ANNOTATED DESIGN CAREER:
MUSING PROTOTYPES STEPHANIE HORNIG (PRODUCT DESIGNER)

STUDENT LEARNING OBJECTIVES

1. To develop your understanding of working practices in specific fields and contexts within the design industries, with a specific focus on the use of prototypes.
2. To provide insights into the educational background and career transition of a featured design professional, Stephanie Hornig (a product and furniture designer).

DESIGN MUSEUM SYNOPSIS

Whether you are looking ahead or actively preparing for your own transition to work in the creative industries, the Design Museum's 'Annotated Design Career' resource series has been created with professional designers to provide insights into real career journeys, complete with honest anecdotes and tips for increasing your chances of getting into a career that will work for you.

The Design Museum is pleased to be working with emerging and mid-career designers on this series of career-related resources to inspire and support students.

In this 'Annotated Design Career' resource, product and furniture designer, Stephanie Hornig shares a range of examples of how prototypes have been used in different types of project throughout her career to date, which has included self-generated projects, large design companies (BarberOsgerby) and a range of smaller contracts and internships.

This resource contains examples and advice relevant to all design students, especially for those studying at the 'pre-university' phase (for example, at a Sixth Form Centre, Further Education college or Foundation programme at a specialist arts institution). We hope you find it useful and inspiring!

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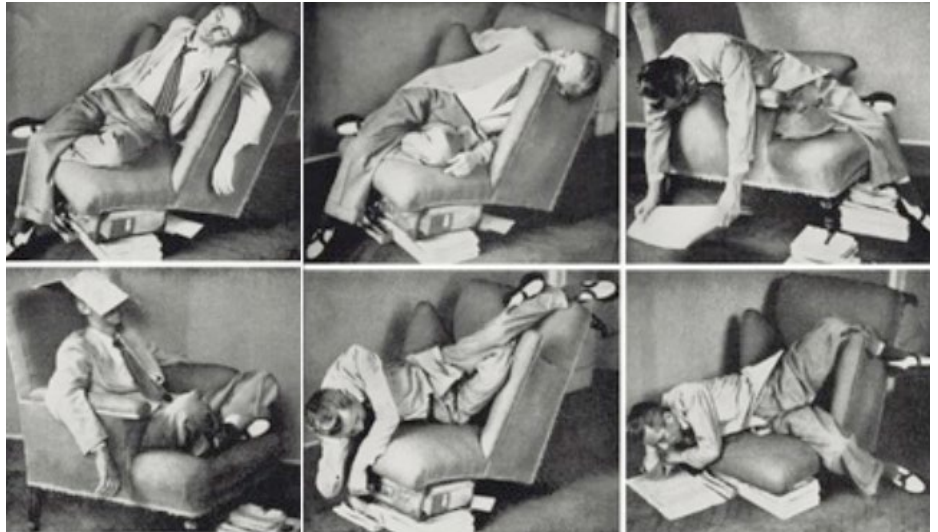
INTRODUCTION

Originally from Austria, I studied Product and Process at the
University of Arts Berlin, before taking employment as a designer
under Patricia Urquiola in Milan and BarberOsgerby in London,
where I am now based and set-up with my own studio.

To me, prototyping is sketching in three dimensions and it supports my
thinking. With this resource, I will share four differnt projects, alongside
images of the prototypes, models and materials I used in them, to
demonstrate different methods of prototyping I use in my professional
work. I aim to show why prototyping is so crucial to my process as a
product and furniture designer, but also why it's really important as a tool
for testing and sense-checking your ideas at lots of stages. This is key
for your own learning in whatever material or subject you work with.

PROJECT 1: FOX

In this project about new sitting positions I have tried to change the standard
sitting position to make it more communicative. As in typography the standard
has been changed to explore new styles, functions and positions. The
main features of the starting point (the Frankfurt chair) have been declined
to create new characters. The relationship created by modification and
inheritance can lead to different appearances of the whole group.

This project has been a very quick one. Instead of creating just a new form,
we have tried to go to the core part of the problem: a chair is made for sitting,
but how are we actually sitting on it?

As designers we should always question if our objects are actually made
in the right way and how we use them. To do this you can either observe
other people, but if there is something that you would like to change it might
sometimes be enough.

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Test things as soon as possible

In the first image you can see some tests for sitting positions by Bruno Munari, a very well known italian designer. He was trying to investigate the same problem but turning an armchair around to find the best possible sitting position. you can see that testing is very important. An idea might work well in your head, but even the smartest person can not know if it will work in reality.

Be creative with your tools

When testing it does not really matter what kind of tools you are using or if it looks very nice. The important thing is the function: Is it comfortable? Does it do what I wanted to achieve? Is it actually useful? Find materials and objects in your surroundings and put them together with some tape, that might already be enough. While doing this you will probably have a lot of fun, feel like a proper inventor and at the same time create something completely new.

Simple ideas always work

You have to be able to communicate your project with maximum 3 sentences. If it takes you longer it is probably too complicated for people to understand and they will loose interest. You can work in a sort of pyramid system: Start with many ideas, some might as well be more complicated, and then sort everything out that does not really work. Focus on 2-3 ideas and start to think what could come out of it. This way you will probably very easily find out what's the most interesting and start working on this one.

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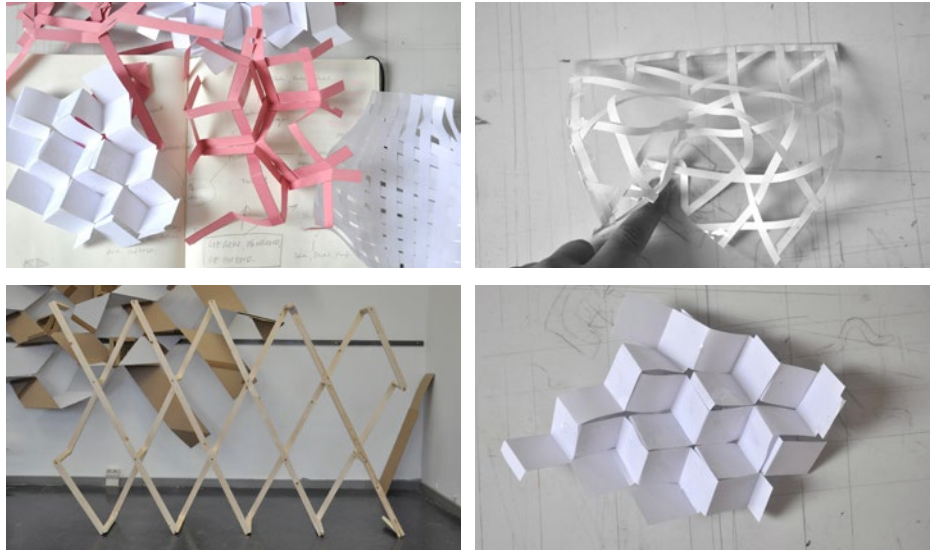
PROJECT 2: SET

Set is the result of many experiments with braiding techniques. Most of my projects are related to lightness, flexibility and simplicity. Braiding for me was the one technique that could combine all of these aspects. The resulting shelving system is based on the principle of a scissors grid with extended axes to make room for shelves. This creates a superimposed image of diagonals, which is adjustable and can be fixed in different positions. The scissors grid system can also be flat-packed while moving or for distribution.

Materials: Beechwood, Steel

I think this project was for me the most fulfilling but also most frustrating one of all of them. When I initially suggested to work with braiding I had no idea what I was going to end up with. It is important to leave things open and not to jump to conclusions too quickly. A project is never finished after just one thought, it takes time to examine it and to find the right from for it in the end.

Don't think too much
When I started working with it I only did small paper models, trying to find a way to braid three-dimensionally. This was quite a long process, but it was also very nice to make one model after the other and go a bit deeper into the subject when something was interesting. During the course of the project there have been a lot of different ideas for products, but when the first 1:1 prototype was standing there it was clear that it was better than anything else that came up before. sometimes it takes a long time until this happens, but you will know it is right when the moment arrives. I sometimes think that this happened out of coincidence, but without all the models before I still wouldn't have arrived there. It is important not to jump to conclusions too quickly. Don't stop working on it, but still take your time and examine your project throughouly.

Prototype as thinking model
Small prototypes can sometimes show a lot. Even if they don't lead to a final product yet they can show what you want to achieve during the process and communicate a "system". Don't be afraid to show these tests to other people, even if they don't look pretty. People want to see what you are up to, even if the project is not finished yet. Keep testing every model and change the scale, you will see that magical things will happen.

Show your process
In a portfolio you shouldn't just show all your "glorious" stuff, you should be showing what you would really be doing. With every project you dive into a new world that only you know. Other people will greatly appreciate to see what world you have been in and what you have learned during the process. Especially in a portfolio it is crucial to show how you work and not only what you have ended up with. This shows your personality as a designer and will help an employer decide if he wants to work with you. Also here: Find out what makes you special and show it!

PROJECT 3: WORK EXPERIENCE / PATRICIA URQUIOLA

Work experiences during your studies are very important to see how the real thing works. During my studies I did an internship with furniture designer Patricia Urquiola in Milan. Her approach is very "hands on", which was great for me to see. I always thought that in a professional world everybody would have 3d printers and only work on the computer. In Milan they actually had one model maker that I spent a lot of time with. He showed me some tricks and explained the importance of prototyping. There are many things that happen with materials only when you work with them, you cannot always know how the material will behave when you are making a 3d model on the computer.

During my internship I worked on the design of an upholstery collecion, the aim was to define the shape and graphical layout. I developed a series of physical models to be tested and then presented to the client.

Professional skills
Don't be shy, what you are learning in school is good as long as you are focussed. but try to really work on these skills. you will see that many professional studios actually use the same tools and they will give a job to somebody that is very good at that.

Everybody is "cooking with water"
When working in a professional studio you will see that if you have built up some skills and you are able to connect them this will be highly appreciated. Of course it is about creative thinking, but it is also about these solid tools that you will be "used" for, if it is nice drawings or high-end modelmaking. You will learn many more things during the experience, but being good at something will open the door for you in the beginning.
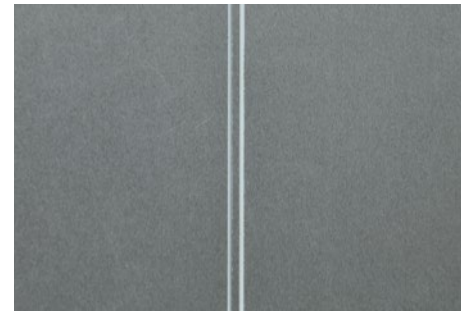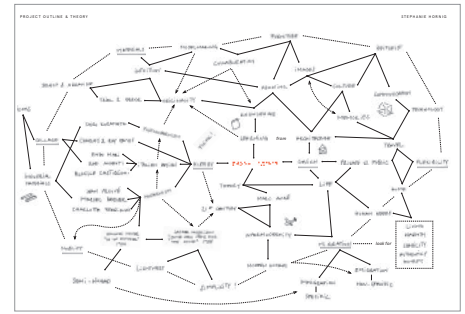
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Build up your personal skills
With these skills I then went on to do my graduation project and found a good job with it. It is about connecting the dots, find out what you are really good at and do it with love. By the way, we also mostly enjoy the things we are good at more than the ones we are struggeling with?

So find out what you are good at and define your own "tools for designing". for me this is creative model making, finding materials that are similar to the end product and creatively try to put them together to create a new image. this is something that keeps working for me and I love to work for my hands. be creative with this, it could be anything from drawings, photography, sewing, CNC machining, etc.

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PROJECT 4: INTERSTATE / DESIGNERS IN RESIDENCE

Interstate is a collection of objects, including a table and storage unit, that meet the needs of a mobile generation. With a focus on the home, I looked at how we use our personal space. With rooms now being used for multiple activities, and a generation who move frequently, I identify the requirements for objects to offer flexibility and adapt to different environments.

Both objects use an ultralight composite material called Hylite. Ordinarily used for packaging, its polypropylene core creates a natural hinge that can be folded almost limitlessly without breaking. It has the same weight and price as aluminium, but is much stronger.

Show skills but also the way you think
When i initially applied for the designers in residence programme I didnt have a very clear object in mind, but i more presented a way of thinking, an approach to the project. it showed how my project would relate to the design museum, design history and social changes of today. it is important for other people to find out how you think. you can use mind maps or diagrammatic sketches, it is extremely important to visualise your thoughts.

Bring everything to paper
Even throughout the project it is important to write or draw everything down. create an archive for your thoughts that you can always refer to. sometimes when i am working i look back to an earlier stage of the project and realise that even with some detours the route was clear. but you will only be able to see this afterwards. so it is important to keep track of what you are doing and visualise every step in some way, your brain will not remember everything by itself. we live in a visual world after all.

Set parameters
Right in the beginning of the project you should write down what is important for you in the project. because this project was about migrating furniture it was clear that the objects had to be lightweight, and it would have to be easy to disassemble. Keep this list safe or even put it on the wall. you will always be refering back to it when you are stuck in the process.

Translating materials
When i found the material i was going to work with i knew that i had to find another one to make models with. usually you can find a very similar model making material out there that has the same properties. for this project I was simply using mounting board, i could cut it and fold it just like the end material. this way i could test the objects directly and see if the folding would work and in what way. be creative with this, it doesnt have to be a material, but it can also be an object that you will transform.

Do one thing at the time and make a plan
Especially with more complicated projects like this it is important to focus on what you are doing at the time and don't mix up tasks. every research takes time but also concentration. I usually set myself deadlines: one week for general research, one week for material research etc. This way i have a clear goal for a specific date and i will need to come to a result within that time. Of course this can be flexible, but it still guides you through the project.

Find a good representation
Not every object is meant to stand on a plinth. in an exhitition and also in a portfolio you should communicate the idea of it. take some good photographs of your prototype and put it in context. go out in the nature if it is needed or create a collage. simple product shot don't always bring across the whole idea and you will be struggling to explain your project.

YOUR RESPONSE

Think about what implications and insights Stephanie's examples can have for you, and your current interests for further study or employment in design. (If you have printed this resource, or are annotating a PDF, you can use the 'notes' section below).

- How many prototypes did you make for your most recent design project? How were each of these different? What did each one teach or show you?

- If you didn't make any – why not? Think back, which stages might they have helped with and how might they have effected your outcomes?

- Have you picked up anything about the role of prototypes for communicating and developing ideas with the other people (e.g. clients, users, experts) you might need to work with throughout a professional design project?

- Can you see any opportunities to try new approach to prototyping (or how you share or document your prototypes) in a current project?

NOTES:

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