

The digital as *Technique*
Andreas Offenberg

Abstract

The digital as technique is an exploratory design project looking at opportunities in AI text generation, mobile touchscreens and NFTs in the context of publishing literature. The diploma has been split into three parts where these materials have been explored separately. The approach has been formed by the materials and my knowledge of them before the diploma. The NFT part of this diploma has been a collaboration with Gyldendal.

The goal of this diploma has been to explore the material qualities of different digital materials and create artifacts that can spark ideas and strategies for the future of publishing. My main target group for this diploma has been publishers and authors.

The result of this diploma has been three artifacts. The first is a booklet of curated texts generated by the AI model GPT-3 reflecting on the data beneath the text and how it could affect publishing. The second artifact is a scenario for a fully digital publisher publishing stories in formats that fits the device, together with prototypes of the formats and a home website for the publisher. The last artifact is a poetry NFT collection developed together with Gyldendal.

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Field: Interaction Design

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Institute of Design
Oslo School of Architecture and Design
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Introduction

Motivation

So why have I chosen to do my diploma on digital materials in the context of literature? My reasons spring out of love, curiosity and frustration. There were a lot of circumstances in my life that shaped my love for literature, but the moment that always springs to mind when I think of my first impactful meeting with literature is when Glahn shoots himself in the foot in Pan by Hamsun. I was introduced to Pan in high school and from that moment I started reading more and more.

Books have shaped my life in many ways. From a practical standpoint it led me to take a job at a bookstore and study literature at the university of Oslo, which are both perspectives I take into this diploma.

While working in a bookstore I started my 5 year path on a master in design at the Oslo School of architecture and design, and here I was introduced to new ways and methods to explore new technology and getting glimpses of what the near future could look like. My frustrations over what I saw as lack of exploration and visibility of literature on digital screens grew for every shift. I saw my bookstore shrink from a huge two story shop, to a small one story bookstore. What I would consider quality literature was swapped out for influencer books and toys. And the lines at the christmas signings were getting shorter every year.

Standing there at my job, throwing brand new unsold books into a big industrial paper shredder, I thought to myself, there has to be another way. I was thinking of all the ways music, TV, film, news and radio have gone through huge shifts in how we create, consume and publish them, but when it comes to literature it has basically stayed the same. We have the audiobook, which is a growing format, but that is not new, we used to call that "hørespill". And we have the ebook and kindle, which is just a worse version of reading the physical book and still only counts for a fraction of global book sales¹.

Book sales have been dropping² every year for about a decade now. We have had a little upswing during the pandemic, but this might fall now as people have started living their normal lives again.³

So why have we not seen any big shift in how we consume literature? Is it something inherent with the form or is it that the publishers and authors have been stuck in their old ways?

My feeling was that it was the latter, and I really got that confirmed right away in my research phase trying to talk to an author who told me that discussing digital publishing made him so pessimistic about the future that it hindered his writing. This is a sentiment that I have found throughout the industry, talking to employees at my job, writers and editors. I couldn't help but feel that the industry, just like Glahn, was shooting itself in the foot, maybe with the best of intentions, but with the possible outcome of making literature a niche artform for the elite.

What type of project is this?

This diploma aims to investigate technology through design in different contexts. I hope that the results of these investigations can spark conversations and strategies about the future of literature and publishing. The project is inspired by two earlier diplomas at the school; “Writing with the machine” by Eirunn Kvalnes and “Backend Books” by Axel Benggraf Egenæs. These two projects have shown how exploratory approaches and prototyping can be valuable tools to understand digital materials and what they can be used for.

The project aims to look at three digital materials that I have chosen from a lense of exploring material qualities. By exploring these materials I hope to inspire writers and publishers to see possibilities in new emerging tech, and hopefully show them ways to explore them through design.

Materials

Using the word material could to some seem a bit odd, and they might find it more natural to call them technologies. They are of course technologies but I think it useful to think of them as potential design materials we could use to solve different problems. But before we can use them we need to understand their material qualities.

The materials that I have chosen to work with are GPT-3 (an AI model for text generation), mobile touchscreens as a surface for reading and publishing, and NFTs for publishing and monetization. I have chosen to work with these three materials because I think they all have potential to impact the industry, but how and what that might look like is unclear. I think it is here design can play an important role, and I hope to, through an exploratory approach, show possibilities and spark interest and conversations around these materials in the context of publishing.

Scope

The goal is to explore the material qualities of different digital materials and create artifacts that can spark ideas and strategies for the future of publishing.

Approach

The approach of this diploma has been to explore technology as a material in the context of literature, to see what type of opportunities could arise from them. That means that the approach and methods used have been driven by the material. The process for three material explorations have taken three very different forms, and I hope to show different ways to work with new materials in different contexts.

Methods

Here is a list of some of the key methods I have used in this diploma.

Desktop research:

Reading up on the technologies I want to explore, both academic research and news articles to get a sense of how it is viewed by a larger culture.

Conversations:

Interviews with authors and publishers who both have and have not explored digital formats.
Interviews with readers.

Mapping:

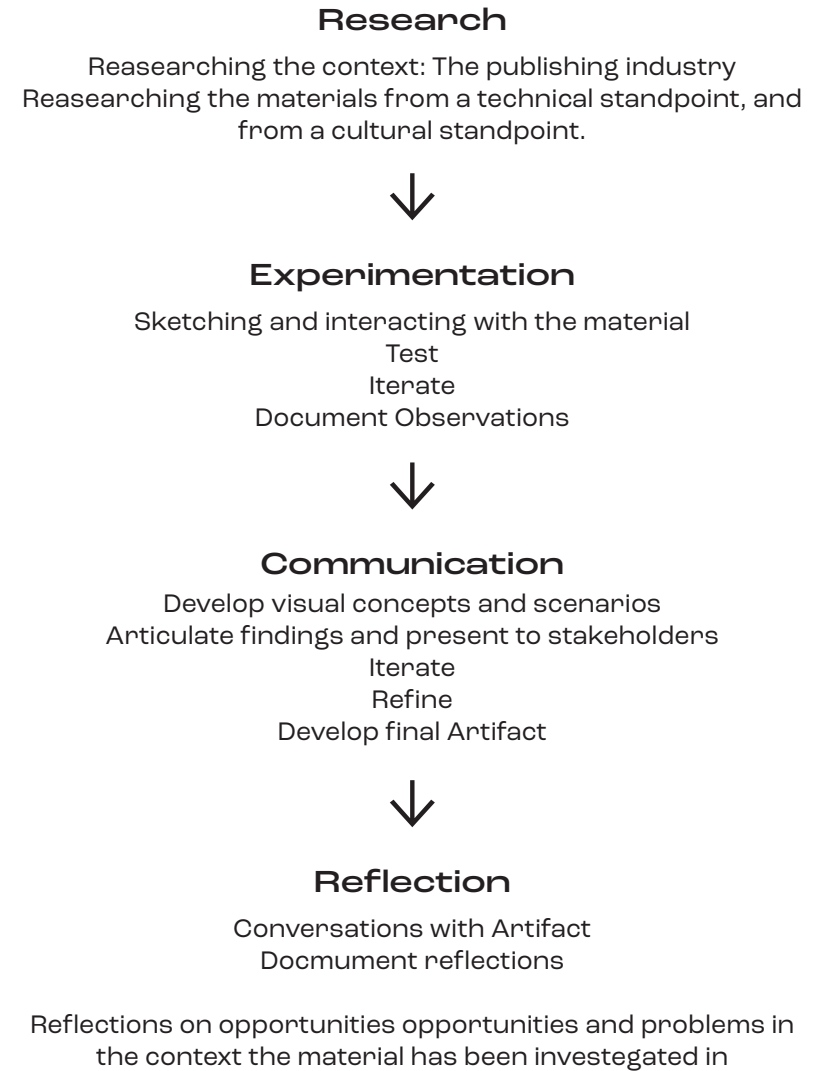
Mapping out the state of the art and how it affects the way we view the technology.
Mapping out user journeys.

Prototyping:

Developing both low and high fidelity prototypes to talk to stakeholders about the future of publishing.

Scenarios:

Creating scenarios of how this technology could be used to create conversations and opinions about the technology.



*This is an overveiw of the process, but it has differed for each of the materials due to context and qualities of the different materials

Understanding the industry

A look at the Norwegian publishing industry

As mentioned, the first author I tried to get hold of in December would not talk to me about the future of digital publishing because it made him so pessimistic about the future that it hindered his writing. This skepticism of digital publishing seems to be a common strain in the publishing industry, and to get an understanding of why, I had to try to understand the publishing industry in Norway.

The CEO of Forleggerforening, Heidi Austlid, said in a debate in Dagsnytt 18 that all the publishers in Forleggerforeningen together published 50 000 titles last year, and out of them 25 000 sold 8 copies or less.⁴ My jaw dropped. How could that be? No business could survive that?

The reason they can survive selling only 8 copies is, among other things, something called Innkjøpsordningen. This is where the state buys about 800 copies of a book for libraries around the country. And this, together with Bokloven, normalkontrakten, Forfatter- og Forleggerforeningen and the vertically integrated bookstores (meaning that the publishers own the bookstores) makes the publishing industry in Norway quite unique. Most of these things are set in place to create a diverse and thriving literary scene and market.

The median salary for an author is about 120.000 NOK.⁵ The average yearly salary in Norway is around 570.000 NOK.⁶ There are grants that authors can apply for, but most authors have to have other jobs as well. Tomine Sandal has written a great article in VINDUET on how the revenue from a book gets split.⁷

Not only is the pay per book pretty bad for an author, but each year the industry throws away millions of brand new books that didn't sell⁸, meanwhile we are seeing a globale paper shortage⁹ which raises big questions about sustainability both financially and environmentally.

To try to get a view of the industry from the inside I wanted to talk to people who have published literature, both traditional and using digital means.

Initial Interviews

Mattis Øybø

Mattis is a publisher at Tiden forlag, and a writer who has published multiple novels. Talking to Mattis was very insightful. He told me about how important Bokloven, innkjøpsordningen and normalkontrakten are for the publishing industry, and how it creates a diverse selection of literature in the market. He also talked about how publishers don't really know how they could fit digital stuff into this framework. As an example, if you only post a poem collection as a "Snapchat show" it would not fall under Innkjøpsordningen. It was also interesting to hear about the change in how the media writes about literature, and how the cultural editorial staff was the first thing to be built down in the newspapers when they transitioned over to the digital space. When Mattis published his first books he got articles about them in multiple newspapers all over the country, now you are lucky if you get one.



Robin Sloan

Robin Sloan is an American writer and media inventor. He has published several books, and been translated into Norwegian. He is also the creator of the app Fish: a tap essay which has been a big inspiration in my work, and this diploma. He has also done small projects with both AI and NFTs. We had a long conversation starting with digital formats. Robin thought that the main issues for digital formats is that they don't really have any place to live. A book gets put in a bookshop and reviewed by book critics and written about on goodreads. It's not the same for his Fish: a tap essay. It lives on the app store and is not recognized by a larger literary culture in the same way as a book. It is also, as he said, hard to do. You have to have a lot of knowledge of how to make digital stuff to create these new formats.

We also talked about his experiments with GPT-2 and NFTs. He thought that AI text generation was interesting, and had actually inspired some of his writing, he saw it more as a fun toy. As he put it, there is no lack of text out in the world, so to simply exist is not enough. He also thought that what NFTs offer in terms of solutions for royalty, crowdfunding and digital publishing is not really as great as the evangelists claim.

Hans Petter blom

Hans Petter Blom is a NRK journalist, and he was responsible for the project Forfatterjakten that was released on NRK the summer of 2021. The project published 4 short stories on the NRK website throughout the summer, both in text and audio. The short stories were written by well known Norwegian writers, but their identity was kept a secret, and just like Maskorama, the audience got to guess the writer. Hans Petter could tell me that the short stories were just as popular as NRKs regular longer articles. He said that most people who didn't read through fell off in the first paragraph. The authors they asked said yes right away and wrote new short stories for the project. All in all he saw the project as a success and hoped to develop it further. In general he also told me that 3/4 readers read NRK on their phone.



Aleksander K. Krag

Alexander K. Krag is the writer of DBMO, a youth book published fully on Instagram. It was really interesting to talk to somebody who had tried to use digital platforms to publish their literature. Alexander told me about the process of writing the book, and how the format informed the writing process. He told me about the huge reach and engagement the project had gotten on Instagram, and great feedback from readers where some preferred the Instagram book and some preferred the physical book. It was also clear that not all of his colleagues saw the Instagram book as a “real book”, and that it was hard to get critics to review the Instagram book.

Key takeaways

To me there seems to be a general skepticism of digital literary products in the industry. One side of this skepticism comes from a conservativeness on what literature should be, and the other comes from the fact that the industry doesn't really know where to fit digital stuff. Some of the reason for this is the framework. Innkjøpsordningen is great at keeping a broad spectrum of literature available on the market, but it also makes it cheaper for a publisher to just publish a new book instead of promoting the books they got. This then leads to authors only making 120.000 NOK a year, which means they can't be an author full time. To me it seems like there are authors out there that are interested in publishing more digital stories as a supplement to the physical books, but there isn't really a framework for that.

Through the material exploration I hope to give authors and publishers insight into some of the material qualities of these digital materials so they could be a springboard for future literary projects.

"When you cut into the present
the future leaks out." ¹⁰

-William S. Burroughs

Part 1:

GPT-3 and the data within

Exploring the material qualities of OpenAI's
GPT-3 in the contexts fo literary fiction

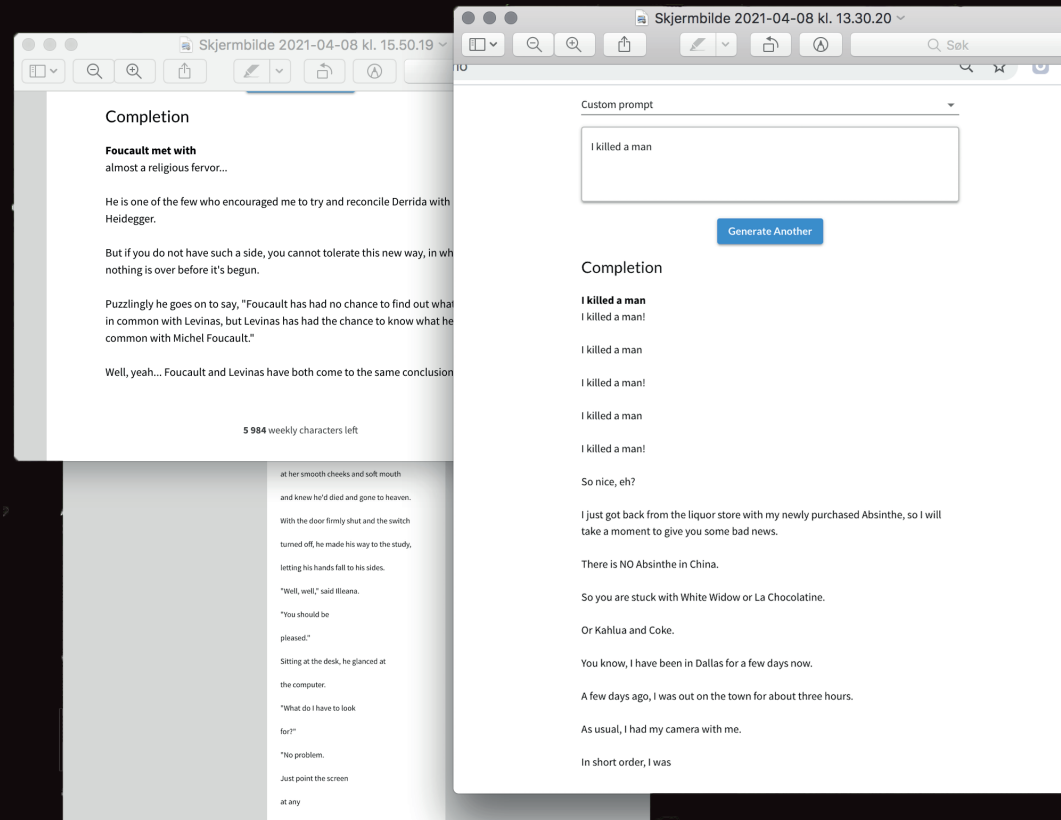
I was first introduced to an AI text generation tool in the beginning of 2021 by my teacher at AHO. It was a demo site where you could write the start of a text and the program would continue. And the continuations were amazing, not because they necessarily would spit out great stories, but because of the cheere randomness of what it would write.

What it was spitting out was weird, delightful and scary. Like “He is one of the few who encouraged me to try and reconcile Derrida with Heidegger ” It had clearly picked up that Foucault was a philosopher, and has had to be trained on text where Foucault had been mentioned with Heidegger and Derrida, but does it know anything about their philosophies in contrast to each other?

Or the lines “I just got back from the liquor store with my newly purchased Absinthe, so I will take a moment to give you the bad news. There is NO absinthe in China. So you are stuck with White widow or La Chocolatine. Or Kahlua and Coke.” To me this is amazing. Something that could have been written by Bukowski, Bourroghs or Hunter S. Thompson maybe. Random, which is also what makes it so funny, in contrast to the actual bad news that he has killed a man.

And then you have the plain out scary continuation of “I don’t wanna eat!” where it continues “I wanna be kidnapped and taken and abused and hurt.” Which makes you wonder what the hell is inside this machine?

I didn’t have a chance to work with the model back in 2021, but when the diploma came around I saw it as a golden opportunity to explore the model and my curiosities about it.



GPT-3

So my curiosity was sparked, and it was turning in the back of my mind, could this be used to write stories? As a tool for authors? I was not sure, but the text the AI was spitting out was definitely sparking ideas for stories, but it was so unpredictable, so random. So to try to answer this question I had to try to figure out how it worked. I applied to get access to the latest model from openAI, GPT-3, and I got it. But before I could start my experiments on it, I had to understand how it worked.

GPT-3 was developed by openAI, a nonprofit founded in 2015 on a mission to create a safe path to artificial general intelligence. In 2019 openAI got a 1 Billion dollar investment from Microsoft, and Microsoft exclusively licensed GPT-3.

So what are these GPT models? GPT stands for Generative Pre-Trained. It is a model that has been fed a lot of data and is now generating new data that is similar to the input data, but not the same. And GPTs data is language. Which makes GPT-3 the newest natural language algorithm from OpenAI. What separates the GPT-3 from the models which came before it is the vast amount of data it had been trained on, which is often referred to as scraping the internet. It is the largest neural network ever built with 175 billion parameters, 100 times larger than GPT-2. What was so remarkable when GPT-3 first launched was how much better it was compared to GPT-2. The underlying principles were largely the same, but the amount of data seemed to have made a huge difference in how it performed.

So there is a lot of math and equations that goes into this, which is something I will not even try to explain, but if we want to understand these models we need to understand what it is actually trying to do, and that is to predict the next word. You see, the model does not know what a dog is or the color blue, the model breaks all words into tokens which consists of about three characters. That means that a word like red is one token and a word like hamburger is about three tokens. Each of these tokens gets values, and it is these values that go into the model and it tries to figure out what is the most likely next token to come after all the other ones that came before it in a sequence of words. So when the model produces text it actually runs this for each token it produces. An example would be to give the model the prompt "Roses are red, violets are" the model will then run that whole phrase through its transformers, get some values and try to find the next token. With really high probability it will return the token "blue", and then it will run the whole phrase "Roses are red, violets are blue" to find the token it

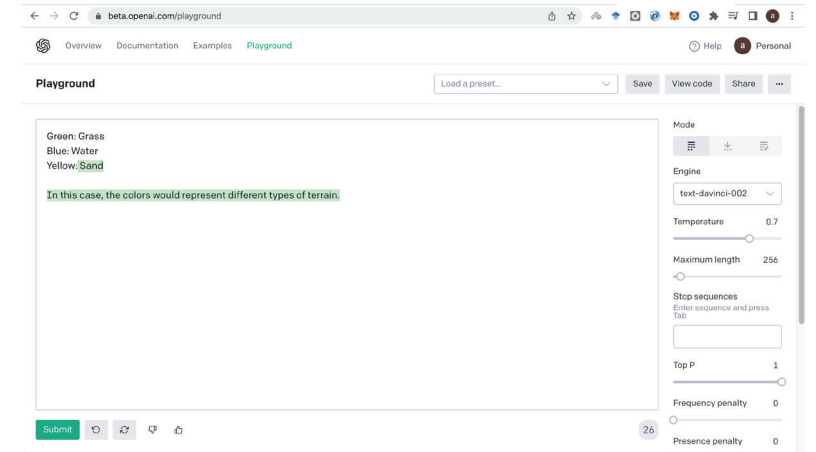
should put next. And so it goes on and on for the length of tokens you have set it to produce. And all these predictions of the next word are built on the background of what data it has seen before. If the data set did not include text that refers to violets as blue the model would not output blue. This then means that what data we train the models on have everything to say for what we get out.

Essayist and writer Meghan O’Gieblyn writes about the training of the model and explains it like this:

“It had been trained in “the dumbest way possible,” as one researcher put it, which is to say it read most of the internet without supervision and started absorbing language patterns. It is daunting to consider what was included in that corpus: the holy books of every major religion, most of world philosophy, Naruto fanfic, cooking blogs, air mattress reviews, supreme court transcripts, breeding erotica, NoFap subreddits, the manifestos of mass murderers, newspaper archives, coding manuals, all of Wikipedia, Facebook, and Twitter. From this, it built a complex model of language that it alone understands, a dialect of statistical probabilities that can parrot any writing genre simply by predicting the next word in a sequence.” (O’Gieblyn, 2021) ¹¹

This big and diverse data set is what has set the GPT-3 apart from the pack and has turned the model into what they call a meta learner.

What they mean when they say that GPT-3 is a meta learner is that the model can learn new tasks just by being shown one. I will give you an example, let say you want to create a translating app. Before you would need a model trained on translating, if there was no model available for that you would have to create one. But instead of creating one you could use a model like GPT-3, and just by showing it some examples of what you want it to do it will be able to learn it.



(Screenshot from OpenAIs Playground)

This means that you can use GPT-3 to create all sorts of apps; Text to code, poem generators, chatbots etc. Prompts have become the new way to code for these models, and by writing the right prompt you get your desired output.

This model has already been implemented in text generation jobs in several institutions. As AI/ML Focused - Principal Analyst at Cognilytica and writer for Forbes, Ron Schmelzer, writes;

“Content and news organizations are making increasing use of AI systems to uncover data from multiple sources and automatically summarize them into articles or supporting research for those articles.” (Schmelzer, 2019) ¹²

Could this mean that we could be reading AI generated or AI assisted novels in the future?

I was standing at the kitchen bench grounding some coffee beans when I saw a creature digging in my lawn. At first I was scared, because it was quite big, but when I realized it was my exes dog my body got filed with rage. I ran outside and stormed up to it, the dog immediately backed away from me and ran off into the woods. In my mind numbing rage I started screaming the dogs name. My lungs started struggling. And after I could not scream anymore I realized that it was six In the morning,

Playground

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I went outside and saw that it was all my exes fault. He had left the dog outside all night near the neighbor's fence. Also I had some serious damage to my lawn.

I was really really mad so I went to my exes house and rang the door bell. He opened the door and he told me that he did not care and that he was not going to pay for the damage.

I went back home and thought about what to do. I had to do something. I knew that I had to call the police and told them that my ex had hit me.

The police arrived and then my ex got really mad. He started making excuses and said that I was not lying.

Generate

Engine: davinci

Temperature: 0.7

Response length: 100

Stop sequences: Enter sequence and press Tab

Top P: 1

Frequency penalty: 0

Presence penalty: 0

Playground

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At night I did not sleep, I kept thinking about the dog and was very pissed off. The next day I was not feeling any better so I decided to go for a walk. I was walking down the street when I saw that my neighbors were moving out. I decided to talk to them, I told them the whole story. I asked them if I could borrow their shovel. They said that it would be fine, but that I had to promise to return it. I told them that I would and I left.

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The next day I went and got dirt to fill the hole. That night I did not sleep, I kept thinking about the dog and was very pissed off about the whole thing. My wife woke up to me pacing the floor. She told me that I was not going to do anything stupid. I told her that I would never do anything stupid. The next day I was not feeling any better so I decided to go for a walk. I was walking down the street when I saw that my neighbors were moving out. I decided to talk to them, I told them the whole story. I asked them if I could borrow their shovel. They said that it would be fine, but that I had to promise to return it. I told them that I would and I left.

My wife was furious at me. She kept asking me why I had to borrow the shovel. I told her that I had to, because it was my neighbor's. She told me that it was a bad idea and that it would not end well. I told her that it would be fine, I was just going to go scare the dog a bit. I was going to go retrieve the dog's owner, because I had a lot of questions to ask him.

I walked out the door and the

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Temperature: 0.7

Response length: 100

Stop sequences: Enter sequence and press Tab

Top P: 1

Frequency penalty: 0

Presence penalty: 0

Best of: 1

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My wife was furious at me. She told me that she did not want to lose me and she would not allow me to

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Experiments

When you get access to OpenAIs GPT-3 you get access to something called OpenAI playground. The playground is a very simple interface where you get to write in prompts and the model generates text. You have a few parameters to play around with such as length, temperature and Frequency penalty. So my first experiment tried out different ways to interact with the model through the playground. I tried out three different methods which I have called Iterative, Instruct and "prompt as writing".

Iterative

So the first method I tried out is what I have called the iterative method, here I first wrote a couple of sentences into the model, a beginning of some sort of story. Then I let the model generate some text. I reviewed what the model had generated, edited and wrote some more myself and then generated more on that edited text. This way the process became this back and forth with the model. I was hoping that the model would spark new ideas and directions for the story.

The model did write some interesting sentences and sparked some ideas for the story. But I found that the model really tried to finish the story as quickly as possible, and the whole experience was quite frustrating and did not feel like the best way to use the model.

Instruct

The second method I tried was what I have called the instruct method. This method is really easy. Here you just write to the model what you want it to do. So you would for example write; Write a flash fiction story. And the model would produce some short prose writing for you.

This model really gives you the feeling of what I have called "AI magic", the feeling of giving the machine an input, and seeing in real time that it responds to what you have given it, and the result is human-like text that is hard to distinguish if put in another context. It also feels like magic because you get no impression of how the model works, or where the words are coming from. The method works great, but feels hard to control.

“Prompt as writing”

The last method I tried was what I have called “prompt as writing”. The approach refers to the fact that the prompt, the example you give to the model, instructs the model in what type of text you want it to produce. The clearer the prompt, the more predictable the result. If you for example give the model a prompt that reads:

Green: Grass

Blue: Sea

Yellow:

The model will produce a word like Sand, and the more complex these prompts are the more unpredictable the output.

Since the model has a limited amount of tokens it can process, and each token you use actually costs money, I went with a literary form referred to as flash fiction. Flash fiction is basically a very short story, and I wanted to see if I gave the model a couple of these flash fiction stories, if it was able to create some flash fiction of its own.

I started by giving the model two stories by Lydia Davis: “Susie Brown will be in town” and “A story of stolen salamis”. I formatted it so the title was in big letters and had an empty line between them. That way the model would hopefully understand that after an empty line it should produce a title, then write a short story.

The screenshot shows the OpenAI Playground interface. The prompt area contains the following text:

SUSIE BROWN WILL BE IN TOWN
Susie Brown will be in town. She will be in town to sell her things. Susie Brown is moving far away. She would like to sell her queen mattress. Do we want her queen mattress? Do we want her ottoman? Do we want her bath items?

It is time to say goodbye to Susie Brown. We have enjoyed her friendship.

We have enjoyed her tennis lessons.

A STORY OF STOLEN SALAMIS
My son's Italian landlord in Brooklyn kept a shed out back in which he cured and smoked salamis. One night, in the midst of a wave of petty vandalism and theft, the shed was broken into and the salamis were taken. My son talked to his landlord about it the next day, commiserating over the vanished sausages. The landlord was resigned and philosophical, but corrected him: 'They were not sausages. They were salamis.' Then the incident was written up in one of the city's more prominent magazines as an amusing and colourful urban incident. In the article, the reporter called the stolen goods 'sausages'. My son showed the article to his landlord, who hadn't seen it. The landlord was interested and pleased that the magazine had seen fit to report the incident, but he added: 'They weren't sausages. They were salamis.'

The settings on the right are: Engine: davinci, Temperature: 0.7, Response length: 100, Stop sequences: Enter sequence and press Tab, Top P: 1, Frequency penalty: 0, Presence penalty: 0, Best of: 1.

The screenshot shows the OpenAI Playground interface. The prompt area contains the following text:

THE LITTLE WOMAN WHO WAS GIVEN PIG'S BLOOD
A man shoots himself in the head at the Lincoln Memorial. The bullet lodging there causes little damage. Doctors say he will be fine. They do express some concern about potential infection, but consider the wound 'not life threatening'. Shortly afterwards, he is discharged from hospital, slightly disheveled, with a bandage across his forehead and a slight, amiable slur to his speech. The episode is reported in all the papers. The man is pictured smiling and hamming it up for the camera.

What makes a good narrative, in a wounded suicide victim? Is this one?

The settings on the right are: Engine: davinci, Temperature: 1, Response length: 150, Stop sequences: Enter sequence and press Tab, Top P: 1, Frequency penalty: 0, Presence penalty: 0.

I was impressed by the result (Here you can see one called A GOOD NARRATIVE). It understood that it was supposed to write a title in capital letters and then create a story that was linked to the title. It also picked up some of the language patterns from the prompts. It felt like it had an understanding of the human condition and often picked up things that refer to our society. It was not really that great at creating full story arcs and a lot of the time it didn't even finish the story. But all things considered, I think this method created the most interesting result, and it was clear that I had the power to change the output by changing the prompt, and giving it titles it could create stories around.

Findings

From the methods I tried it was pretty clear that the “prompt as writing” was the most interesting from a view of writing. It gives the writer a way to show the machine the form you want and the style of the sentences. This is something that I have found to be one of GPT-3s great strengths, its ability to learn structures by examples. Show it a poem in a certain style and it will write a poem in that style, show it a structure for a sale pitch for a book, and it will write new sales pitches in the same style, and so on and so forth.

I also felt like pieces of the data was peaking through the stories, for example, in a story about asbestos a character named Rudolph Guliani was introduced, something that was eerie close to Rudy Guliani who had said that the air was safe i NY after 9/11, even though the air was filled with asbestos. And a lot of the stories had these moments where you could see the connections it was making if you were looking for it. The problem is that you can never be sure, there is no real way for a user to see why it made the connection.

The result from this experiment was 12 flash fiction stories written by GPT-3 without any alterations from me.

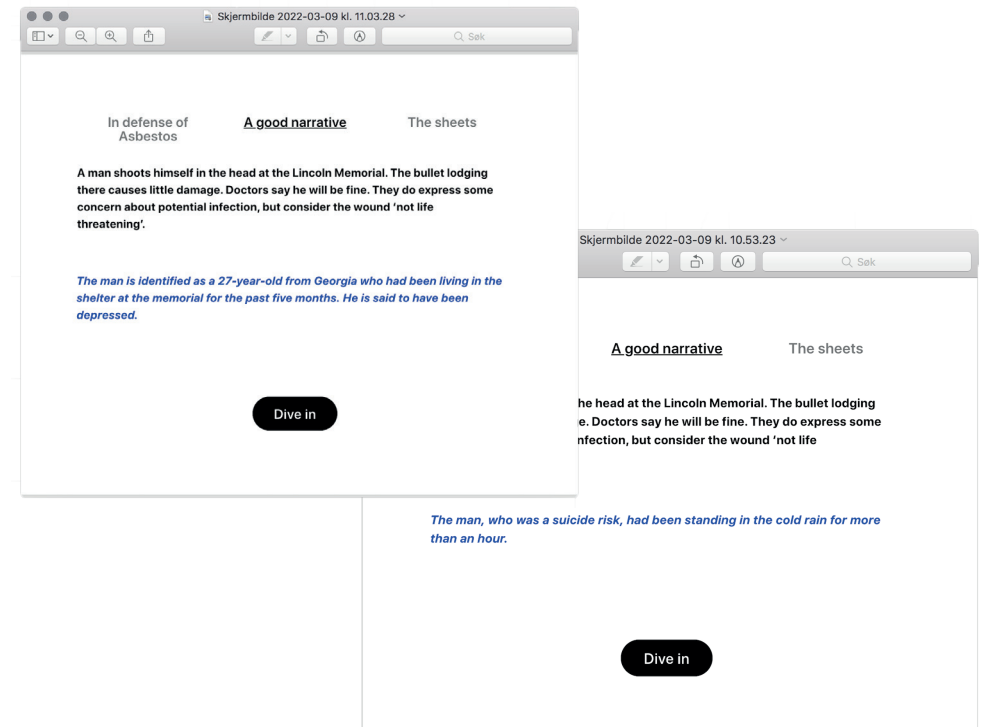
First artifacts

The first thing I wanted to see was if the stories I had created with GPT-3 were obvious to the casual reader. The second was if I could build a small app that could give the feeling of diving into this weird data like the one with asbestos. Getting people to see that it was not magic, but that the model was combining real texts in new ways, and because of that language patterns and biases will float to the top.

The first artifact I created was just some simple story cards. Three of the story cards had stories generated with GPT-3 and the third was a story written by Lydia Davis.

The second artifact was a small app that was inspired by the cut-up technique popularized by William S. Burroughs. The technique is a process where the author cuts up already existing texts and uses these cut outs to create new text. I think this technique has many similarities with generating text with GPT-3. The generated text is generated on the background of all the text it has been trained on, in this way the text that comes out is “cut-up” and rearranged based on mathematics. Also, when it comes to the original cut-up technique, the author has the possibility to have some influence over the final result by being the one who arranges the words and phrases. With GPT-3 the author also has influence by the prompt they use. They can influence structure, style, length and topic. With this in mind I created an app that sends in curated prompts and spits out endings to these prompts.

The app was built using the github repository GPT-3:sandbox by Shreya Shankar ¹³ that did most of the heavy lifting for me. I then coded a python app that sendt a prewritten prompt to the GPT-3 and returned a continuation. With that prompt I also sent the GPT-3 models some flash fiction examples so it would have a better understanding of what type of text It should return. The user could jump between three texts, and generate new continuations on each of them.

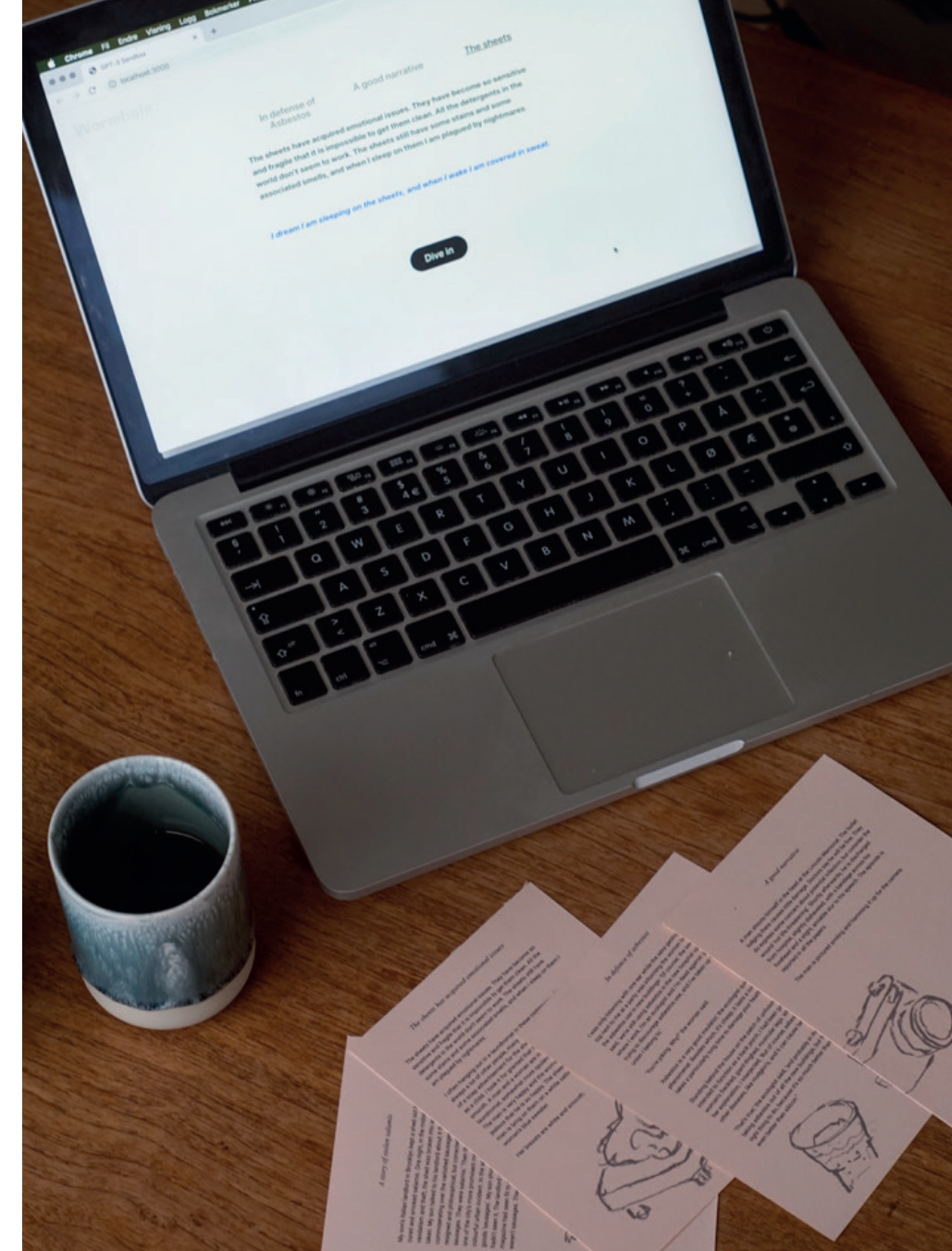


Once I started showing people the story cards and the “cut-up” app two things became pretty clear.

First the story cards. The first reaction of most of the readers was that the stories were interesting and funny. Then I told them that some of them were generated by AI. It was hard to guess which one was actually written by a human. Even Eirunn Kvalness, who did the diploma Writing with the machine, found it really hard to say which was generated and which was written by an author.

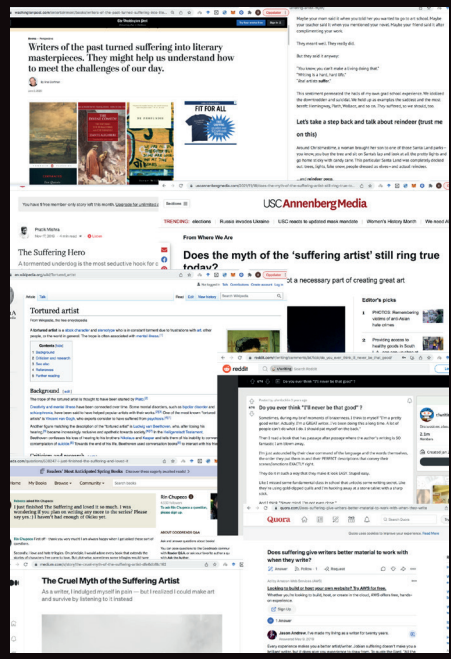
When showing the app I let the user click around a bit, and then showed them some of the best examples that I had gotten out of the app. A question that came up multiple times was “Is this actually working, or have you faked it?” Which showed me that I hadn’t achieved what I wanted with the app. I wanted the app to be a simple curated way for users to explore rabbit holes in the data of GPT-3, to create conversations around how we build these AI models.

So with that as my key takeaways I went back to the flash fiction stories I had created and started to break them down and synthesize what I felt were the most important when it comes to the material qualities of the GPT-3.



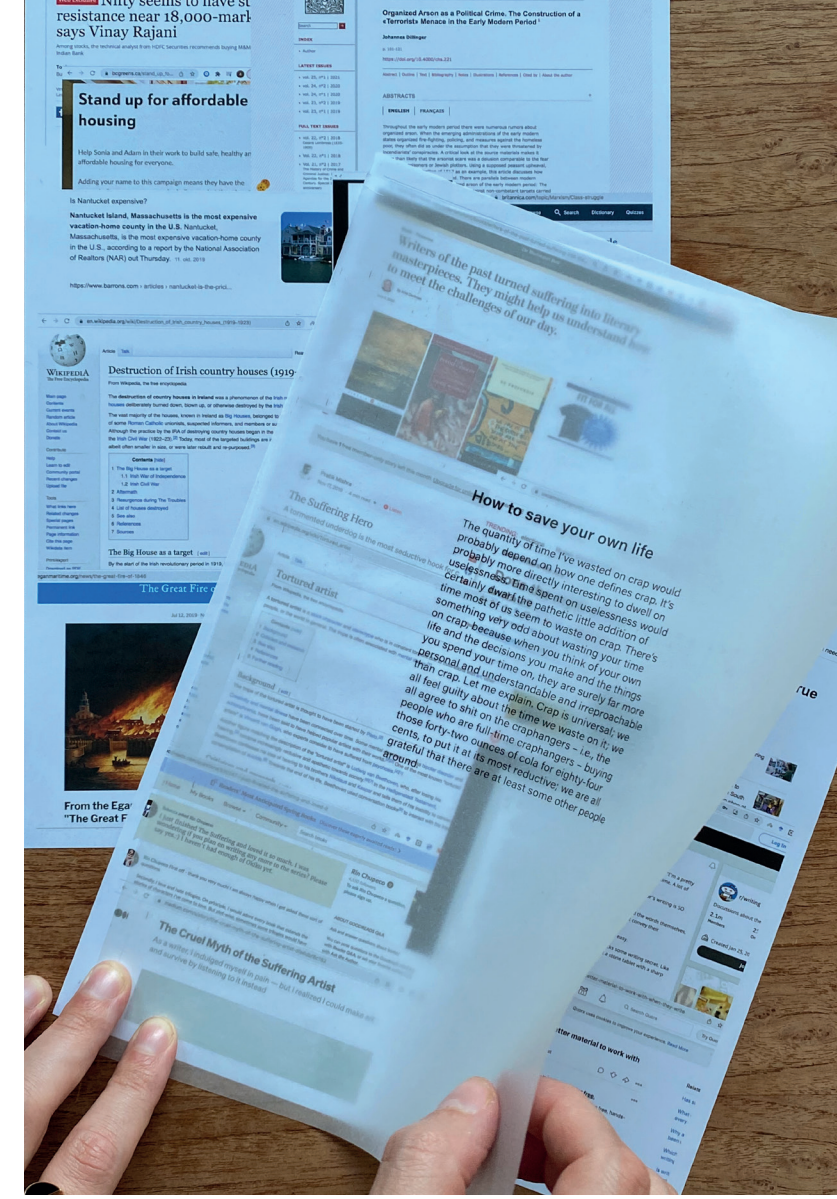
I COULD NEVER BE A WRITER

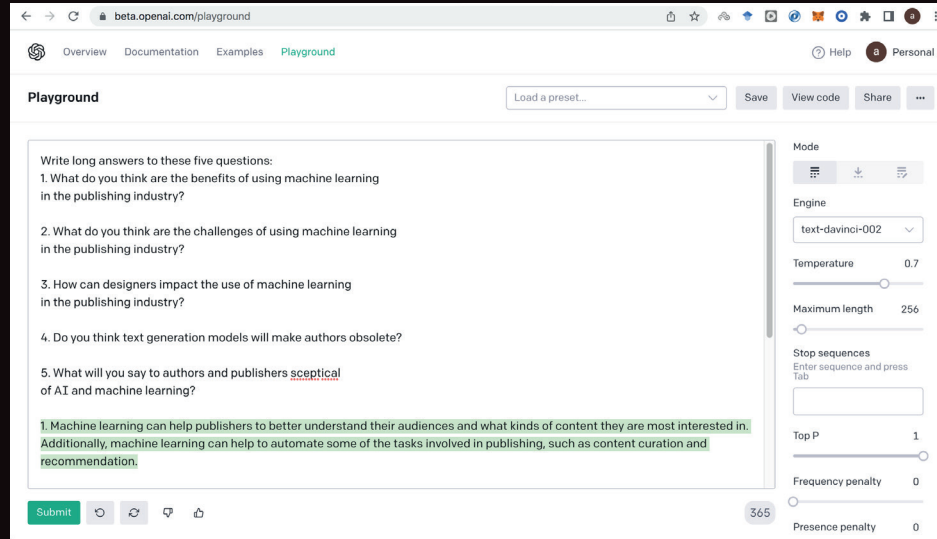
Only by making sense of our sad hours can art arise from suffering. I couldn't write at all if I had not had my fair share of sorrow during whatever remnant of a lifetime I may still be allotted. Emotional intensity is something I could never achieve on my own. It is plain that in my life I didn't make the necessary sacrifices required by writing.



Here you can read one of the flash fiction stories I got out of GPT-3: I Could never be a writer. The first thing I think is striking is how human-like it is, the text is filled with despair over the struggling artist, something it feels it isn't. It might seem weird that a machine that exists to solve one thing, that being writing, claims it can't write. But when you start doing some quick google searches you quickly realize how much text that exists on the internet that is about the struggling artist myth.

There is no way for us, the user, to figure out which of these articles are in the training data or not, and because of that I decided to visualize the data from the stories to get people to think of all the weird stuff that are in these models.





Throughout the project I have seen how versatile the GPT-3 model is. Therefore I thought it would be good to showcase other use cases as well. I did that by having an interview with the model about its uses in the publishing industry.

This interview was conducted using OpenAI's playground to interact with GPT-3. I asked it a couple questions about the use of ML in publishing, and this was the result. Non of the answers has been altered.

What do you think are the benefits of using machine learning in the publishing industry?

The benefits of using machine learning in the publishing industry include the ability to identify potential bestsellers, the ability to target promotions more effectively, and the ability to automate some aspects of the publishing process.

What do you think are the challenges of using machine learning in the publishing industry?

The challenges of using machine learning in the publishing industry include the need for large amounts of data and the difficulty of understanding and explain the results of machine learning algorithms. Additionally, machine learning is a rapidly changing field, which can make it difficult to keep up with the latest developments.

How can designers impact the use of machine learning in the publishing industry?

Designers can impact the use of machine learning in the publishing industry by creating user-friendly interfaces that make it easy for publishers to access and use machine learning algorithms. Additionally, designers can create visualizations that help publishers understand the results of machine learning algorithms.

Do you think text generation models will make authors obsolete?

Text generation models will not make authors obsolete. While text generation models can create basic texts, they cannot replicate the creativity and imagination of human authors. Additionally, text generation models are not yet advanced enough to create entire books on their own.

What will you say to authors and publishers sceptical of AI and machine learning?

I would say to authors and publishers sceptical of AI and machine learning that they should not be afraid of these technologies. While there is some risk involved in using these technologies, the potential benefits are too great to ignore. Additionally, I would suggest that they keep an open mind and be willing to experiment with these technologies.

Final artifact

When working in OpenAIs playground, and also the small app that I built, the generated text feels very volatile in a way. There is really no interface for saving and archiving your stuff, and if you want to see what else it can generate you have to take it away and generate new text. By archiving and storing my outputs from the GPT-3 I had in a way taken snapshots of the data sets. I wanted to curate these texts and contrast them with visualizations that represented the data they were built on and I landed on doing that in a book. The book is a way to further play on this idea of freezing the model, taking it out of the digital space and into a familiar medium for literature. The reader has a chance to examine the text and the data beneath, and time to reflect on their relationship.

I also wanted to show how versatile the models are so I generated two other texts with GPT-3. The first was an interview with the model about AI/ML potential role in the publishing industry and the other was a reflection on how designers can shape how we interact with and use these models.

So the final artifact is a folder with curated stories from my experiments, together with visualizations of the potential data that have created that story to highlight the fact that this is not magic, and everything the model spits out comes from somewhere. With the set of stories I also put the interview with GPT-3 and a short reflection about where it sees itself in the publishing industry and what might be some issues with using AI/ML.





Conversations

Throughout this project I have talked to a lot of people about the use of models like the GPT-3 in publishing while showing what I had done. I will summarize some of the key takeaways here.

Some of the most interesting conversations I had were with the American author Robin Sloan, and the Finnish author Jukka Aalho. They have both worked with GPT models for creative writing tasks and had quite different views when it came to the use of these models. Robin looked at it as a fun little toy that he admitted had inspired some parts of a book he was writing, but not something he thought would be widely used. With his argument being “what problems does it solve?” It is not like there is a lack of text in the world, it is almost on the contrary. Jukka on the other hand had a way more optimistic and business minded take. He also admitted that creative writing might not be the key part of what AI/ML will do in the future of publishing. But he looks at it more as a tool for editors to pick out the right texts and find spots in the text that could be improved. I challenged him a bit on the data these models are trained on, and how new creative writing styles might be deemed bad by an AI editor, even though it could be the next James Joyce. Together we reflected on the symbiosis of the editor and AI, and how important it is for the tools that are being built to take these questions into account, and that the editor needs to understand how the model takes its decisions.

I also presented some of my insights at Gyldendal for about 120 people working in different parts of the organization. Among other things I showed them an example of how you could use a model like GPT-3 to write automatic product summaries on the webstore, while also reflecting on potential biases and reinforcement loops. After the presentation, talking to several of the people who had attended, I felt that I definitely had sparked some interest in these models.

I think the one thing that has stood out through all my conversations, from talking to Designer Eirunn Kvalnes, to Robin and Jukka, to Gyldendal employees, and even interviewing the GPT-3 model itself, is the fact that we can shape the future of AI through our decisions when it comes to data collection, how we set the model up to make predictions and how we display these results.



Reflections

Working with GPT-3 has been a truly interesting experience, and has really given me a feeling of peaking into the future. But as I have explored it I have gone from seeing it as a possible tool for creative writing, to seeing a powerful language model that probably has more potential elsewhere in the industry. I have heard talks by some publishers and authors about how it could be used as a co-editor and I think it might in the future, but then it becomes extremely important for the designers and developers who create that tool to really reflect on what data the model is trained on, what type of predictions and rulesets you set for it. Because all of these things are decided by humans and will affect how a tool like that works and feels.

I see potential in writing blurbs, text for online bookstores, sales pitches, it might even be able to write reviews in a world where literature is written less and less about in the papers, and the publishers have to become more engaged in the marketing than ever before. Another small but interesting area where GPT-3 could be used is in writing rejection letters. Today, if you get a standard rejection from the publisher, they don't have time to give you any feedback of why, or where to improve. If you put that text into a model like GPT-3, that has been fine tuned for the task, it might be able to give feedback to the authors without adding any extra time for the publisher. This has the potential for drastically bettering the experience of getting rejected, and inspire unpublished writers, rather than demotivate them.

Do I think there is a place for creative writing with GPT-3, or other similar models? Absolutely. The cut-up technique popularized by William S. Burroughs, where you cut up existing texts and put them together in new ways, proves it. To me that is basically what you and the machine are doing when generating text. On the other hand, I don't think this is where it will have the biggest impact.

As I have been working with OpenAIs GPT-3 model it has changed and new functions have been added. This technology is moving, and it seems to be moving quite fast. But if you are looking for a specific model, trained on specific data, it is going to cost you, both in time and money. So be sure that you are actually solving a big problem before investing in it.

To round off I will say that as the language models get better and better it becomes harder and harder to see the connections to the data beneath, and it is really this data, and what we have set the model to predict, that is the materiality of a model like this. So when picking a model for a task, I think it is important that you ask yourself; what am I trying to solve? And design the interactions with this model in a way that lets the user understand how the decisions are being made.

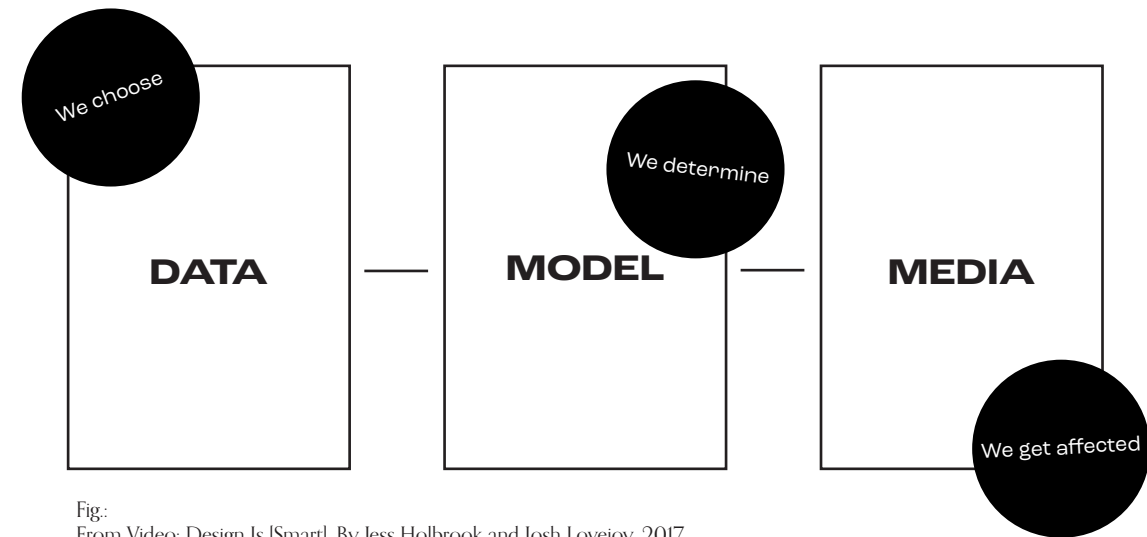


Fig:
From Video: Design Is [Smart]. By Jess Holbrook and Josh Lovejoy, 2017.
https://design.google/library/design-is-smart/?fbclid=IwARHfNTBr-ct-MubTq7CfczoJcYSKnbp_zGvk0g9tbnScPT9caSfPGhzZ7Nw

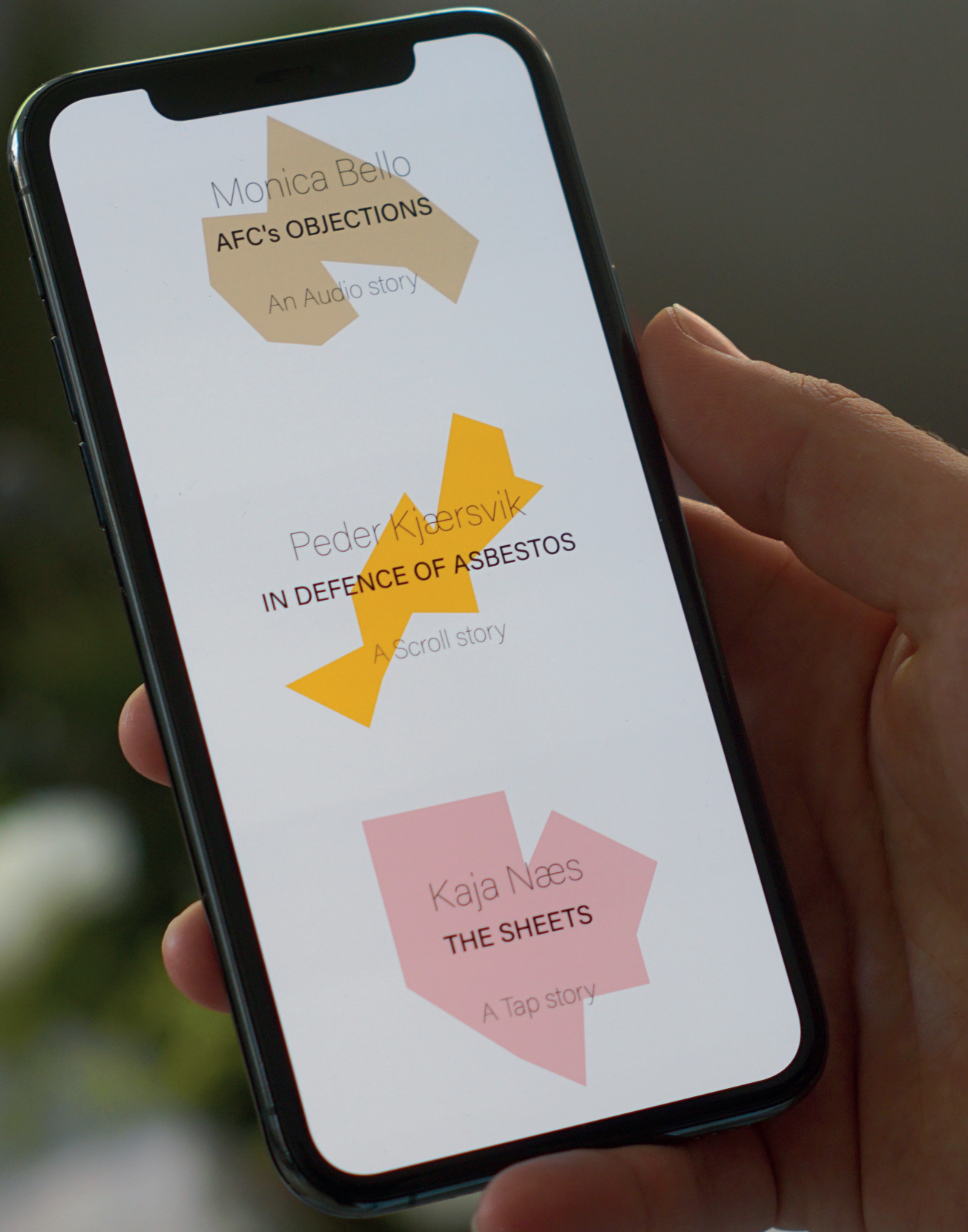
” En kunne jo ha ønsket at de to gode novellene heller ble solgt enkeltvis og resten utelatt, men det har vi verken etablerte formater eller økonomiske løsninger for. Her finnes det nok muligheter når mer og mer av markedet blir elektronisk og leseformatene andre enn de vi er vant til i dag.” ¹⁴

-Bjante Breiteg

Part 2:

Literature on the little screen

Exploring the potential of smartphones for publishing and reading literature



The phone has become a multipurpose device we carry with us wherever we go. We use it to fill time when waiting in line, walking to school or sitting on the bus. In all these small moments of boredom the phone becomes the rescue. The music and radio industry is probably the ones who have come best out of this digital device. As Felix Richter writes: “Between 2001 and 2010, physical music sales declined by more than 60 percent, wiping out \$14 billion in annual revenue. During the same period, digital music sales grew from zero to \$4 billion, which wasn’t even remotely enough to offset the drop in CD sales. It wasn’t until the appearance and widespread adoption of music streaming services that the music industry’s fortunes began turning around again.” (Richter, 2022)¹⁵ And now streaming accounts for 60% of the revenue.

The thing that once was predicted to destroy the music industry was also the thing that in many ways saved it. Nothing comes without problems, but services like Soundcloud have made it easy to publish your music as an independent artist, and many new music stars have been discovered on platforms like that. It gives the musician a platform to experiment, get feedback from listeners and build an audience before doing bigger commercial projects. We have not seen this shift from physical to digital in the literary sector.

Physical book sales still account for the majority of the revenue, and the system in Norway makes digital productions hard to fit in, and not as lucrative. During this project I have seen that much of the skepticism in the industry comes from a fear of the digital formats taking over for the physical book. After a short project I did half a year ago, exploring Robin Sloans “Fish: A tap essay”, it became really clear to me that digital expressions of literature could, and probably should, exist as its own form. As something the authors could use as a tool to express their stories. But if you want to write for the mobile screen you have to have an idea of what that means, how that text is going to be displayed. Both Robin Sloan and Alexander Kielland Krag were clear on how the format had informed the way they wrote.

So the scope was clear; showing different ways you could display stories on screens to help authors and publishers visualize what their stories could look like. But I did also scope it down to short stories and poems, and mobile touchscreens, and not desktops.

Why short stories and poems? Well first off I had found after the short project I did on short stories that prototyping with text takes a lot of time. So from a time perspective shorter texts seemed optimal.

Another aspect is the actual format of the short story and poem collection. A long novel works really well as a book, it is really hard to compete with the physical book, but as Bjarte Breiteig puts it in an interview with forfatterforeningen;

“The short story collection is an artificial form from the start. It consists of short stories that are put together so that they resemble the novel and fit the sales channels.” (Breiteig, 2012)¹⁴
(Translated from Norwegian to English)

There is also science on reading on screens showing that our comprehension of the text, and our perception of when certain scenes in books occur, gets weakened when we read on screens. Like this published study from this year saying “We found that, compared to reading on a paper medium, reading on a smartphone elicits fewer sighs, promotes brain overactivity in the prefrontal cortex, and results in reduced comprehension.” (Honma, M., Masaoka, Y., Iizuka, N. et al. , 2022)¹⁶

This again strengthens the argument for having shorter texts when publishing on screens.

When it comes to my choice to look at the phone, and the touchscreen over the laptop, there were two factors. The first was after talking to Hans Petter Blom he told me that 3/4 readers read NRK on their phone. And the second reason, and probably the reason why such a high percentage of people reading NRK on their phone, is that the phone is a device you bring with you everywhere you go, and you often use it to kill small amounts of time between other activities. To me this seems like a great place to try to get users to read literature.

State of the art

It is not like digital reading experiences do not exist, even though it can feel like it sometimes. So before I started sketching I wanted to look at the state of the art of digital reading experiences. I have looked at several reading apps, bible apps, literature published on Instagram and creative news articles. I have picked out some examples to highlight some findings.

Most of the reading apps are fairly traditional and are sticking with either the scroll or traditional pages. Mostly black text on white background, but with options for customization for the user. These apps try to the best of their ability to replicate the book. Some examples of this are The kindle app or Spark bible.

Robin Sloans “Fish: a tap essay” is a fairly unique format that seems to utilize the phones innate qualities with simple tools. The format cuts the text into small chunks and lets the user tap through almost like a slideshow. With changing background colors, changing font sizes and some visual elements the format allows writers to write in a new way that immerses the reader in the story using simple tools

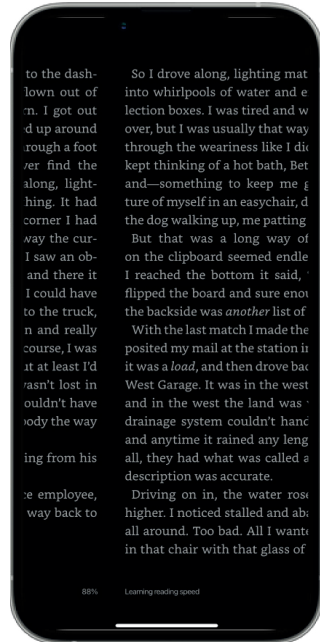


fig. 1 (Screenshot from the kindle app for iphone)

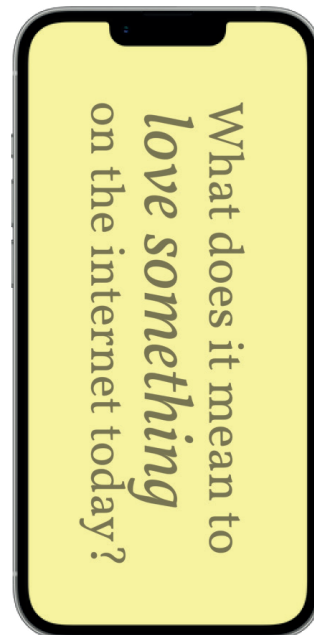


fig. 2 (Screenshot from Fish: A tap essay By Robin Sloan)

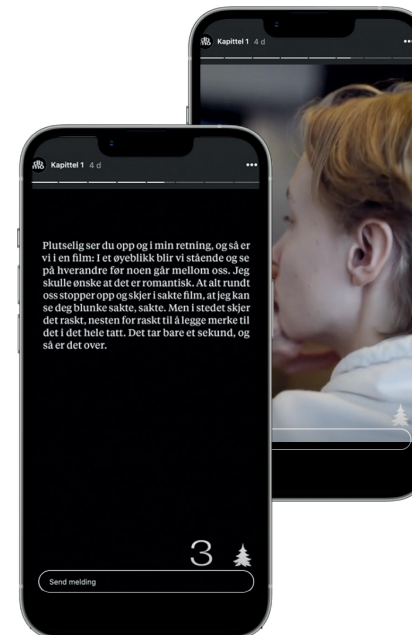


fig. 3 (Screenshot from DBMO_2020 instgram account)

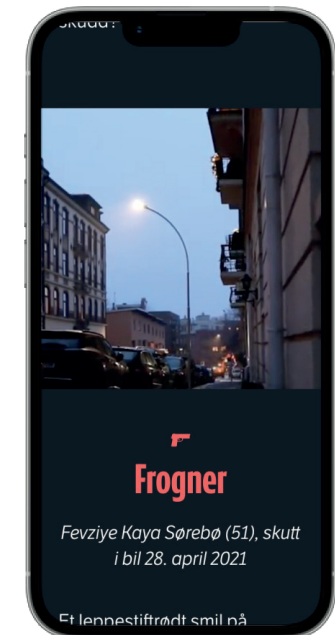


fig. 4 (Screenshot from the NRK article Drept på åpen gate)

DBMO is Aleksander K. Krag and Gyldendals Instagram book. The interesting thing for me in this project was how they released chapters over a longer period of time giving the project longer exposure in the public eye. As well as how Aleksander had thought about how it would look on Instagram while writing.

“Drept på åpen gate” is one of the many creative news stories I have looked at. It is produced by NRK and is a long form article utilizing the scroll in an interesting way, breaking up the text, implementing video and pictures, giving the reader options of shorter and longer text etc. I think the literary industry could learn a lot from newer news articles and how they are using the scroll.

Sketching

To start to get an idea of how we could interact and move through text on the mobile screen I started sketching around three main interactions; Swipe, Scroll and Tap. After sketching I mapped out all the sketches and tried to evaluate the sketches based on criterias such as readability, "interestingness" and doability.

After the initial sketches I picked some I wanted to look closer at through prototyping.

After getting some quick feedback from colleagues and some readers I decided that the next step would be to create more polished prototypes so I could show it to authors and other stakeholders in the publishing industry.



Prototypes

My main goal with the prototypes was to use them in a way where they would spark interest and ideas between the authors and editors. Seeing if it could spark more interest in publishing digitally.

Based on the sketches I made 6 prototypes.

Tap

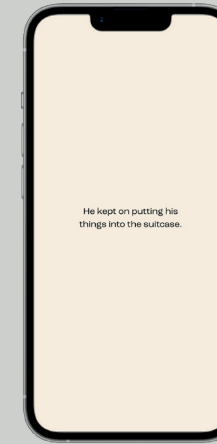
The tap format is a further exploration of Robin Sloans “Fish: a tap essay”. This format breaks the text up to smaller chunks and uses slight changes in background color, font size changes and rhythm to tell the story in a more phone native way. I had explored this format before the diploma and found that it is optimal to have the format in mind when writing for it. Something I also got confirmed by both Robin Sloan himself, and also Aleksander K. Krag. The optimal stories for this format seems to be stories with a high pace and rhythm to the language.

Poem collections

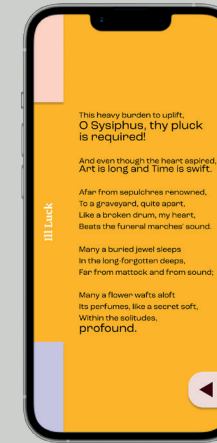
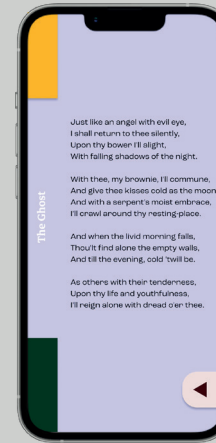
I created two different ways you could release a poem collection. The first uses colors and scroll to navigate through the poems, hopefully letting the user connect the color and the poem. The user can also easily switch between just reading and text and sound.

The other one is more straightforward, having the poems be individual cards. I made it like this because of the skepticism I have seen of digital publishing in the publishing houses. Respecting the text as is, but still creating an interesting way to collect poems digitally.

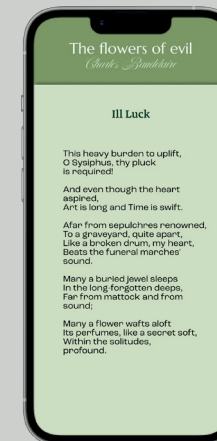
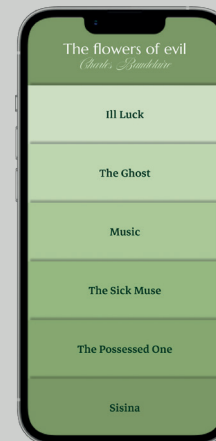
Tap



Poem



Poem



Long and short

This one was inspired by designer Theo Zamudio-Tveterås. The format allows the story to operate on two levels where you basically get a long and a short version depending on your time and interest level.

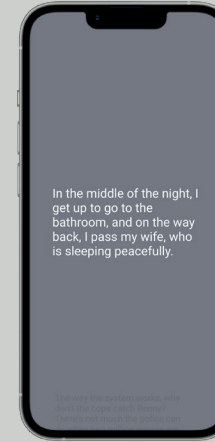
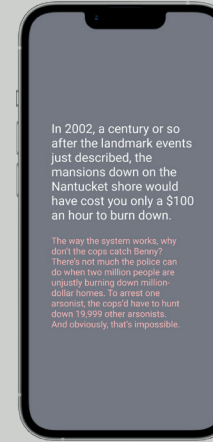
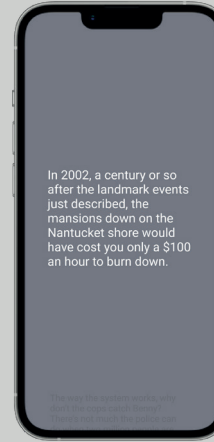
Scroll

The scroll is inspired by newer news stories on mobile screens. We know that the long white scroll is a problem. It is boring, it feels like you are not moving forward in the story, and it can be harder to remember the order of the scenes. Therefore I have tried to make the scroll a little more interesting, and having spaces in the text that breaks up the long scroll, giving the story a rhythm and helping the reader connect certain scenes to certain places in the scroll.

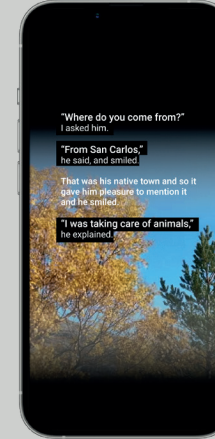
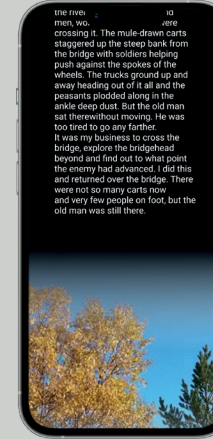
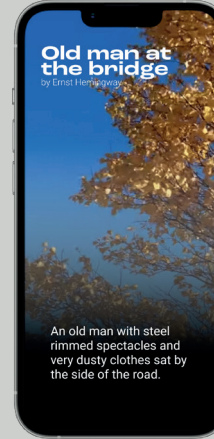
Flash cards

This format was a way to try to give the reader a way to browse the text, and get interested in the whole text, letting them see how many pages it is, and let them easily navigate between them.

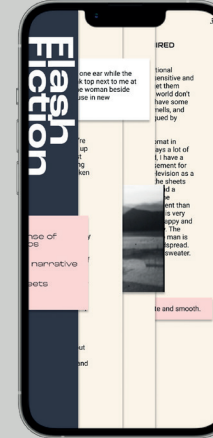
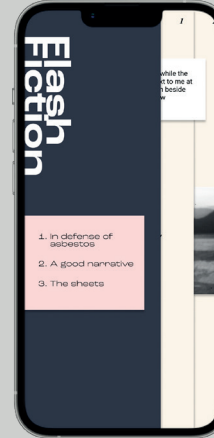
Long & short



Scroll



Flash cards



Insights from Tjenester og vekst at Gyldendal

Due to my collaboration with Gyldendal I was lucky enough to get some useful user insights from their instagram project DBMO. Lene and Solveig at Tjenester og vekst at Gyldendal interviewed 10 users/readers from Instagram during the time I was there. There were 8 females and 2 males which correspond well with the reader group according to their data from Instagram. Their age ranged from 16-24, but most respondents were over 20. I have picked out some of their key insights that I found relevant for the diploma:

1. The respondents describe their social media use as an activity to kill time.

To me this seems like an area of opportunity, to switch out social media use with literature to kill time.

2. Audio and visuals can be distracting elements, and the respondents liked the clean look of the text only posts.

This responds well with my own findings from doing small tests with visual material with text. You have to be careful not to overpower the text and the text should always be the main focus and driving force.

3. Users engage with storytelling that captures their interest quickly.

This corresponds well with my talk with Hans Petter Blom at NRK. It is important to capture the reader in the beginning, and it is here we see the biggest drop off rate.

4. What respondents found most interesting about DBMO was the concept.

Even though the readers liked the story it seems like it was the concept that stuck with them, which might show that new readers are open and even want these new types of reading experiences.

Scenarios

After creating the prototypes and discussing them with some people at Gyldendal, fellow students and teachers. I sensed that it might not be the right artifact to get the conversations I was looking for with the authors and editors. I therefore decided to create some scenarios for the formats to try to show how the formats change the way they publish, how it could impact the writing process and new ways for audiences to engage with the writing.

I developed three scenarios:

The digital feuilleton

The author writes chapters/poems/short stories and publishes them digitally throughout a longer period. The author uses data to help develop the stories, and find out where it should go. The project ends in a book being published, and the author has been building name recognition and reach over several months instead of just once a year.

Growing talent

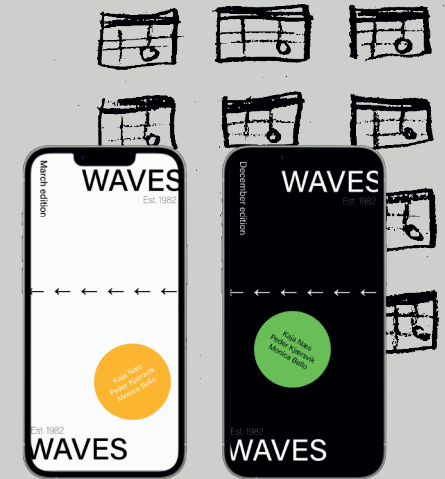
The publisher creates a digital antologi for new writers. Here they get to test out stories, see what works, and what doesn't, build readership and name recognition. The publisher can test out authors, formats and stories and use that insight to build up authors and readership.

Digital native stories

The publisher creates a digital platform and player for digital literary productions. Here the author can write for these formats and the digital publication is the whole work in itself. This can increase reach and relevance for authors, giving them multiple channels to share the stories.



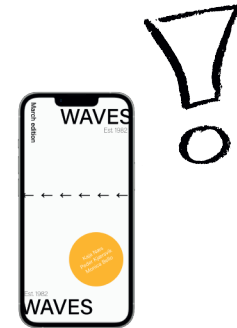
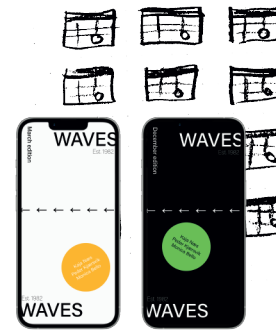
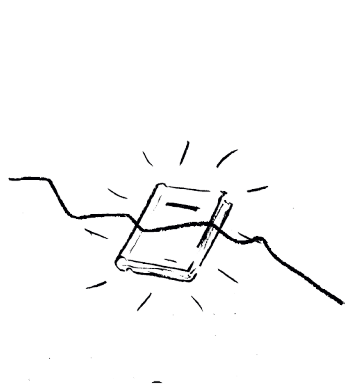
The digital feuilleton



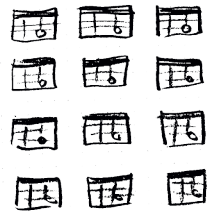
The digital antologi

After outlining the scenarios I talked to Lene and Solveig at Gyldendal, a couple of my fellow design students and three readers to refine them a bit and get some feedback before showing it to the stakeholders. I saw in these conversations that the Growing talent scenario and Digital native stories overlapped in several areas so I decided to only sketch out Growing Talent and The digital feuilleton scenarios.

The digital antologi



The digital feuilleton



Feedback

After sketching out the scenarios with the prototypes I created a presentation I could show to stakeholders to see if this could be a delivery that could spark a conversation at the publishing house. I talked to three people with different backgrounds within the publishing house; Mattis Øybø who is an author at Oktober forlag and publisher at Tiden forlag. Fanny Chays who is a product manager at Tjenester og vekst at Gyldendal, and Alexander K. Krag the author who has published on Instagram.

As a method the scenarios worked really well and I had hour long conversations with all of them. There were a couple of things that came up in all of the conversations. The first was data; what type of data you collect and how to use it. All three of them reflected over the relationship between the data that was collected, the publisher and the author. Some were skeptical, but others wanted to usertest the text, and saw that as valuable. Fanny made a good point pointing out that the publisher already uses “data” through their knowledge from education and working with texts, so this could just be one more data point to use in the publishing process. “Data is neutral, how you use it could be good or bad.” As she said.

The other point that everybody reflected on was the platform. Where is it read, and where is it discovered? Where does it fit in your digital everyday? Together we reflected on the weaknesses and strengths of using third party apps such as Instagram. Building up your own platform takes more time and resources, but gives you a unique possibility to shape the reading experience. Using third party apps gives you quick access to an audience, but if the app changes or gets shut down you lose everything.

And the last key point from these conversations were the submissions of the texts to these new formats. Should the author write as usual, and the publishers suggest a format based on his new knowledge? Or should the publisher create interfaces where the author writes directly for those new formats. It is clear that either of these will affect the writing process and has the potential to breed a new type of writer.



Final outcome

With all of the reflections from the scenario interviews, and seeing the conversations that were started by telling a story about a possible future I decided that the final delivery for my explorations would be a near future publisher that could be that starting point for a discussion inside the publishing houses. The publisher scenario builds on my explorations and conversations with the stakeholders.

The artifact is a digital publisher, publishing phone native stories.

Waves is a full digital publisher started in 2022. Waves decided to focus on three formats to publish in: The Tap Story, The Scroll Story and The Audio Story. After starting up they gathered a lot of data on their first stories and started to see patterns of best practice for the different formats. They saw that due to the context of when people use their phone, shorter text seemed better. They also found guides for rhythm, sentence structure and language that could be useful when picking a format for your story. It became clear to them that in order for the stories to be as good as possible the authors need to think about what format they were writing for throughout the writing process. Therefore they developed writing tools that let the author write directly into these formats, so they can test out the stories on the phone before sending them into the publisher. The publisher then uses data and literary quality assessments to decide which stories to publish.

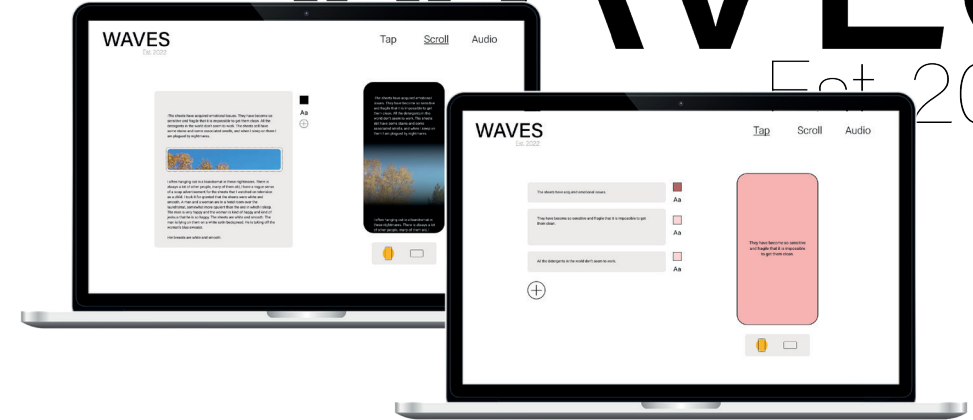
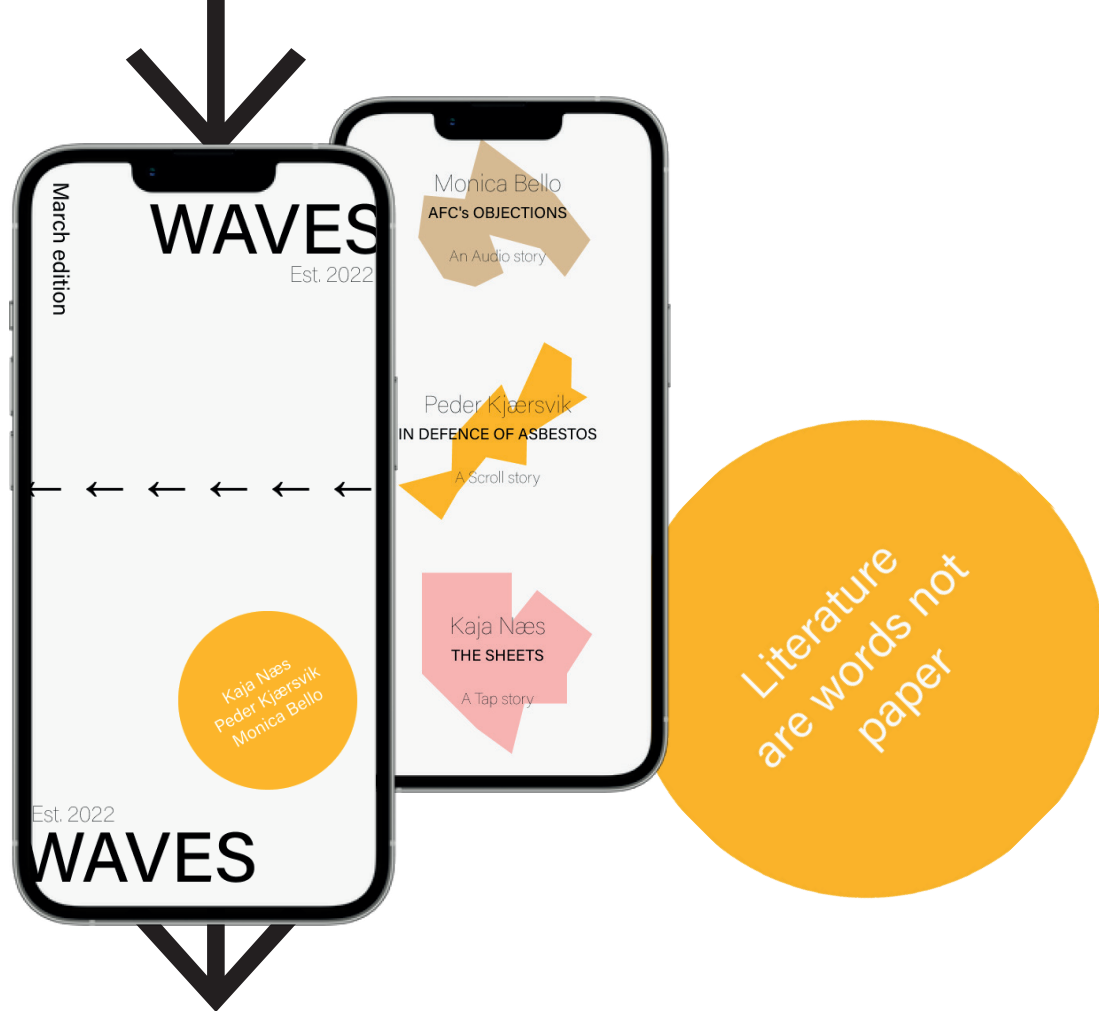
By making the stories easy to share they have been able to reach on average 100 000 readers. And since they release new stories every month they stay relevant in a high frequency media landscape. By staying relevant both Waves and the authors have built up a greater name recognition in the public eye. New authors have gotten to build an audience before releasing their first book, which has increased the book sales for their debut novels.

The delivery is this scenario with prototypes and screenshots as evidencing, together with a live home website to Waves.



WAVES

Est. 2022



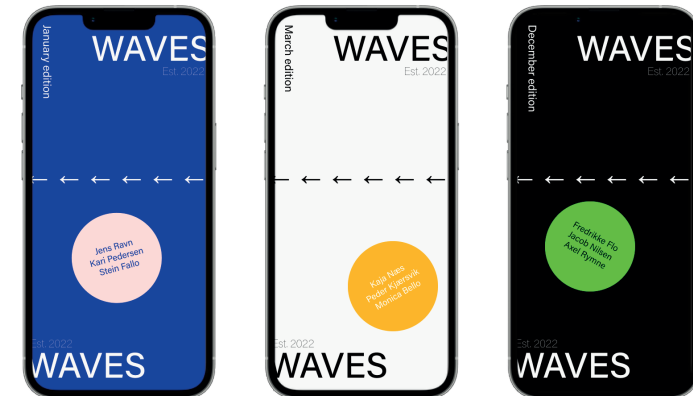
We have developed writing tools so you as a writer can test out your stories before sending them in to the editor.

Our editor picks out stories with high literary qualities, and uses data to pick out the stories that perform best in these formats.



Waves works with three formats that you as a writer can write for. The Tap Story, The Scroll Story and The Audio Story.

With our experience we have created guides that can help you optimize these stories for the formats.



New stories every month.

WWW.LITERARYWAVES.COM

Reflections

There is no doubt in my mind that the publishing industry is 5 years or so behind industries such as music and news when it comes to utilizing the potential of the phone in a publishing context. The mobile phone has become the way that most people interact with the internet in their spare time. We are already consuming videos, radio/podcasts, music and news on it and there is no reason why literature shouldn't have a place there either. But from this project I think that the form might have to change a bit to fit the device, and then it is important to emphasize this as a supplement to the book and not a replacement. I think that there is this idea of the replacement that makes a lot of authors and publishers hesitant. Writing for different platforms exposes writing for new audiences, and these new audiences could then be inspired to order your book. From my work at the bookstore I have seen several online sensations driving new buyers into the store which makes me think that the problem is not the book, but the reach and visibility in our everyday life, and this is where I think the phone, and in general publishing digitally, has a huge potential.

From my research into reading on screens, and literary formats in general, I would recommend anybody that wants to publish literature digitally to start with shorter text. Shorter text such as short stories and poems seems like the obvious low hanging fruits. From the context of when you use your phone, to studies on screen reading, to even how artificial the poem and short story collection is.

When it comes to how writing for the little screen could change publishing it comes down to new ways of creating and distributing as the key factors. For creating I have seen through my interviews and sketches that you need to think about, and write for, the format to get the best result for the readers. It is easy to put that task on the writer, but the writers need to see and experience the formats before they can write for them properly. So I think the publisher needs to use their already existing knowledge, and be open to learn about what works in these newer formats to pick out the right texts.

And when it comes to learning about these new formats, posting digitally opens up the possibility of collecting data. Seeing which stories performed well and where people are falling off. This data can't be used uncritically, but can be used as a way to learn about what works in these formats, and combine that with the literary criterion and knowledge the publishers already use.

I think digital publishing is a great way to bring relevance to the table. When a huge music star drops his new album there are not long lines at the record store, but I can bet that everyone on the bus with earplugs is listening to it. Digital publication makes it easy for people to access and share the content, and that leads to people discussing it, meaning that it is having a cultural impact. Distributing shorter texts this way means that you as a writer could stay relevant every month by releasing new stories, instead of once a year, building your name recognition and growing as a writer.

” It’s hard to make sense of what the NFT creative landscape might mean for otherwise underpaid writers. At once, it’s a place for writers to experiment with form, publish and earn money directly and instantly without any traditional publishing gatekeepers. It’s also a brand-new subculture with no reliable routes to financial success or readership, cut off from a larger writing market and culture that doesn’t understand it, raising knotty questions about what elements of writing are truly valuable to readers. For some, it’s exciting. But it’s also chaos.” ¹⁷

-Walker Caplan

Part 3:

Blockchain or mockchain

Exploring NFTs and blockchains from
inside a big publishing house

fig. 1



fig. 2



fig. 3

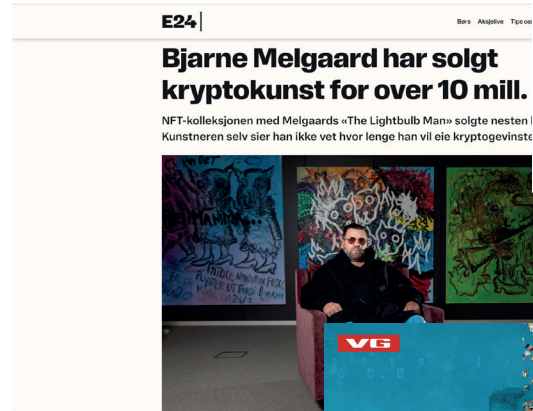


fig. 4

fig. 1 (Screenshot from nrk.no)
<https://www.nrk.no/kultur/na-vil-nft-moten-ta-verden-med-storm-115811197>

fig. 2 (Screenshot from nrk.no)
<https://www.nrk.no/nordland/nft-og-krypto-kan-endre-hvordan-vi-handler-pa-nett-115740095>

fig. 3 (Screenshot from e24.no)
<https://e24.no/teknologi/12840n/bjarne-melgaard-har-solgt-kryptokunst-for-over-10-mill>

fig. 4 (Screenshot from vg.no)
<https://www.vg.no/rampelys/i/GampOl/bilde-fil-solgt-for-590-millioner>

NFTs, or non-fungible tokens, really took off in 2021. Opensea, one of the largest NFT marketplaces, reported a trading volume of \$14 billion dollars throughout 2021.¹⁸ Which is quite a hick from \$ 21.7 million in 2020. It is the visual art market that really has taken advantage of the NFT boom with record sales at big auction houses such as Christies.¹⁹ Big sale figures like that will obviously bring with it its fair share of questions. On the one side you have the evangelist who preaches the NFT as the future of trade, the future of creatives, giving them a bigger piece of the pie. On the other side you have the naysayers calling it a ponzi scheme and a scam.

What nobody could deny was that people were making money selling digital stuff, a lot of it, so when we know that authors in Norway have a median salary of about 120.000 kr, exploring new ways of monetization seems like a necessity to create a sustainable publishing industry.

Approach

This part of the project has been a collaboration with Gyldendal, and is framed by being a project that is supposed to be set in production this year. This means that I am looking at the technology to see what we can do now, with the resources available, and through this project get a better understanding of what it can be used for in the future.

I have also launched my own NFT project before the diploma selling over 30 NFTs, so I did have some insights into the process of launching a NFT project before the diploma.

What is a NFT?

To understand a NFT it is hard to get away from its connection to crypto and blockchain. So I will briefly try to explain the two concepts. Both crypto and NFTs are built on a system called the blockchain. The idea of the blockchain is that it is a system that enables safe and quick peer to peer transactions without any middleman such as a bank. The way the blockchain solves this is by creating a decentralized register that tracks all the trades. Instead of the bank being the centralized entity that verifies the transactions, the blockchain is a network of servers doing the same. Using encryption and a big network the transactions are supposed to be safe from corruption. Since the servers are spread around the world and in private hands, in theory, if there are enough of them, it is impossible to hack because you have to hack over 50% of the network. But having a large decentralized network like this requires incentive to have the servers up and running and this is where crypto often comes in. The different blockchains are structured in different ways, but they often use some form of payment of crypto to run the network. So to simplify you can say that the people who run the servers and verify the transactions get paid in cryptocurrencies to do so. The currencies or tokens value depends on the market, and we can think of these tokens as fungible tokens. A fungible token is something you can change out and still be the same. So take a one dollar bill for example, it doesn't matter which one dollar bill you got, what serialnumber it has, as long as it is a one dollar bill.

Then we can go over to the Non-fungible token, you can then probably tell by the name that this is a token that you can not change out for another, it is unique. You can think of it like two famous paintings; the Mona Lisa and Scream. They are both famous paintings, and let's say for this example that they were worth the same in terms of dollars. Even if that was the case you couldn't swap one for the other and say that they are the same.

So the NFT is said to make it possible to create unique digital scarcity of digital "objects", which then turns them into assets because of their tradability. And this is possible because of the blockchain that verifies ownership of these tokens and logs all trades of them.

How could this be interesting for the publishing of literature?
To me there are three key aspects that seems interesting.

1. Royalty

One of the promises of this system is the automatic kickback to creators on resale of the items. So that means that the creator of the NFT can set a percentage they want as royalty on every future sale. This could become a potential new revenue stream for authors and publishers.

2. Managing rights

There is often a question of what you are actually buying when purchasing a NFT. Do you buy the copyright? The IP? Or just the certificate of ownership? In most cases it is the latter, just a proof that you are the owner of this digital thing. But it could be used for trading rights, setting up smart contracts within the publishing industry that would be automatically executed when certain terms were met.

3. Making the digital "physical"

The NFT has the potential to reshape how we think of owning digital stuff. The pandemic really forced us online, and kick-started the NFT business, and it might also have reshaped the value of the lives we live online.

Collab with Gyldendal

During my pre-diploma I got in contact with Fanny Chays and Tom Christian Gotschalksen at the Tjenester og Vekst team at Gyldendal. They are the department that developed the Instagram book DBMO and a department that explores new ways to discover, publish and sell literature.

By coincidence I was working on my own NFT project at the time, and asked them if that was something they were looking at, and to my surprise it was something they were interested in exploring.

To quote Fanny Chays, digital product manager at tjenester og vekst;

“In our team “Tjenester og Vekst” at Gyldendal, we are working towards empowering storytelling talents to create, distribute and monetise on their work in a digital context. With this vision in mind, it was clear that we should invest time and effort in understanding the NFT space. NFTs allow specifically for innovation on all three levels: creation, distribution and monetisation.

On the creation level, the built-in property rights in the NFTs enable unique formats based on co-creation, be it with other creatives or by inviting the audience in remixing content. On the distribution level, it allows for global, community-driven distribution. On the monetisation level, it shifts the dynamics from volume to scarcity, from mass to unique, restoring the value of a digital object. It makes it possible to create a special connection to a digital product, and for the audience to support their favourite artists.

However, there are also challenges with this technology, such as the environmental impacts and the unregulated aspect questioning its security. The fast pace of NFT development has also made it difficult to navigate and understand where to create value.”

Research

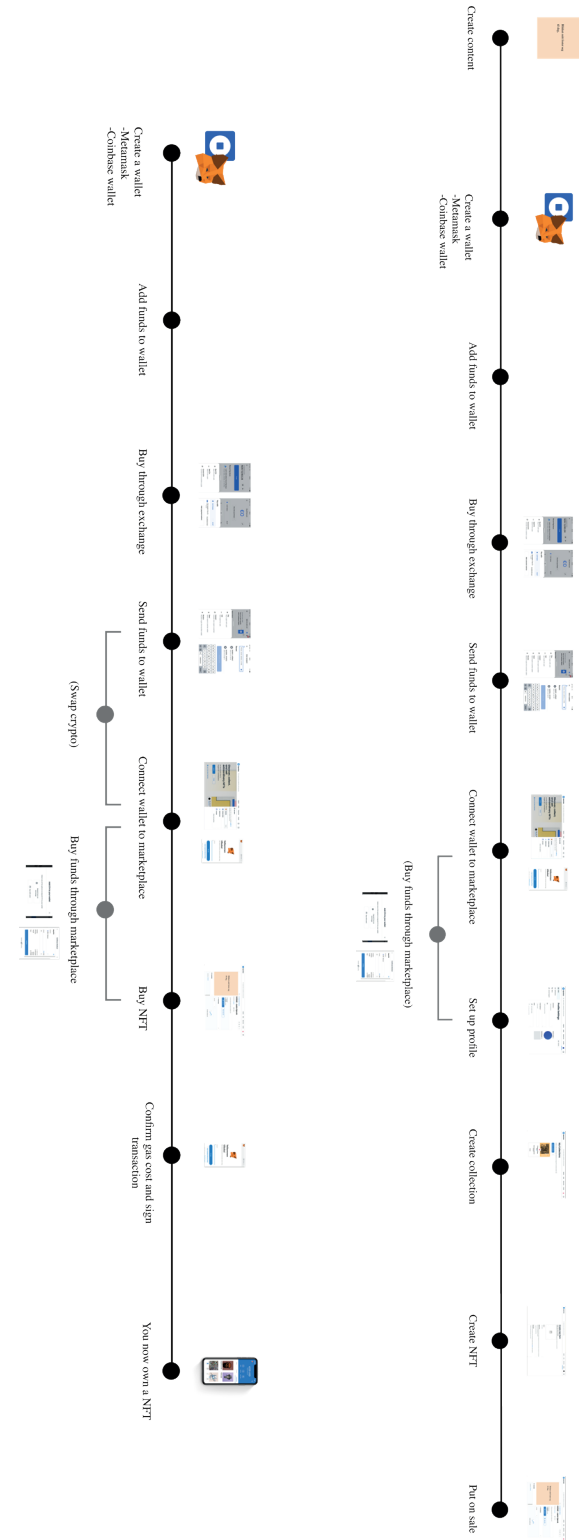
The technology itself allows for everything you can put into a small piece of code to become a NFT. That means pictures, gifs, videos, audio and text files, but it also includes small programs and also opens up the possibility for interactive NFTs.

To get a better understanding of what types of NFTs were being created, and what types of NFTs we could create I mapped out the largest NFT platforms and looked at their interface for NFT creation.

From the mapping it became pretty clear that even though the blockchain opens up for a lot of possibilities for what a NFT could be, the platforms didn't. The NFT format was pretty standardized. For most of the sites a NFT is a picture or video in a square ish format. Some of the NFTs also come with "unlockable content" which are usually just a link to some files you could download when owning the NFT.

Then to get a better understanding of NFT creation on these platforms and the buyer's user experience I mapped out the user journeys for making and buying NFTs on the biggest NFT platform.

The biggest "pain point" in this journey seems to be the cryptowallet. A cryptowallet is like an account that stores your crypto and NFTs, here there are several different providers which require different levels of identification. Both the creator and the user need one for their journey, so the buyer needs to understand and create a wallet before they are able to purchase a NFT. After that the journey is pretty straightforward, you can buy the crypto you need with a card on the site, and the rest is just like any other web shop. The only other hurdle is the understanding of the system and what you are actually buying.



Sketching and concepts

So before we could start on the concept development we needed a literary work we could work with for the project. It became clear to us pretty early that poems seemed most suitable because of the length of the text and the digital real estate we had to work with.

It was important to find an author that was interested in experimenting in this space, and after some rounds at Gyldendal we were lucky enough to be able to work with Joakim Kjørsvik's poems from his book "25. September-Diktene".

From the findings from the platforms I set up three different directions we could take for the NFTs itself;

1. The poems "as is" with just the text
2. A dynamic presentation of the poems with focus on the tempo and rhythm
3. A merge between the poems and some visual elements

After a discussion with the team we decided to work further on a combination of the dynamic presentation together with some visual elements trying to make the NFT more digital native.



Artist collective

Since we wanted to create NFTs that merged text and something visual, the idea of working with the illustrator of the cover, Anders Kvammen, came up. We went through the poems and created a small collection of 10 poems. These 10 poems were short poems often using very pictorial language. The front cover illustrations is of a kitchen with a lot of elements and we could see that some of the items corresponded with items in the poems.

So the first concept was 10 poems by Joakim Kjørsvik, together with 10 illustrations by Anders Kvammen creating this small artist collective.

We also made a concept around one longer poem, dividing it into 9 parts, giving the buyer a way to remix and create their own poems.

We presented these two concepts to Joakim and Anders and discussed them together.

SVERME
SVERME
SVERME
SVERME

Blikket mitt fester seg til deg.

Blikket mitt fester seg til deg, lik en veps til honningkrukken.

Du smiler,

Du smiler, setter blomsterbuketten fra Bunnpris i en vase av krystall.

GUDDOMMELIG HVERDAG

Hvordan kjøpe?

HÅV

SVERME

DU MIN VAKRESTE TANKE

Du smiler,

Concept 1

GUDDOMMELIG HVERDAG

Hvordan kjøpe?

HÅV

SVERME

DU MIN VAKRESTE TANKE

Du smiler, setter blomsterbuketten fra Bunnpris i en vase av krystall.

La meg drikke navnet ditt, baelme deg i meg til jeg skvulper over, til hjertet ikke kan bære det lenger.

La meg drikke navnet ditt, baelme deg i meg til jeg skvulper over, til hjertet ikke kan bære det lenger.

La meg drikke navnet ditt, baelme deg i meg til jeg skvulper over, til hjertet ikke kan bære det lenger.

La meg drikke navnet ditt, baelme deg i meg til jeg skvulper over, til hjertet ikke kan bære det lenger.

La meg drikke navnet ditt, baelme deg i meg til jeg skvulper over, til hjertet ikke kan bære det lenger.

NAVNET DITT

Hvordan kjøpe?

La meg ete navnet ditt, slite det i biter med hendene, med tennene. La navnet ditt holdes hellig mens det renner fra munnen over leppene, over haken. La meg nive det til trevler, ete det, tygge det, svelge det, fontæne det.

Concept 2

NAVNET DITT

Hvordan kjøpe?

La meg ete navnet ditt, slite det i biter med hendene, med tennene. La navnet ditt holdes hellig mens det renner fra munnen over leppene, over haken. La meg nive det til trevler, ete det, tygge det, svelge det, fontæne det.

Conversation with Joakim Kjørsvik og Anders Kvammen

Together with Fanny I presented the background research and concepts to Joakim, Anders and the publisher at Kolon Forlag Bjørn Aagenæs. I asked them what they knew about NFTs, and they were not really familiar with it other than having read about it in the news. But they were interested in the opportunity of trying out something new, reaching a new audience and learning about the technology.

We discussed both of the concepts and agreed to work further on concept one. Joakim would curate a list of poems, and Anders would start thinking about the 10 illustrations.

Users

We defined early that the core target group should be fans of Joakim Kjørsvik and Anders Kvammen. And hopefully we would also reach a new and bigger audience with the new format of the poems. Since the target group wasn't "cryptobros", or people who buy NFTs as an investment, we knew the onboarding of users would be very important for recruiting buyers.



Production

Together with the team at Gyldendal we discussed what needed to be at the landing page of the project and how we could structure the NFTs with the new illustrations we had gotten from Anders Kvammen.

On the landing page we decided to have a section at the top that would be a digital experience of the project, an interactive merge between the illustrations and poems to create interest in what you might have stumbled on. We also knew that we had to explain what an NFT was and how to buy them. We also discussed the potential of having special products for NFT holders, so that also needed to be added to the site. And at the end we wanted to add the previous books of both Joakim and Anders in hopes that this project could lead to discovery and sales of their earlier books.

For the NFT productions we decided that we wanted to give the drawings some movement. So I worked with the drawings in AfterEffects to give them a little bit of life. Then for the poem part I split the poems up into lines and animated them together to a whole stanza using the rhythm that was naturally in the language of the poem.



(Illustration by Anders Kvammen)

Header

Experience

NFT

Artist collective

Shop

Footer

"GUDDOMMELIG HVERDAG"

The NFT



The final concept is a digital native experience using animation colors and rhythm to display the poems in a new way. The text is the main focus and the illustration, animation and colors are there to enhance it.

The Website

The website works as a hub for the project. Introducing the user to the artist collective, what a NFT is, how to buy it and also has a shop for the books of the two artists. There could also be NFT exclusive products such as a limited edition book for NFT buyers.



Reflections

So that is how long the project has gotten, the website is in the process of being built and the videos for the NFTs are almost done. If everything goes as planned it will be released by the end of summer 2022.

The goal of the project was to learn about NFTs as a material for publishing literature and creating digital products with their own revenue streams. So I think there are some interesting aspects of NFTs and the blockchain that could be explored further in the publishing industry, but I will start with what I see as potential problems.

So first to the blockchains itself. You can think of the blockchain as their own little internet of trade, and right now there are a lot of those internets that do not talk to each other. So just like the internet I do think that for this to really take off we all need to be on the same internet of trade for this to really work. All of these blockchains that exist have different strengths and problems. But all of them have problems that are quite significant. Let's take the Ethereum blockchain for example, the biggest blockchain for NFT trading. The chain can process on average 15 transactions per second, Visa does about 1,700. Because of how Ethereum works that leads to really high transaction costs, called gas fees. One Ethereum transaction takes about 240 kWh to process, 100 000 Visa transactions take about 150 kWh. So I think it has some serious scaling issues which it has tried to solve over the years, but that keeps being delayed. There are other blockchains that solve some of these issues, but they have other problems such as not being decentralized.

And when we are talking about decentralization I don't really think the consumer cares. If you told the user that you had one chain that processed 100 000 transactions per sec and the transaction fees were only a few cents versus a chain that processed 15 and the transaction fees were 30-80 dollars and Visa was operating the first and the other one was decentralized. I think we all know which one they would pick.

The whole NFT craze of 2021 was a gold rush, no questions about it, and as the structure stands as of 2022 NFTs are an instrument for what I would call hyper capitalism. Making everything tradeable, and everything something you can speculate in, no regulations, no borders. There is also a question of what it really solves, if we could use other existing structures to solve pretty much the same things like royalty splits and giving back to the early supporters.

When all that is said and done (and there is also a lot more I could have said), I do hope it can inspire publishers to look at new and creative ways to bring in more money to the underpaid writers. I also think it could inspire new ways to organize rights management within a large publishing house, or in the industry as a whole. But to me the most interesting concept is probably what is often referred to as "true digital objects". This idea of creating uniqueness on the internet in the age of digital reproduction could really bring back an aura to owning digital works of culture such as music albums and books. If we look at human behavior when it comes to physical books I think there is good reason to think that this could have value for literature. Even though most books can be borrowed in the library, people still tend to buy them, and when they are done they put them in their bookshelf even though they will probably never read them again. The book as an object seems to symbolize something more than just the story inside, what books we buy and read functions as identity markers, and the bookshelf works as a social furniture displaying those markers. The NFT could allow for something similar on the internet as bigger and bigger parts of our lives happen there.

Final reflections and outro

Final reflections

This project started with three materials: GPT-3, The mobile phone and The NFT. The goal from the start was to let the material and my findings lead the way, and I think I succeeded at that. What I have found from these very different processes is the difference of working with an unknown material like GPT-3 and a known material like the mobile screen. When exploring materials that are unknown to you it is like going in the dark, and you really don't have any idea of what you're going to find.

I have also learnt a lot about the difference between working on a project in a school setting and working on a project that is actually going into production, like the NFT project. In a project like the NFT project there are a lot of people involved from author, illustrator, publisher, developer, product manager, legal and more. Things do take time when that many people are involved, and you also need to think about time, money and resources in another way. So I feel lucky for seeing the inside of an organization like Gyldendal, and have learnt a lot from that process.

Some might ask why I chose to work with three materials instead of one. So the simplest answer is curiosity. I saw this diploma as an opportunity to learn, and this was the things I was interested in learning. But maybe more important was the goal.

From working in the book industry for many years I knew that the hardest part is not to convince readers, but the publishers and authors. So the goal of this diplom was never to create the perfect reading experience on the phone, or to automate sales pitches for online bookstores. The goal was to inspire publishers and authors to see possibilities in these materials, but also more importantly in exploration as a whole. And due to my collaboration with Gyldendal I have already seen my work having an effect, and I hope it will inspire more publishers and authors to experiment in the digital space.

Thank you to-

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