composition of the city. It's presented through a stacked barchart at the bottom. Embedding the data in the map would show clearly and directly how the two data sets correlate."

Weak Critique ↓

"My experience at the Mandarin Oriental Singapore was exceptional. I traveled there with my friends and we began by booking the trip on Trip Advisor where it received five stars from nearly everyone. We arrived and the staff was great and gave us iced tea before taking us to our rooms. I heard once that, "at a good hotel, all you have to do is ask. At a great hotel, you don't even have to ask." This was definitely true at the Mandarin Oriental. The rooms were luxurious. Everything was amazing because it was designed holistically."

¶ Start by presenting John Dewey's theory of experience. ¶ Use the 5 P's to present the narrative, then critique the strengths, weaknesses, and possible improvements for each component. ¶ Being a service experience, talk about the touchpoints of the journey. ¶ While I understand the notion of designing in a holistic manner, it should be further explained in the context of this hotel.

The Design Language of Nike's Iconic Sneaker:

Webbing that contours the foot.
Mesh that allows air
to flow through.

Bright, energetic colors and lines that reflect the Nike logo. Similar techniques are used on other Nike lines.

Above: 2015 Nike Free 5.0, nike.com.

Using Images: is a great idea! If you're calling out specific aspects of the image, annotate with lines. In many cases, conducting your design critique in the piece makes more sense than just through narrative.

Design Vocabulary: Designers have specific ways of talking about the world. While it's usually in very relatable terms, there are discipline-specific vocabularies that are important to incorporate into your papers. Terms like *visual hierarchy, multivariate analysis, ergonomics, touchpoints, user flows, UX Unicorns, systems integration,* and *visioning* are used in class, lecture slides, and handouts. Start to get in the habit of using them in scholarly and professional work (not unicorns).

Your Audience

Consider your audience as a lay intellectual who is not in this course, familar with its materials, or the subject matters at hand.

Incorporating Source Material

The texts we read and topics we discuss should directly feed into your paper through quotations, terms, and interpretations. Demonstrate your understanding by citing the authors and translating their ideas into your own words. Because this is design and we're always trying to be practical, how do the authors' ideas map to the design examples that you're presenting?

Citing Sources

↗ Use APA format. bibme.org is very helpful in creating clean, consistent, and accurate citations.

Burke, K. (1969). The Five Key Terms of Dramatism. In *A Grammar of Motives.* Berkeley: University of California Press.

↗ Use parenthetical citation.

"A portrait painter may treat the body as a property of the agent," writes Kenneth Burke, "whereas materialistic medicine would treat it as 'scenic,' a purely 'objective material'" (Burke, 1969).

Help from Others

Did you get help from others? Make a note of this after your citations indicating whether you solicited help from the professor, another faculty member, the academic resource center, or if you discussed the paper topic with a peer. Discussing course material with peers is encouraged, but written assignments must demonstrate original thought and content. Learn with others but don't work with others when it comes to graded assignments.

Formatting and Submission

↗ Please double-space with your full name at the top.

↗ Drafts should be sent as editable Word, Pages, or Google Docs.

↗ Finals should be submitted as a PDF.

↗ Submit to Blackboard by 11:59 pm on the listed due date.

↗ Extensions are rarely granted. Late papers lose a letter grade each day.

↗ Give your paper a title that reflects the thrust of the paper.

Strong Title → Designing Interactions to Help People Make Informed Energy Decisions.

Weak Title → Sustainable Design is Cool.

Not a Title → Design Paper 3