4.1 Layouts, Hierarchies, Grids

So now we're going to talk about layout. We're going to talk about hierarchies and grids. And these are more of the design elements that we started talking about last week. Layout is super important because it helps communicate the structure of information. And the structure of information, it's what helps people navigate the information and make sense of it.

So layout is about how you lay out the things on the page. And it can support or detract from your story. A messy layout makes it complicated. In fact, it doesn't just make it harder for people to make sense of it, they tend to tune out and not pay attention to it. Visual hierarchy and grids and composition, these three things work together to help you keep people attentive to what you're trying to communicate to them and also helps organize the information so they can make sense of it.

So the layout itself can be powerful. And we're going to spend some time on that. The first part of layout that I want you to think about is visual hierarchies. And visual hierarchies or what communicate what's the most important thing on the page. So you would tend to think about, what's the most important thing on the page? What's the next most important thing on the page? And what's the next most important thing on the page?

And there's visual cues that we can give people that help them find what those most important things are. These visual cues can help people make sense of what they're seeing and help them make their way through the image or through the page or through the visualization.

OK. So here's an example. I got this off the web, and I think that it's great. And most people will tell me that that's exactly what they experience. They're going to read that great big black text in the middle of the white box on the page first. And then the next thing that happens is their eyes slide down into the black space, and they read that next line, the one that says, "and then you will read this." And they got a little lower, and they say, "then this one," and at the end, they'll read what's on the top.

Now, to some degree, this is based on the way that we organize information and text in Western civilizations. So in different cultures, there might be some differences. But by and large, most people tell me that that's their experience. And it's because of the contrast and the size of the text and where things are placed. In Western civilizations, we tend to read from the top to the bottom. And in this case, we don't read that very top line first, because the text in the middle of the white box is so big, it draws our attention first.

So the first rule that we're following when we see this image is, largest text first. And then we start reading down. So that contrast between the large text and the black and the white is what grabbed our attention first. OK, this is very standard. And we can actually just borrow this when we're designing our layouts.

One of the publications that has historically done a really great job of layouts is *The* *New* *York* *Times.* This is an example front page of *The* *New* *York* *Times.* And if you just look at this front page, most of us are going to see the image first. It's the thing that has the most contrast. It has a lot of screen real estate, so it takes up a lot of space. And then after we see that, then we're going to start looking above that and around and following some of the other rules, like top down.

So in this case, probably the most important communication element on the page is the picture. And then is the title, "Bush celebrates victory." So what looks like the most important thing on the page often is the most important thing on the page. It's the thing that draws our eye. It's the element that stands out in largest contrast to everything else on the page. In this case, *The* *New* *York* *Times* is using color, a color image. They're using fonts and the size of the font to communicate different things.

It turns out position is also important, and we're going to talk about that a little bit later. But by and large, the things at the top right are the things that are going to grab our attention the most. The next thing that *The* *New* *York* *Times* does is it provides subheadings. And these subheadings help us navigate the page. We can look at this and tell what's important, what we want to look at. *The* *New* *York* *Times* title is a brand. And so it's a different font than everything else. And it helps us know that we're looking at *The* *New* *York* *Times.*

And then there's something called grids and gutters, and we're going to talk more about that in a second. But they can help emphasize certain elements. I mentioned that the image, the photograph of Bush and his family, is the most important thing on the page. And if you look at the page, you can see that there's columns. But the photograph breaks the rules of the columns by spanning four different columns. In that way, that's a kind of contrast too is that it's breaking the rules.

Grids are actually hugely important in helping to organize information. They signal and define the layout simultaneously. They support the visual hierarchy by having the information organized in some way that helps us figure out what's important, and what's the next most important thing. They provide structure and organization, and they do this by alignment with whitespace. I'm going to show you an example of that in a minute.

But those grids provide consistency. The information isn't all a jumble. It's organized in some clear way. And grids help us organize in. Grids also provide an opportunity to break the rules. Like I was saying with the photograph, the photograph spans four columns. And it does that intentionally breaking the column rules or the rules of the grid. And it does it so that it can communicate something. These grids support cognition and visual perception. Without it, with everything being a jumble, we actually tend to just zone out when things are complicated.

So by making things organized, we keep things cognitively simple. So here's an example of a grid. And what I want to point out here is that this grid has, on the left, this kind of looks like a textbook. We have an image in the top left, we have some text below the image that describes the image, and then we have two columns. Maintaining this consistent format actually exists because we have found, over time through research, that it works. It's what helps us digest information.

Short columns that are nicely laid out are easier to read than really wide columns. And so that's how we tend to organize things. We also tend to break the rules in ways that are strategically important. So for some reason, we have two images of this textbook page. On the left hand, we have a picture up at the top left. And on the right version, we have a picture that spans two columns.

So whatever the author's intention was here, in this case, they chose shorter columns, they chose an image that spans two columns with the text that describes the image on the right. But these are strategic choices that you can make. And in fact, later I'll talk about iterative design. That's probably the case here. They tried one design, and then they went with a different design. But maintaining that consistent structure is very important and really helps people make sense of the information.

These are different examples of a similar thing. Whereas before, we had a columnar layout, and we had a grid that supported that column layout. Here's two examples where they're actually using more of a grid layout to organize the information. So they have, on the left side, they have a bunch of space at the top. And then they have blurbs of text at the very bottom, and they have an image on the left, they have two images on the left, and they have the text in the middle. These are very intentional layout decisions.

The right is just another example of it. But one of the things that I want to call your attention to is that they don't actually-- we have red lines showing these grids here. But in the real textbook image, they don't have red lines breaking things up. Actually, the only thing that breaks the page up is the whitespace.

So whitespace, it turns out, is hugely important in communicating the layout of the page. Usually we find that boxes around things can be distracting. So instead of having boxes, we just let-- add a little more space, and we use the whitespace to make that grid obvious.

It's also the case that having whitespace on a page gives us a place to rest our eyes. A lot of times, when we look at a page, our eyes tend to dart around to figure out the page. Having space where our eye doesn't necessarily go is considered good form.

OK, here's another grid example. On the left, we have a pretty straight column layout. And on the right, we have a bunch of images mixed in. By and large, on the right, we're following the grid layout very, very carefully, except where that large image right in the middle of the page spans two columns.

The image also has space on it. For most people, what they'll find is, their eye will wander around that page, and it'll keep going back to that image. It goes back to that image because the image breaks the grid rules and also because the image is different than the surrounding text.

Grids aren't new. They've been around for a long time. They're a key element of design and a key way to keep your information neat and tidy, which makes it cognitively easier for the people that are trying to make sense of what you're trying to communicate to them.

This is actually a map of the New York Underground, sorry, London Underground. And if you've been to London, you know that the Underground is a hugely important part of life. People use it. They find it relatively easy to use. But they don't use this map of it. They use a map that has been imposed on a grid structure. Grids just make life easier for us. They help us make sense of the data. Here you can see the grid layout over it in such a way that it makes the lines of the London Underground map really stand out.

Now, when you go to the different cities around the world, many of them use the same kind of grid-imposed layout in order to layout their underground map. So when you're coming up with a layout, like I have said before, for this class, one of the big deliverables is a poster at the end. And you're going to have to think about how to lay the information out.

So one of the things that I do a lot of times is, I get a piece of paper and a pencil, and I just sketch what an underlying grid might look like. And then I fit things to the grid. You already know how to resize the images in order to make them different sizes. You actually want to-- when you're laying out your grid, you want to lay out the grid and then enforce the grid, which means changing the size of your plots to fit your layout.

So start with a sketch. Try different organizations of the information. Try laying out your plots in different places, putting your text in different places. And do that with a piece of paper and a pencil, first because it's fast, and because you can just throw away sketches that don't really work. You want to be very careful to align things that are similar in ways that help people organize the infor-- or that help your viewers make sense of the information.

And then we've got whitespace. Remember I said whitespace is actually better for enforcing layout than having different boxes and putting everything in boxes on a page. In this case, gutters are the whitespace and columns that separate the columns. And we want to make sure we have very clear gutters. This whitespace can communicate a flow in the post or design. And I'm going to show you an example of that in a later lecture. But whitespace also helps direct your eye. Where do you want people to pay attention?

Details matter in the layout. They matter in a really big way. If you're going to show a grid, you want to make sure that everything lines up evenly on the grid. You don't want things a little bit off to the left or a little bit off to the right, because then they don't enforce the grid in a way that helps people make sense of the information. And that's what it's all about. Remember, this is about communication. You want people to get your point. So make it easy for them. Make it easy for them by having a good clear layout and making it obvious to people.

Another thing that I've found is that you can actually look in a mirror. If you've got your layout sketched on a piece of paper, and you're looking at it this way, it looks one way. But if you take it around, turn it around and look in a mirror and then look at how that layout looks, it actually can help you go, mm, that part probably doesn't work, or this part needs a little bit of work. You can also squint so that it's kind of blurry. That blurriness can give you an overall sense of how the design looks, instead of getting mired in the details or spending too much time looking at one thing.