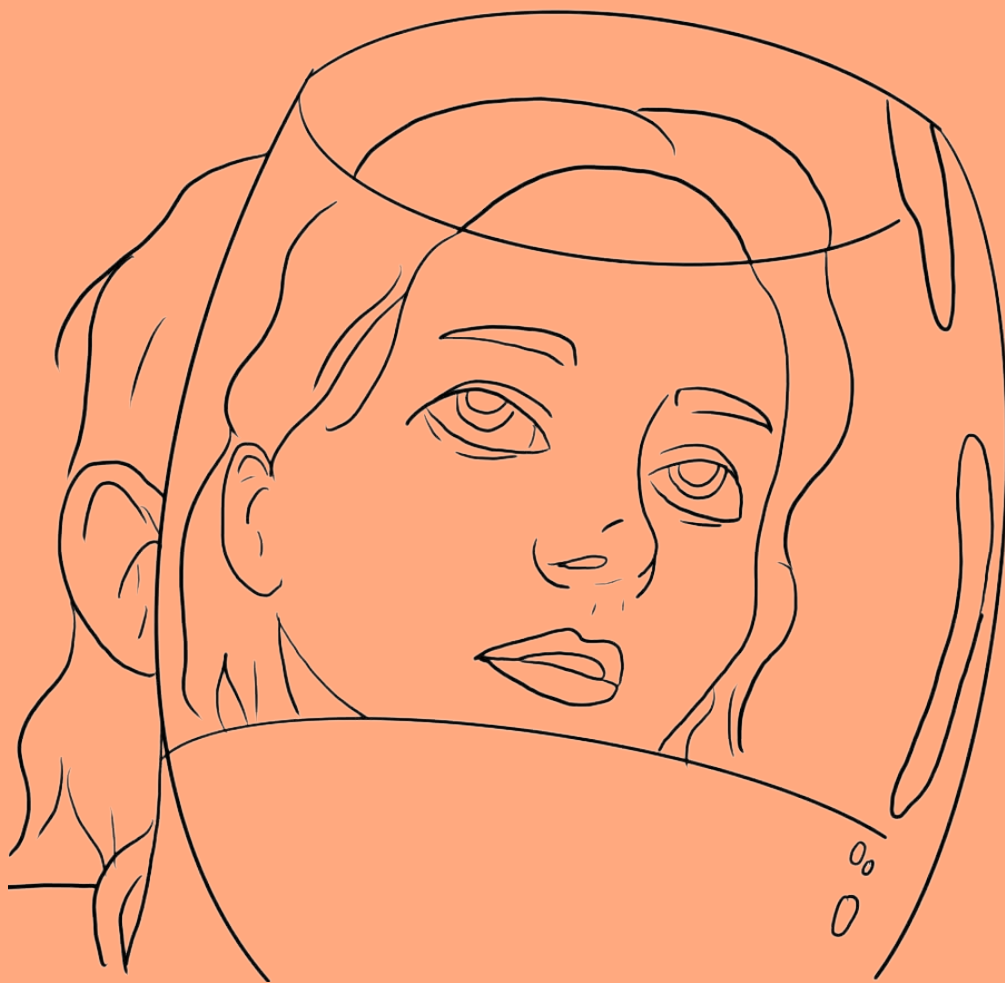# SNAPSHOT

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About

Snapshot is an undergraduate research journal written, reviewed, and edited by students of the Humboldt University Language Centre in Berlin, Germany. *Snapshot* welcomes submissions from all disciplinary areas and aims to publish the best work of university students in the humanities and social sciences.

The editors of Issue 1 of *Snapshot* were: Maria Baturkina, Lisa Busch, Eva Fabian, Eva Katzinger, Yejia Li, Sebastian Rust, and Michael Tran.

Contents

How Kombucha, exercise and mindfulness
can help you get through COVID-19

Eva Katzinger

"There are wounds that never show on the body
that are deeper and more hurtful
than anything that bleeds"
(Hamilton, 2007)

Have you ever felt this way? Have you ever had the feeling that you cannot leave your bed because you are too exhausted? Many of you probably know what it feels like to struggle with mental health issues, which can include changes in emotion, thinking and behaviour and are associated with distress and problems functioning in society. (American Psychiatric Association, n.d.). The COVID-19 pandemic has had a negative impact on the mental health of people. A study from the Netherlands showed that being in lockdown significantly affected the mood of the participants. The mood levels of people with a history of mental illness declined significantly more than in comparison to people without mental health problems (Taquet et al., 2021). Other studies confirm these results. Anxiety and depression increased during the pandemic, especially in younger people, women, those with pre-existing mental and physical health conditions and individuals in disadvantaged socioeconomic groups (Kwong et al., 2020). In such tough times, it is important to maintain good mental health. Therefore, the question arises: What can you do to maintain your mental health during the COVID-19 pandemic?

Firstly, it is important to maintain an active life and to take exercise. The integration of activities that you like and value into your daily life is central because mood and activeness are in a mutual relationship (Weinstein & Mermelstein, 2008). Going on a walk, exercising, preparing a nice meal, or talking with a friend can brighten your mood. Here it is important that the exercise matches your personal preferences. Being aware of your own mood-lowering activities and learning how to avoid them is also very helpful, a strategy connected to the concept of behavioural activation (Hopko et al., 2016). Behavioural activation was originally developed for people with depression, but it is also helpful as a prevention technique. It assumes that

experiencing a low frequency of positive reinforcement can lead to depression. This can contribute to an avoidance of social contacts and activities, which lowers positive reinforcement again. Depression can be a result of a vicious cycle of avoiding positive activities and low positive reinforcement. All in all, the integration of activities that you value and enjoy can help to prevent negative thoughts and feelings (Hopko et al., 2016; Hoyer & Vogel, 2018).

Secondly, the practice of mindfulness during the COVID-19 pandemic can improve your mental health. The concept of mindfulness (Bishop et al., 2004) has its roots in Buddhism and has been described as a process of bringing a certain quality of attention to your lived experience through mediation techniques. Mindfulness is now common in various psychotherapeutic approaches like addiction therapy and has been adopted as an approach to increase awareness. Mindfulness can be also used to respond to mental processes that contribute to emotional distress and maladaptive behaviour (Bishop et al., 2004). Practicing mindfulness in your daily life can be done through muscle squeezing. Squeeze different parts of your body in turn, count to five, then release and notice any bodily changes. You can also meditate through focusing constantly on your breath, a song, or on colouring in a colouring book (Headspace, 2019; *Mindful Colouring And Why You Should Try It*, n.d.). It can be helpful to integrate such techniques into a fixed time slot in your day. Another important part of mindfulness is acceptance (Shapiro et al., 2008). Living through the COVID-19 pandemic is a situation of extreme uncertainty, and we do not know how long it will last. However, you cannot change this situation through worrying. Therefore, tolerating the uncertainty, accepting that some anxiety or fear is normal, trying not to think about the 'what-ifs', and trying to live in the moment is important (Jacobson, n.d.). Empirical studies recommend mindfulness techniques due to reductions in perceived stress and rumination (Shapiro et al., 2008).

Thirdly, structuring your own day is another key aspect of maintaining your mental health during the COVID-19 pandemic. Home office or quarantine tempt you to stay longer in bed or even to work from bed. The COVID-19 pandemic has also led to an increased consumption of social media and television (Ginsberg, 2020; Sekuj, 2020). However, the daily routines people had before the pandemic are still essential and without them, stress, anxiety, and depression can result. A daily routine does not only provide you with a structure, but also gives you a sense of accomplishment and makes you aware of your own feelings. Habits such as waking up at the same time every morning, daily showering, dressing in office style, eating regular meals can create a positive level of stress that keeps you focused and may help you to

avoid feelings of isolation, fear, rumination, and uncertainty (Ginsberg, 2020). In a life without COVID-19, we encounter daily social contacts which give people support. During lockdown, it is not as easy to stay connected with others, but it can be helpful for your mental well-being to maintain friendships digitally: talking via Zoom, phoning, or texting. Therefore, a routine which involved contacts with other people can boost your mental well-being (Canadian Mental Health Association, n.d.)

Since the pandemic started, many restaurants and canteens have closed. It is tempting, therefore, to consume ready-made meals and eat fast food and unhealthy eating patterns have increased during COVID-19 (Ashby, 2020). However, maintaining a healthy diet does not only strengthen the immune system and therefore physical health (World Health Organization, 2018), it can further contribute to better mental health due to the gut-brain connection, also known as the human microbiome (Naidoo, 2021; Simkin, 2019). This is a community of bacteria that is healthy for the body, it is affected by food and contributes to the functioning of the brain. Healthy food introduces good microbes into the gut environment, and they are decomposed into supportive substances which have a positive impact on the body and brain. When unhealthy nutriments will be decomposed into negative substances, they take over the good bacteria and cause inflammation in the gut. The latter is thought to contribute to several mental health conditions, including depression and anxiety. Consequently, it is helpful to integrate more vegetables into the diet due to their high fibre content. High fibre diets have an anti-inflammatory effect and have been linked to reduce the risk of anxiety, stress, and depression. Pickles, miso, kombucha and other fermented foods contain probiotics which include live active cultures that restore good bacteria and microbes to the gut. These maintain a healthy gut biome. Omega-3 Fatty Acids, which are found in walnuts and hazelnuts, are anti-inflammatory, which means that they support a healthy brain. Moreover, vitamin D and spices like turmeric, oregano, and rosemary decrease inflammation (Naidoo, 2021).

The COVID-19 pandemic has had a negative impact on mental health and the prevalence of mental health issues has increased (Kwong et al., 2020). The strategies I have outlined above can have a positive impact on our mental health. All in all, mental health issues are defined as illnesses caused by different environmental and genetic factors (Tsuang et al., 2004). In case of an arrhythmia, it is recommended to seek support of a cardiologist. Therefore, if all the above recommendations do not help you to cope with your anxiety and other problems then you should see a psychologist.

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The importance of tincture: the symbolism of colours in the writings of Hermann Hesse

Maria Andreeva

What do you expect from reading? Perhaps you want to receive wisdom from the thoughts of others? Or do you wish to perceive other people's feelings? Everyone has their own hopes.

But does one expect the author to appeal to one's personal perception? That the writer who immerses the reader in the text will force them reflect on their senses? That is exactly what Hermann Hesse does in every text he creates.

One of the most important things for him as a writer is to describe how the world is full of sounds, feelings and colours – this is his way of provoking the interest of his readers and making his writings closer and clearer to them.

Let us take a closer look at an excerpt from his novel 'Narcissus and Goldmund':

> But often his prayers would end in those strange, magnificent dreams of which he had so many now: day-dreams, with half-awake senses, **dreams of her with all his senses participating**. The mother-world would spray its fragrance about him, look darkly from enigmatic eyes of love, rumble deep as an ocean, like paradise, stammer caressing, senseless endearments, or rather endearments that filled his senses with a taste of sweetness and salt and brushed his hungry lips and eyes with silken hair.

This short passage appeals to the five human senses: *smell*, *colour*, *sound*, *taste* and *touch*. For Hesse, it is crucial to show that the characters are in contact with the same reality as the writer and the reader. What there the reasons for that? Perhaps they arise from the author's own personality.

In the mid-1910s Hermann Hesse endured a severe spiritual crisis. Remarkably, he had been highly sensitive and sensible since childhood. There were many reasons for this nervous breakdown: the death of his father, the outbreak of schizophrenia that his wife suffered, a serious illness that affected his son Martin and, last but not least, disappointment with the decline in creative work of many artists and intellectuals during the First World War. In 1916, at the age of 39, Hesse sought the help of the psychotherapist Dr Josef Lang and, on his advice, turned to watercolour painting, which helped him to overcome his spiritual crisis.

He painted for almost half of his life. Although he started quite late, he left about 3,000 different watercolours, first sketches and drafts. But the main trace left by his passion for painting is the so-called 'artist's discourse' and accordingly the colour thinking for the works created after the 1910s. Hesse attributes the same influence to painting as to his literary work, in which the presence of a strong autobiographical element is due to the author's tendency to self-reflection. By giving the writer the opportunity to put his experiences, feelings and dreams on paper in a form previously unknown to him, painting becomes one of the centres of his spiritual life, and influences his work: '*For me, producing with drawing pen and brush is the wine whose inebriating effect makes life warm and pleasant to an extent that it becomes bearable,*' he wrote in a letter to his friend, Franz Karl Ginzkey, in 1920.

From the mid-1910s he was actively painting and selling his illustrated poems. Meanwhile, themes and motives associated with the artist's craft and life can be found in his work, as well as features of artistic thought and worldview. The texts that appeared since 1918 onwards praised the joy of being an artist. In 1920, Hesse published the compilation 'Gedichte des Malers' ('Poems of the Painter') and at the same time a collection of three stories, one of which was 'Klingsor's Last Summer'.

*Full of hatred he ripped a furrow of **Paris blue** under **the green gypsy wagon**. Full of bitterness, he broke **the chrome-yellow edge** of the curbstones. Full of deep despair, he dashed **vermilion** in an empty spot, annihilating the challenging **white**: **bleeding**, he fought for continuance.*

*He screamed in bright green and Neapolitan yellow to inexorable God. Groaning, he threw more blue into the dreary dusty green: imploringly, he kindled deeper lights in the evening sky. **The little palette full of pure unmixed colours, intensively luminous,** was his comfort, hiw tower, his arsenal, his prayer book, his cannon. From it he fired upon wicked death. Purple was denial of death, vermilion was mockery of decay.*

All the colours are not only described by qualitative characteristics (such as brightness or intensity), the colour itself becomes the hero of the narrative, so to speak, and fills the text with emotional meaning and independent images. This is a component that acquires its own symbolism and compositional significance in the interplay with other means of artistic expression. In addition, the colours and their sensory perception show the state of mind of the characters when they attain their inner harmony or come to a self-discovery ('Iris', 'Demian', 'Siddhartha').

The fairy tale 'Iris' is in fact a whole life story of the protagonist, Anselm, from childhood to the autumn of life. It shows us his personality and the path of his personal development. On the next page you can see a chart that shows the use of colours in the fairy tale. All the contexts where the colour is mentioned were selected with the intention to make the picture more illustrative, and each 'context cell' is coloured with a hue described there. The application is uneven because a different number of colours are used in different parts of the fairy tale's composition, which correlates with the hero's condition and sensibility. The chart is presented in German in order to reflect the contexts as close as possible to the original images.

The chart represents the use of colours in the fairy tale 'Iris' (1916)

durch den *grünen* Garten	an ihre hohen *hellgrünen* Blätter	von *gelben* Fingern	aus dem *bleichbläulichen* Blumenboden	ein *lichter* Weg	*blaue* Geheimnis der Blüte	sah die *gelben* feinen Glieder	zwischen den *goldenen* Bäumen	die *violette* Wölbung	hinter den *gelben* Pracht-gewächsen	im *blauen* Schlunde
über *lichten* Weg	aus *bräunlich*	*grüner* Haut	*lichtes*	*Grün*	und *Lila*	das junge *tiefe Violett*	eine harte *blaue* Blütenspitze	aus *grüner* Schale	*blau* wie Luft	*gelbe* Gewäsche
lichte geäderte Bahn	*blaues* Seidenzelt	über *goldnem* Traumwalde	*blaue* Glockenblumen	über *rötlichem* durchsonntem Laub	*rotgolden* die erste Teerose	kein *goldbezäunter* Pfad	*rote* Beeren	*rotbraune* Sternblumen	mit *perlmutternen* Rücken	zeigten den *braunen* Samen
Glasscherben *grün*	blühten die Brombeeren *braun*	mit *silbernen* Glocken	neben dem *schwarzen* Efeulaub	durch neue *blaue* Höhen	eine erste *bläuliche* Blütenspitze	*Blau*	die *blaue* Lilie	folgte diesen *hellen* träumerischen Pfad	zwischen den *gelben* Gestäuden	dem *verdämmernden* Blumeninneren
aus *purpurfarbenem*	*Dunkel*	von *Blau*	und *tiefem Rot*	*helle* Linien	mit *Rot*	und Blau	an einer *grünen* Rinde	bis zu den *weißen* Haaren	die blaue Iris	auf dem *goldgezäunten* Pfad
aus ihrem *grünen* Schatten	im *blauen* Blick	im Blütengeheimnis der *blauen* Iris	mit einer *roten*	und dann mit einer *gelben* Mütze	*schwarzer* Hut	und *dunkle* Handschuhe	*schwarze* Kleider	die *blauen* Schwertlilien	*errötete*	aus dem *Dunkel*
errötete dabei	in den *blassen* Zügen	*goldenen* Faden wiederfinden	*dunkle* zarte Gefühle	*blau*	*grau*	lächelte *hell*	*weiße* leichte Kinderhand	lächelte *licht*	*bleich*	aus dem *bläulichen* Grunde
zwischen *goldenen* Stäben	die *lichtblaue* Bahn	unter breiten *grünen* Blättern	er sah einen *blauen* Pfad	*goldene* Säulen standen	der Vogel sang *hell*	durch die *goldnen* Säulen	ins *blaue* Geheimnis	in deren *blauen* Kelch	er entgegenging der *goldnen* Dämmerung	die *goldnen* Säulen

If we pay attention to how the author describes Anselm's impressions and feelings throughout his life, we can see that his 'childlike' part of life is actually more colourful and brighter than his adulthood, to which the most part of the narrative is devoted. We note that it is only among the first 1,583 words (which correlate with the protagonist's 'childhood') that 56 colour names appear – that is more than 3.5% of this passage and 63% of the total number of colourisms used in the narrative.

> *He used to press his cheek against the tall, **bright-green leaves**, touch their sharp points with exploratory fingers, deeply inhale the scent of the marvelous large blooms, and stare into them for minutes at a time. Within, there were long rows of **yellow fingers rising from the pale blue floor of the flower**, and between them ran **a bright path** far downward into the calyx and the remote **blue mystery of the blossom**. He had a great love for this flower and peering into it was his favourite pastime: sometimes he saw **the delicate upright yellow members as a golden fence in a king's garden**, sometimes as a double row of beautiful dream trees untouched by any breeze, and between them, bright and interlaced with lining veins as delicate as glass, ran the mysterious path to the interior.[1]*

_____

If we follow the text, we see that the compositional conclusion is congruent with Anselm's old age and self-discovery also coincides with the 'return' of a large amount of colours. This irregularity in the distribution of colourisms throughout the text indicates that the author may have deliberately resorted to using as many colours as possible in this part of the text, as he wanted to show how vivid the world was as seen from a young boy's point of view, still a susceptible, sensitive creature, capable of acute perception of reality and sensing the beauty of the world – something that the character lost when he became an adult. The detailed descriptions at the beginning of the text, which slow down the reader (a retarding effect due to the increasing number of images) and force the reader to imagine many picturesque visions drawn in little Anselm's imagination, are opposed to the relative eventfulness of the time when the hero has matured, in which the dynamism of the events almost completely supersedes any descriptions – especially those with special imagery and that make the reader think in categories of colour perception. In addition, the sense of colour from the boy's point of view brings the reader closer to the hero, 'intimating' what is happening and making the reader see the world of the fairy tale through Anselm's eyes.

There is almost no colour in the descriptions of adulthood, but real life is inseparable from the search for the origins of personal identity, which lies in the ability to perceive the world as sensitively as a child. And the litmus paper that shows this strong sensitivity is colour perception. One finds themself, and seeing and absorbing all the colours means that one feels the world with all his senses and responds to it as sensitively as possible.

This thesis applies to all of Hermann Hesse's works, in which he describes the inner development of the protagonist and their acquisition of harmony with the world At the same time, the contexts can be different. It could be a contemporary history of a German youth during the First World War ('Demian. The Story of a Youth') or the parable of an indian Brahman who has independently found his own spiritual path, which differs from the path of Buddha ('Siddhartha'). It can even be a biography with elements of utopia, representing a whole gallery of occidental culture and oriental

practices (Chinese or Indian) that take on a completely new meaning in a new context ('Glass Bead Game').

Regardless of context, be it oriental or occidental, the main thesis for Hermann Hesse is that the idea of self-discovery is universal. When Hesse draws on elements of foreign cultures, he is demonstrating the universality of the various concepts and at the same time professing his own particular humanism. And the key to uncovering this secret of self-discovery lies in colour – just as Hermann Hesse was able to recognise himself when he began to paint.

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'Angles'

Eva Fabian

In the middle of the picture, you can see a friend of mine leaning on a table. There is a glass of red wine in front of her face, which warps it. The glass does not cover her whole face, which is why you can see that her face is warped, but also a bit of the face with real proportions outside the glass. In the background, you can see just blue and turquoise brush strokes and yellow colour, which create a border and divide the front, the middle distance, and the background of the picture. Using big and visible brushstrokes in the background also creates a lot of texture. The focus is set to the middle of the picture, where the face of the girl is. This perspective makes the viewer feel like he is sitting on the other side of the table, right in front of the girl, talking to her, but you cannot enter the scene because there is no realistic background that draws you into the scene, but only bright colours. Since the painting is based on a photograph of a friend of mine, I used the same colours as the original picture, except for the background. I wanted to paint the background in brighter colours because the portrait itself is not very colourful.

SNAPSHOT   13

Even when the face is in the original colours, there is still a colourful painting style due to the background. The face is painted with the colour of the original photograph, while the background appears to create an atmosphere with the colours used. There is no natural light in the picture: the only indication of an existing light source are the shadows and highlights in the face, eyes, and the glass. There are also some contrasts you can see in the picture. For example, the contrast of quantity due to the different sizes of colourful areas in the face, which is painted rather small and the colourful area of the background, which is rather big. Moreover, there is a contrast of quality due to using pure colours in the background and dull colours in the face and the wine. The picture was painted with gouache and the colours were applied opaquely or sometimes even quite thick. Only the yellow background was not painted with gouache, but digitally.

The painting is based on a photograph of one of my friends. We were sitting at a table and one of my friends saw that the glasses changed her face and seemed to morph it, so she took a picture of her without her noticing. It is not staged but a snapshot of a moment. My first idea was to paint everything colourful without any of the colours of the original photograph, but when I painted the more realistic version, I liked it much better. The painting is not supposed to have an important meaning or message. It is just a snapshot that reminds me of friendship and a great evening. We live quite far away from each other, so this also shows that, especially in times like these, it is important to stay in contact and enjoy the little moments you can have together with your friends. Since we met while traveling and we still like to go traveling together, this reminds me even more that it is important to think about the small interactions you have and that it does not always have to be something special. Even if it is just an evening you are spending together or a short and funny moment when you see your friend with a distorted face. And maybe it is a small reminder to find joy in the little things and try to look at things from different angles from time to time.

Hit the like and the subscribe button: How YouTube's algorithm shapes our decisions and reality

Sebastian Rust

Introduction

YouTube's business model revolves around selling adverts, and it uses recommendations for that purpose. In order to show more ads to each user, YouTube tries to maximize the time each user spends watching videos on the platform [1]. This process is not malicious but driven by commercial considerations; however, it can have unintended consequences which this article will further analyse.

This article will explore how the YouTube recommendation algorithm works to create and amplify filter bubbles, how it can enable malicious behavior, and how to fix or mitigate these problems. Following this short introduction, we will analyse how the YouTube recommendation algorithm works in Section 2. Afterward, in Section 3, we will explore the unintended consequences of the algorithm. In Section 4 we will discuss possible solutions to these unintended consequences.

What we know about the recommendation algorithm

The goal of the recommendation algorithm is to select, from the millions of available videos, the videos a user wants to watch, thus generating more watch time and ad clicks. The complete recommendation algorithm is split up into *Stage 1: candidate generation* and *Stage 2: ranking*.
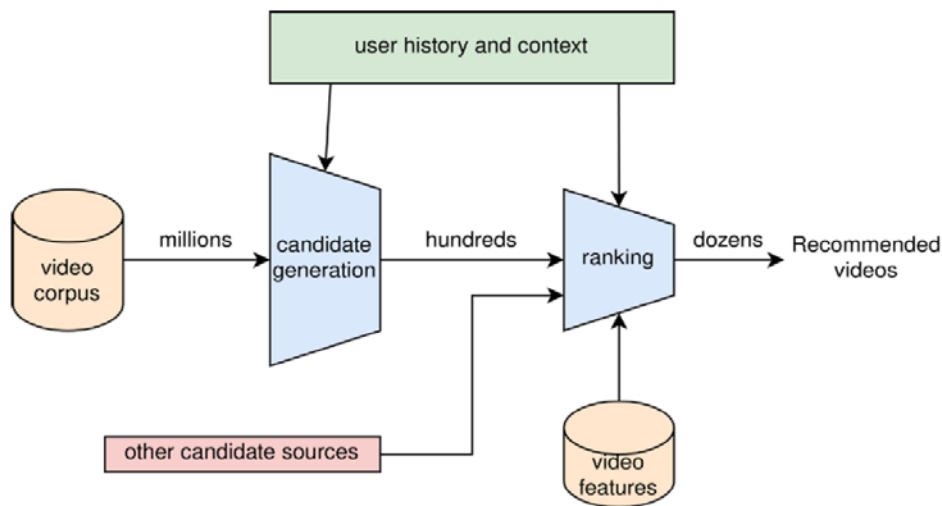
YouTube multistage workflow for recommendations [2]

Stage 1, candidate generation, generates a list of videos that the user will most likely watch. These videos in this list are not ranked per se, which means you cannot say that the first couple of videos on the list will be the best videos to recommend. However, this candidate list contains the videos that will be recommended and is much shorter than the list of all available videos, only hundreds instead of millions, making later processing and ranking much easier. The user is simplified into so-called *features* to determine which videos will be candidates for a recommendation. Features include, for example, the user's behavior, watch time, comments, or search history, but also age, gender, localization, or what similar user watched. These features can be quite detailed. For example, YouTube monitors which part of a video you watched to the number of seconds [2]. If you watched a second, this second gets a score of +1. If you skipped or did not watch a second, it gets a -1. Every second summed up gives the video a score that indicates what part of the video you liked or did not like. In terms of the recommendation algorithm, these features define a user.

But having these features is not enough. For example, it is unclear which feature is more important than another, and the weight of importance might change from user to user. For some users, the process described above video might be the best way to predict video preferences; for others, their location and age might be the best predictor. All of this is, in the model described so far, unknown. Therefore, what YouTube and other recommendation

algorithms try to do is to learn what a specific user likes, and to do that, they use a *deep neural network*. A neural network tries to mimic the human brain. It consists of lots and lots of functions, elementary computer programs connected to each other. Each function can receive input from another function or external sources and send output to another function. YouTube now gives all the features of a user to this neural network to learn what the user is interested in watching, as shown in Figure 2. The learning process of the neural network is trial and error based and very much like natural learning: if a specific combination of features worked well, this combination is favoured in the future; if it didn't work well, it is disfavoured. The user itself teaches the algorithm its preferences, and the algorithm learns.
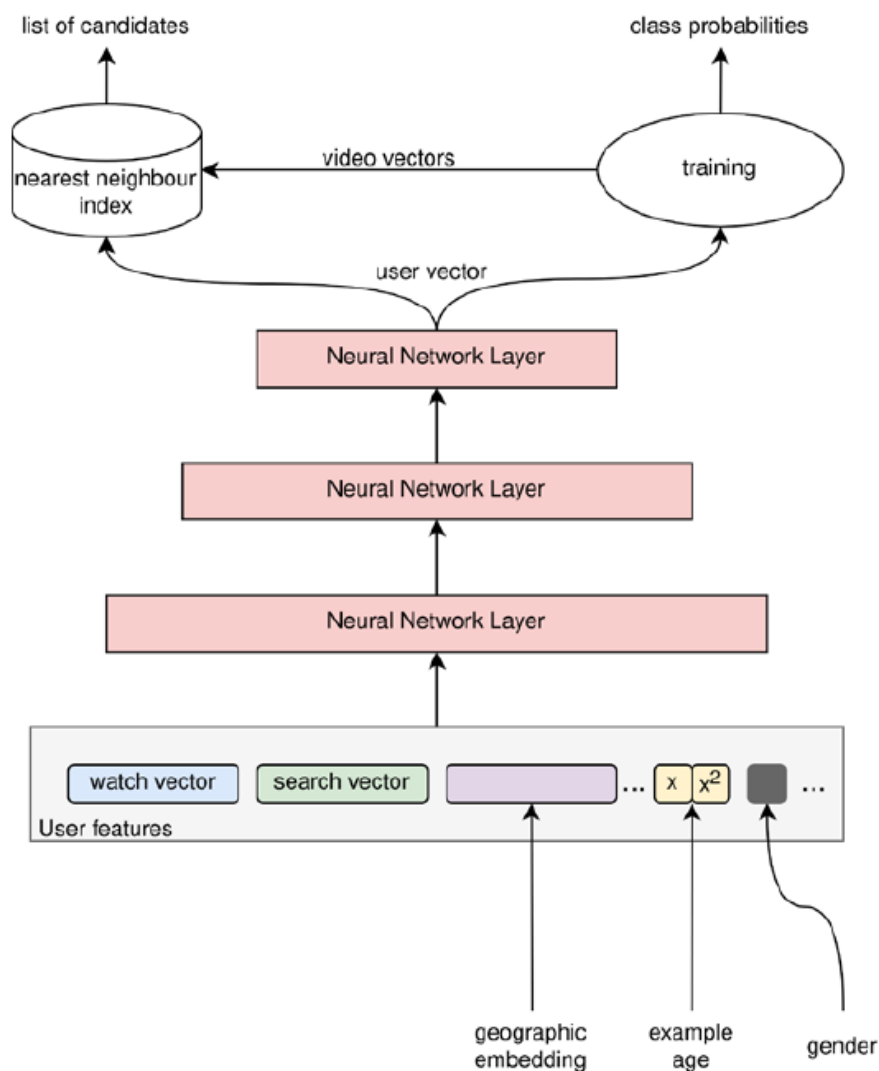

Deep neural network for candidate creation [2]

Stage 2, the ranking, now tries to whittle down the list of recommended videos from a couple of hundred to a handful of videos and tries to find out which of these videos the user will be interested in the most. The basic structure is very similar to Stage 1; however, the algorithm now considers not only user features but also video features like popularity, view numbers, length, and *engagement*. Engagement is not precisely well defined, but in general, it refers to the number of comments, likes, and subscribers of the channel, among other factors [3]. The engagement factor is why many channels ask their viewer to "like, comment and subscribe" or something similar; it helps their videos and channels to get more recommendations. The deep neural network refines the recommendations with a "trial and error approach." The learning process is the same as in Stage 1: the algorithm suggests videos and learns from the user interaction if it made good choices or not, and adjusts the weight of features to improve future recommendations.

Consequences of the recommendation algorithm

As we have seen, the YouTube recommendation algorithm learns what it has to do to make people stay on YouTube and click on their ad links. However, this narrow-minded focus on watch time and ad clicks can have unintended consequences unforeseen by its creators.
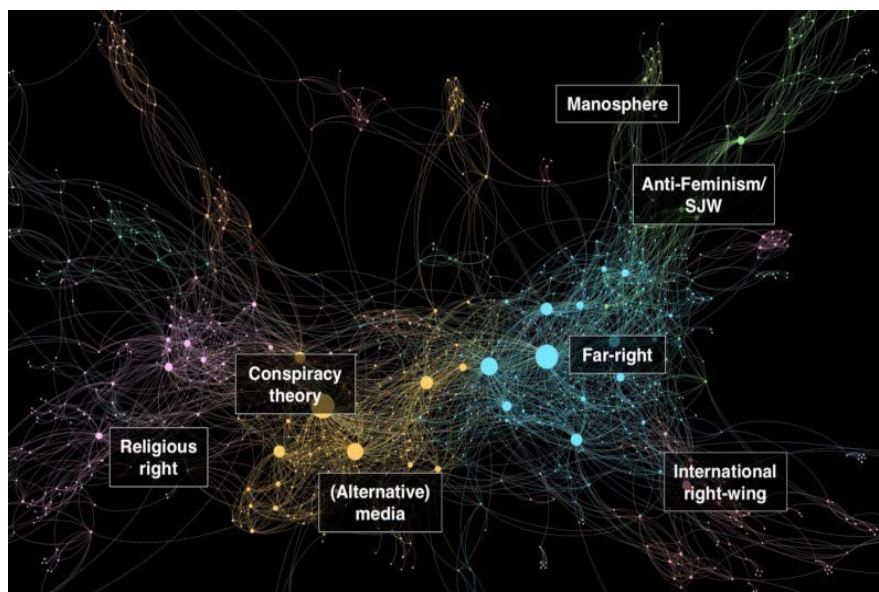
Clusters of right–wing content [4]

Researchers from the Humboldt Institute for Internet and Society (HIIG) analysed the recommendations given by YouTube for a wide selection of channels [4]–[6]. The researchers used the recommendation given by YouTube to find out what content gives what recommendation and to create a map visualizing the recommendations between channels as a network. Within this network, the researchers detected that channels with far-right, racist, conspiracy theory, alternative media, and anti-feminism content are highly clustered, as can be seen in Figure 3, and even more so compared to other groups like mainstream media or left-leaning media.

This shows that the YouTube algorithm learned that there seems to be a connection between those channels and content types: that is, people who are watching videos located only in one area of the right-wing cluster or adjacent to one of these areas are much more likely to get recommendations for other regions of the right-wing cluster, often suggestions of more radical content. This form of recommendation system also causes opposite views or correctional material to occur less likely in the recommendations of these users, therefore driving them deeper into the right-wing cluster. It has to be noted that YouTube did not set out to promote racist content. However, it detected that pushing this kind of content worked best to keep some people watching, resulting in monetary pay-outs for YouTube due to the increased amount of ads being watched.

However, it is not only the case that YouTube profits from this arrangement, but the content creators also get paid for views of their videos, creating a vicious circle: Content creators upload algorithmically optimized videos to get more recommendations. These videos often try harder to be controversial in order to increase the rate of interaction and stay within their recommendation clusters. This means that content creators are actively rewarded for being divisive and partisan because, according to the recommendation algorithm, it benefits YouTube inter terms of time spent watching videos and ad clicks.

In 2018, the Trump administration released a memo from the FBI showing that intelligence officials sought authorization for the surveillance of former Trump advisers. Shortly after the memo's release, YouTube showed among the top results for the search term "FBI memo" channels like Alex Jones, BPEarthWatch, or Styxhexenhammer666 [7], channels very much within the cluster of right-wing and conspiracy news shown in Figure 3. YouTube shows these results because its data indicates that these videos have a higher-than-average probability that

people will stay on YouTube and watch more videos. Once you have watched these videos, YouTube has learned that you like this kind of content and will start recommending similar content, which most likely means content from the same cluster of alt-right media content.

This is not only a problem for YouTube but for social media in general. On platforms like Facebook or Twitter, so-called "information bubbles" are created by similar recommendation systems [8], [9].

Can we fix it?

The question we must now answer is: How can we fix these problems of the recommendation algorithm?

In the last few years, YouTube has banned comments under videos containing children or children's content and has also changed, according to their statements, the algorithm. Furthermore, YouTube has banned multiple offending accounts and deleted videos and comments containing offensive or dangerous content. However, these measurements are only manual adjustments and act as fine-tuning for the main automated system. A fully manually moderated system or a hybrid recommendation system with manual and automated recommendations seems unlikely given the sheer amount of data uploaded to YouTube every minute.

Another promising alternative to these approaches seems to be might be found in adjusting the incentives that YouTube is working towards, which now consists of clicks and watch times and this goal towards something else. However, what that might be exactly be, and how it would really work, is unclear.

Google, YouTube's owner, has tweaked its search algorithm to favour authoritative sources to fight the spread of conspiracies and misinformation. Something similar is also possible with the YouTube recommendation algorithm. However, this then raises the problem of what counts as an authoritative source. In a political context, such a mechanism can provoke accusations of censorship [10], whether the charge is justified or not.

On the bright side, not all social media seems to be affected in the same way by such filter bubbles. Platforms like Reddit, which do not have personalized recommendations, seem to have fewer information bubbles than platforms that utilize personalized recommendations [11]. This seems to indicate that abolishing personalized recommendations seems to lessen the problem of filter bubbles.

Conclusion

In the end, it is unclear how we might fix the problem of the recommendation algorithm. It has to be noted, that YouTube is not alone in suffering from this problem: almost all Internet services and social media employ some kind of recommendation system with more or less the same underlying principles that YouTube has, and they have many of the same problems. Furthermore, YouTube does not create the problem of overlapping communities but merely exacerbates the problem surrounding them. The problem is that it actively rewards channels and creators that exploit the connections that the recommendation that the algorithm has detected. YouTube benefits from these information bubbles which result in more views, more ad clicks, and ultimately more money for YouTube. This article has shown that the recommendation algorithm, which exacerbates and feeds the problem, works in the way it does because it directly benefits these companies. Only if we can adjust the incentives of these companies and make it so that they avoid the creation of information bubbles can we solve the problem. However, this kind of change is unlikely to come from these companies alone. Public opinion needs to demand change in order to solve the problems caused by the like buttons of these tech giants.

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An interview with the Snapshot journal team

Michael Tran
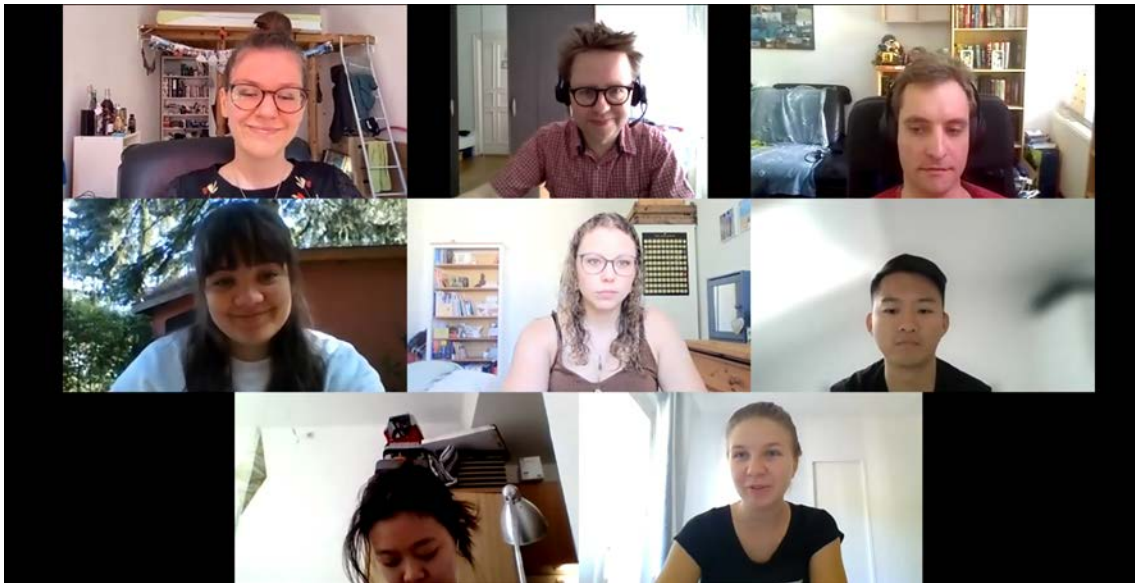
To give our readers exclusive insights into our journal team and the production process, we held an interview on Zoom. But some background first. We are all participants of the C2-level Course 'Student Journal: Learn Academic English by creating an undergraduate journal' at the HU Language Centre. Our class consists of seven students and our instructor Paul Walsh. Even though we are all part of the review and editorial process, we all have our specialised workgroups. Here is a short overview of the teams and the members before the interview.

Design & marketing: The design & marketing team were responsible for the look and feel of the journal. They gave us input on various marketing strategies and proposed several design layouts.

Members:
Lisa: She is originally from Cologne and is studying Anglistic and Hispanistic Philology. She is currently writing her Bachelor thesis.
Yejia: She is studying American Studies.

Review: The review team was responsible for reviewing submitted manuscripts and for making guidelines and policies for the review process.

Members:

Sebastian: He is currently pursuing his M.A. in Computer Science. Due to his motivation to pursue a career in academia, he wants to gain more experience in academic writing.

Editorial: The editorial team were responsible for bringing submissions through the production process, their publication, and all matters relating to the final publication of the journal. In the end we were all involved in the editorial procedure but the members assigned to the editorial team analysed the techniques and methods of a well-organized editorial process.

Members:

Maria: She is an exchange student from Russia. She is studying International Relations at her home university in Moscow. At Humboldt she is studying Social Science.
Eva K.: She is studying Psychology student and loves to write articles in English.

Blog: They are responsible for the frequent updates and content on our blog. They also collaborated with the other teams and are responsible for this interview.

Members:

Eva F.: Her major is Deaf studies and she wants to be an interpreter in the future. She likes reading and drawing, and you might have seen her work on the journal's front cover!
Michael: I am a Masters student pursuing a degree in Business Administration. To improve my English language skills, I decided to join this course. Certainly, a great decision!

The Interview

Michael Tran conducted the interview, and Maria, Lisa, Sebastian, Eva K. and occasionally Paul contributed.

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Michael: My first question is to everyone: What is your current research topic and do you like it? Maria, would you like to start?

Maria: My current research topic is the German media since technically my first and official language at the university is German. I focus on German culture and Germany in general and in particular German media information management.

Do you like it?

Maria: I do like it a lot. The current year is the year of media. It´s the fourth estate, so to say, of the internet and public diplomacy so that´s what I am focusing on. And it truly plays a great role now. It really affects people so it´s kind of up to date I would say.

Thank you very much Maria. What about you Lisa, what is your current research topic and the same question. Is it related to your article and do you like it?

Lisa: Well, my research topic right now is intersectionality which is a theory or discourse that expands on many different fields actually. It is a theory of discrimination. Because we are in the year 2021, I can't believe that there are still so many ways of discrimination that also intersect with people. That is my research topic right now. Since I haven't submitted an article, I can't really answer the second question.

Thanks Lisa. Sebastian what about you? What is your current research topic?

Sebastian: In broadest terms, it is about decentralized networks and how people use them. You got monopolistic systems like Facebook and YouTube which are from one big provider. But there are also self-organizing groups. Forums, the darknet and bitcoin are examples. And I am interested in how people use it, how they communicate with it and what happens when people communicate with it freely.

Is it also related to the article you have submitted?

Sebastian: Not directly, but sort of. My thesis or my work doesn´t specifically analyse YouTube, but it´s certainly an example of a subgroup or one of these decentralized groups forming within a large monopolistic provider. So, it is like an intersection between those two groups.

What was your motivation in writing your article? Why did you choose this topic for your article?

Sebastian: Because it was something that I was aware of, like the general topic but I hadn't had the chance to really work on it. I wanted to flash out a topic I already had in mind.

Thank you very much for your answer, Sebastian. Last, but not least Eva. Please tell us about your current research topic.

Eva K.: Normally my research topic is addiction and I really have a passion for this, but I need all my ideas for other publications so I thought like okay I don't want to risk plagiarism, so I thought I should write about mental health during Corona.

Why did you choose this topic? Are you just very interesting in it or do you have personal experience with it, if I may ask?

Eva K.: Well, I think it is all in all really important that you stay mentally healthy during lockdown and I think it is quite interesting what came up during this time. So yeah, that is why I chose this topic.

Thank you Eva. Now please tell us about your motivation to participate in the journal and your expectations from this course.

Maria: First of all, my motivation was based on the fact that I had to choose certain subjects which are also taught in my university at home and English is one of them. The student journal sounded like a really exciting and interesting thing to do and it didn't sound like an ordinary class where you have to only do grammar exercises but also something creative. In addition, I have already had some kind of experience in this area. In my home university, we have several faculty journals. My faculty for example has a German journal and journals for other languages. However, I have not really participated in an English journal yet, so it is a really interesting experience for me. This is also why I chose this course.

You have already participated in a journal in another language?

Maria: Yes! In my faculty we have a German club where people who study German can write articles, and we also created a journal.

How did you like your experience here compared to the other journal teams you have participated in?

Maria: The German one I participated in was completely different. Well, not completely but the difference is quite significant. Because in this journal we almost only had to focus on research. We also wrote articles in the journal in my home university, but not necessarily, so we have several fields. For example, we were able to write articles on politics, economics or culture. You do not necessarily need to do research work. You can also for example write an overview of traditions for example. And I think it was issued every month. That is the main difference.

Thank you Maria. I would like to ask Lisa now. What was your motivation to join the Student Journal course?

Lisa: I have been wanting to have a look into publishing anyways. That is why, when I got the email about this course, I was very excited that this could actually happen at our university. I wasn't planning to take it but then I chose to do it and it turned out really good. It is the first mini step, so to say, to the right direction when looking into publishing. And during the course, I really enjoyed our collaboration, the teams we have built and our meetings where we get together and talk about all the topics. That has been great for me.

Have you ever published before?

Lisa: Not in an academic sense, no.

Although you didn't have enough time to submit any of your articles for this years' issue, would you be interested in submitting next time?

Lisa: Yes! That is what I was thinking about. Maybe I will submit something next year.

What surprised you most about the publishing process?

Lisa: There are actually many steps between receiving the submissions and going through all the different processes with different teammates as well as the output. And I also didn't know that the review process was going to be anonymous, which I find really great because there are no stereotypes to face which we otherwise might have.

Thank you very much Lisa. What about you two, Sebastian and Eva?
Sebastian: My motivation is actually very similar to Lisa's. I wanted to experience the publishing side as well and as things are looking right now, I might stay in academia so I might also just get my feet wet early. The course description was really interesting because I wanted to do an English course where you actually learn to edit your stuff and not only hand in your submission where, at the end, it's gone forever. But rather getting your article back and working on it again is something where I don't have much experience, because most of the time you just need to hand in a one-shot submission. That is why I really wanted to work on that for myself.

Eva K.: I had two motivations. One is quite similar to what the others have already mentioned. I want to become a therapist, but I also want to work in research simultaneously.

My research group recently also handed in a paper so I thought it would be good to get an insight into what is happening behind the scenes of creating a Journal. In addition, I really like to speak English and I think you always have to practice it, otherwise you become rusty.

Thanks to both of you for the answers. My next questions are probably the most important ones: How did you like working for the journal so far? What do you think about the process from the beginning to the end and was it how you expected?

Maria: In my opinion, the process was quite productive and well structured. I didn't expect that. There were also different tasks for us to improve different skills like editorial, comparisons between different journals and videos, teaching us how to improve working on a journal. These things were very useful. I didn't had certain expectations, I only knew that it would be a course about a student journal. I didn't know that we would actually produce our own journal. I thought it was more about writing, writing, and writing. I really thought it would only be a writing course.

Lisa: As I have said before, I really liked our collaboration even though unfortunately it was easier with some people than with others. There were issues of communication sometimes but I think we have managed it well. Other than that, I actually also wasn't sure that we were publishing a journal. It was in the description, but I thought maybe that is just the overall heading to give it a theme but I am really glad that we are actually publishing a journal.

Paul: I didn't actually know at the start of the course whether we would publish a journal or not. I had the feeling that we don't have to publish one, we can just lay the foundations. But to be honest, once the course started and everyone gave their input, I thought this is a good group, why don't we just do it and try and publish a journal? That was my feeling.

Sebastian: I wasn't sure about publishing a journal. I thought it would only be an internal journal for our group. So, I am kind of excited about going live with this journal. But I kind of underestimated the workload, to be honest. There are many small steps that tend to take some time. And yes, I agree with Lisa that the communication can be improved. It is weird that sometimes communication becomes a black hole in certain groups but that is just the way it is apparently.

Are you satisfied being in the review team?

Sebastian: Yes actually. I quite like writing reviews and I don't know what that says about me, but I am always better at picking on someone else's work than picking apart my own work. So yes, I actually quite like it.

Eva K.: I also liked the course and I am really surprised that we had a good workflow. But I think this is also because Mr. Walsh (Paul) always says things like "well, let's just do it now," or "let's go on". I also really underestimated the workload. I am under the impression that I do more for this course than I should, but it is still very interesting and I like it.

Thanks to everyone! Before I continue with the fun questions, I would like to know if you would recommend this course to other students? Do you have any suggestions for the improvement of the course, the journal, the process, the structure, or anything else?
Sebastian: It took a lot of time to figure out the process as a whole thing, like reading yourself into how other journals do things and how everything works or how it is supposed to work. That took a lot of time. I think we should prepare a guidance for the next group so they have it a bit easier to get into this.

Would you recommend other students to take this course next semester?
Sebastian: Yes, of course. Yes!

Eva K.: I would also recommend this course, but I think that this course is worth five credit points rather than three. We could mention that, therefore maybe the students can imagine the workload before they enter the course.

Do you have any other suggestions for improvements?
Eva K.: Maybe we could also summarize our work in order to give an idea of what we need to do for the next group.

Maria: I would highly recommend this course, but it might also depend on what each person wants to learn. It would be nice to make a more specific description of the amount of work because that was not what I expected. Nevertheless, it is a good course that helps

students to improve in many aspects such as communication or presentation skills, the ability to host meetings in English and to write an academic article.

Lisa: I would definitely recommend this course to everyone who is interested in publishing or even in knowing what the processing behind their reviewed work is. It is great for anyone who works academically to get an impression of what is going on behind the scenes and to know what they can improve even before submitting an article to a journal. It´s a great course for everyone on either side. What would I improve? I was really looking forward to the collaboration in the teams. Unfortunately, that did not happen to me in this course. I don't know how that can be improved. Maybe it would have been better with more members in the teams but that was due to the small number of members in the course. So maybe it would have been better to have more people in the course overall and then with more people, it would have been a smaller workload for each individual person. We need to recommend this course to other people so next time there will be more participants. Those things might improve then.

Thank you for all the suggestions! Next, I would like you to give me 3 aspects of what you have learned from this course.
Maria: Well, my most recent experience is hosting a meeting. I have never done that before. Second, writing an article, which was a good experience. Lastly, collaboration and communication. It would have been better in person but since we did not have that opportunity it was still good.

Lisa: For me, the three aspects would be the brainstorming that we did at the beginning of the course, it was great to have a look into that and the videos we have watched for this topic. The second one would be the publishing process, the different steps that have to be taken. The third aspect would be the hedging - how to formulate everything in a nice way to not insult people.

Sebastian: The first thing is that your first draft is going to be crap, and that is true for everything you are going to write. I, for myself haven't decided if hedging is a good thing or not, like for me personally, for my communication style. I also learned that publishing is not one big block but many small steps.

Eva K.: I was able to practice my English, which I wanted to do. I learned what publishing is about. All the steps behind it and to work in a group, because you always do different exercises.

Thank you very much! Okay, now on to the more fun questions: Since we are doing academic research ourselves, I would like you to tell me: What is your favourite academic paper and why?
Sebastian: 'Smashing The Stacks For Fun And Profit' is a classic introduction into computer security written by one of the greatest computer security guy. It is written in a really fun way in order for you to see that the author doesn't take himself or his work too serious and this was really refreshing compared to other dry academic papers. You will have fun with it.

Who would you recommend this paper to?
Sebastian: Anyone who wants to understand why it is difficult to make computers secure.

Maria: The first thing that came to my mind was the manual of my supervisor. In one of her books she wrote about the influence of the English language on the Russian language and the media. That was very interesting to read but I'm not sure if she has the same book in English.

Eva K.: We had one paper in our lecture that showed us how passionate researchers can be, which I found really interesting. The paper was about gamma waves in the brain and that they are often affected by eye movement. So the researchers poisoned themselves so that they do not have any eye movement to measure their gamma waves. It was really interesting to see that researchers even poison themselves to prove something.

Paul: Doesn't that break the protocol?

Eva K.: You are not allowed to poison your participants. But you can poison yourself.

Sebastian: Great ethical guidelines!

Lisa: The best thing I´ve read in the last month I would say is a bit longer. It is a whole research book: 'Invisible Women'. It´s research on every single aspect of life where the world is completely designed by and for men and how women are systematically excluded by that. It´s a great piece and I recommended it to men as well and they agreed that is very unfair. It´s a great piece of research. I recommend it to everyone, so that we can actually change something.

Thank you guys for the recommendations! Now, to our last and very short question. What sentence would you use to describe Snapshot journal?

Maria: One sentence is quite short. I would say that it´s a great mixture of academic and creative writing from students of different faculties.

Sebastian: Research accessible to everyone!

Eva K.: Snapshot - get an insight into the academic life of HU students!

Michael: I like that.

Lisa: I can't come up with something better than what Eva just said. That is a great sentence, let´s just take that one.

Michael: But what comes to mind when you hear Snapshot? I mean you were part of designing it!

Lisa: It´s a collaborative piece from us as students for other students.

Paul: A headache! [Laughter]

Michael: Great sentence Lisa.

Paul: But what about you Michael? What was your motivation and your expectations for the course?
Michael: First of all, I just wanted to take an English course. I had taken one last semester which was at C1 level. This time I wanted to try a C2 level course. There weren't that many other options at the language centre. This was actually the most interesting one to me. Similar to the other classmates, I didn't expect that we would publish a whole journal but as soon as I knew about it, I was really amazed, because such a course is quite unusual for an English class. Personally, I think the best part of this class were the interactions. I really enjoyed talking and discussing with everybody and I am looking forward to everything this course would has to offer as we move towards publication