Explo**ring Micromember**ships

In search of fair and open online revenue models for creatives

waag**futurelab**
Introduction

As a creative, the ways to generate some income from your work online have considerably increased in recent years. Particularly with the advent of the COVID-19 pandemic - when the cultural industry ended up in a precarious position - creatives turned to all kinds of ways to make money from their 'content': from advertising revenue to subscriptions and from microtransactions to freemium models. Even the establishment has succumbed to the latest hype: Marina Abramović and the Rembrandt Heritage Foundation have just published a series of NFTs.

Now that more and more creatives want to present their illustrations, written work or video art to an online audience, the question is how to generate some income from that without using online platforms with questionable revenue models. After all, the online world has become a place where commercial tech giants set the rules. In this white paper, we investigate what kind of open and fair online revenue models are in line with the practice and wishes of the creative community.

This white paper is part of the 'Micromemberships' project. 'Micromemberships' is a conceptual revenue model that allows users to contribute small amounts of money on a recurring basis to a collective of creatives. We have used this model as a speculative design to discuss the problems artists encounter online and to come up with new ideas. The design helped us to explore whether Micromemberships would qualify as a potential online revenue model for creatives, but also brought some fundamental questions to the surface, i.e. online revenue models and the technological solutions that can profoundly affect the relationship between the creator and the audience.

In this white paper we discuss the problematic effects of platformisation dynamics online. Platforms have a drastic impact on the interaction between the maker and its audience: they are powerful and skim off a significant amount of money, using closed technology and collecting large amounts of (personal) data. Platforms also have a major influence on the 'content' online. The disruptive power and the centralised control leaves creatives at the whim of platforms; the design of these platforms hinders creatives from organizing together and leaves each creator to fend for themselves.

New revenue models seem to be falling into a similar pattern. Web3 is the latest fad, promoted by many crypto investors as a great promise. In this white paper, we argue that Web3 is another form of platformisation, but that the underlying ideas about decentralisation do appeal to the imagination. They generate ideas about how you could organise yourself as an artist online and how you could collaborate without (or with minimal) intervention from third parties.
Finally, we will discuss the concept of Micromemberships. We see that there is a need for cooperation, commonality and solidarity among creatives. Speculating about Micromemberships, we discovered that we were inclined to come up with all kinds of ready-made solutions that are offered as a fully functioning product, not meeting the needs of creatives. Therefore, it would be better to look at the technical 'ingredients' that could genuinely support this group, with the intended relationship between the maker, its audience and its work as a constant point of reference.
Do platforms offer suitable revenue models for creatives?

The work of artists can increasingly be found online. As a result, these creatives enter into all kinds of new relationships with their audience, including in a financial sense. The most common variant is that the public gets to see the creator’s work for free and the creator earns income through advertisements or donations. Another option is to put content behind a paywall and earn from the audience paying for it directly. Very common is it for creatives to publish their work online for free to increase their visibility online and earning their income indirectly while platforms profit directly by selling user data collected about the audience.

The emergence of transactional relationships

These payment methods influence the relationship between the maker and her audience. Platforms are able to monetise this contact in all sorts of inventive ways; with the emergence of the above-mentioned type of online revenue model, the relationship between maker and audience is increasingly becoming transactional. Think of an artist who, for example, has to keep the click rate high online.

The emergence of this type of transactional relationship in the arts is also fueling a wider debate. This concerns, for instance, the question whether this transactional relationship (expressed in numbers) should be a benchmark for measuring the success of an artist in order to be eligible for grants or subsidies. Or whether such revenue models should even serve as an alternative to current scholarships and subsidies. That is why the time is now to critically examine these online revenue models and their underlying values.

Platforms decide

Online platforms not only influence the interaction between the creator and the audience. When you enter the internet as a creative, virtually every digital space to present your work has been appropriated by a company. There’s a lot of human interaction going on, but the tone and shape is dictated by the design choices, filtering algorithms, and preferences of a handful of tech companies. As platforms, these tech companies know how to bring together and organise the supply and demand sides of a market and thereby have created an indispensable role for themselves.

Over time, by integrating all kinds of services, platforms have become serious ecosystems that dictate the rules of a particular market (which are mainly beneficial to them). Platforms dominate the market and have made you as a user structurally dependent on them (the so-called ‘vendor lock-in’). This platform dynamic has a number of characteristics.
• The platform tries to attract large numbers of users to their service, for example by making the service free. By going big, platforms benefit from network effects and minimal marginal costs.

• The platform uses closed technology. In this way it shields its business model from the outside world, in the service of shareholders and the owners of this technology. Closed technology contributes to platforms keeping their users locked into their ecosystems.

• The platform collects large amounts of data to construct a granular picture of their users. This allows it to deliver a personalised offer (and new services) leveraging user profiles that it has created. In some cases, products are also offered on the platform.

For a while, the corona crisis seemed to be fertile ground for new business models that could break the omnipotence of these large platforms. The ‘creator economy’, in which creatives monetise their online content, took off enormously. Through Twitch, Patreon and OnlyFans, creatives could offer their work through subscriptions, tips or crowdfunding, making their income streams less dependent on the tech giants. These business models also made it possible for creatives to no longer have to use tracking. Yet these platforms turn out to be more of the same. The platforms have similar service models, pursue comparable scale with their hunger for data and use closed technology.

Artistic freedom at risk

This platforming dynamic is particularly problematic for artists for whom artistic freedom is of great value. Platforms offer their services in such a way that the work and the interaction between the artist and the audience is forced into a mold. Platforms are designed to use simplified, universal parameters to categorise and qualify each user’s behavior (more on that in one of our next paragraphs, or see artist Yin Aiwen’s essays1). The architecture forces us to create profiles using interests and traits suggested by the platform. The work we post on our timeline has to fit the pre-prepared personas and hashtags. The architecture of such platforms leaves little room for previously unclassified persons, ideas or work.

In addition, the content policy is currently very arbitrary. Platforms can block content and users at their discretion. While a platform like Patreon likes to position itself as a place where creatives can build independent careers, podcast producer Anshuman Iddamsetty told the New Yorker that erotic self-portraits have faced some unexpected barriers2.

Our preliminary suspicion is that artists probably don’t even need that much to organise themselves well online and present their work; a payment service and a simple database would probably help them on their way. Complex platforms (and their perverse dynamics) may not be required for that at all. This will be discussed in more detail, but first we will delve deeper into the underlying problems of platformisation.

1 https://so-far.xyz/issue/on-platform-design-part-i-from-subject-centred-communities-to-persona-driven-platforms
Paragraph 2.

Beyond the disruptive power of platformisation. On the need for a fundamentally different perspective of online business models.

With the arrival of the internet, content has become fragmented. Where articles used to be part of a newspaper and songs part of an album, the internet has made these storage media less common. The specific properties of the storage media are lost through digitisation.

To consume this content you no longer need a book, record or film, but can rely on a single device, such as your mobile phone. The type of medium has an unmistakable influence on the content itself, which means that the experience of different forms of content is now more similar. The popularity of vinyl can be seen as a countermovement. Large, fragile and expensive, records are a far cry from consuming the fragmented Spotify content that is almost free.

And then, of course, there are the big, powerful platforms that have an undeniable influence on the way online content looks. As discussed in the first paragraph, platforms offer their services in such a way that the work and the relationship between the artist and her audience is forced into a mould: creatives must conform to platforms that use simplified, universal parameters to categorise and qualify the behaviour of each user.

Platformisation and content

The fragmentation of content continues with the arrival of large platforms, this time driven by the business models of these platforms. Platforms are the new intermediaries that determine how the content is organised and made accessible to large groups of users. The form of the content has to conform to the uniform user interface of the platform. The platform also wants to hold the attention of a large group of users; online content must therefore be easily accessible and immediately consumable and hold the user’s attention for as long as possible. The user is reduced to a one-dimensional human being who is looking for nothing more than instant gratification.

A seasoned content creator or a company that works for content creatives knows exactly what they have to produce in order to be in the spotlight for a large number of users and organises its revenue model around it. With the broadening of the concept of content, content creatives therefore not only include artists and other creatives, but also people and

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3 Internet activist John Perry Barlow once criticised this development in the foreword to a book by Corry Doctorow. Read it here https://craphound.com/content/intro-by-john-perry-barlow/
organisations who simply know the revenue model of platforms. Platforms with such business models turn the internet into an uneventful place where content starts to look more and more alike.

Platformisation not only affects the content, but also the relationships between users (or creatives). The fragmentation of content leads to a situation where creatives are more often left to take care of themselves online, where they could previously rely on a record label or publisher. Platforms facilitate an online culture in which individuals (‘entrepreneurial selfs’) compete by introducing quantifiable criteria such as likes, and provide little or no insight into the algorithms that explain that success.

One of the logical consequences is that creatives will look for new revenue models that circumvent such powerful platforms. Creative makers and also others like open-source developers want to ensure that users or admirers can reward their work directly. Users can also pay per product, for example, based on the time they spend on a website. We experimented with this last year in the ‘Microdonor’ project. We used the Coil standard to research micro-donations for journalists, open-source developers and artists.

Commodification of online goods

During that project we came across a greater, social risk aside from the question of whether such a revenue model is viable for the maker. With the rise of this so-called pay-per-use consumption on the internet, we are putting a price tag on online work that we can now see for free or very little money.⁴

This 'new form' of consumption can lead to further commodification of online (and sometimes offline) goods. This reinforces the conditional, transactional nature of the relationship between creator and user. For example, it is sometimes suggested that micropayments should be used to finance public goods. At first sight, this seems like a nice idea. But it could also lead to a scenario where all kinds of work that are currently not capitalised would be at the mercy of the whims of the market. Not only the revenue model of platforms, but also the microdonations model (as well as other similar transactional models) have an effect on the way 'content' is presented on the platform.⁵ An important difference, however, is that micro-donations do not enforce one mould, as platforms do.

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⁴ This makes sense, as we should actually pay for some services that are now free.
⁵ See also https://waag.org/en/project/microdonor/
In short, the internet has become a homogeneous place, where due to the fragmentation of 'content' and the disruptive power of platforms, creatives and users are increasingly on their own. In our search for new revenue models for creative makers, we run the risk of arriving at revenue models that indeed leave room for makers to present their work, but further promote commodification.

One such answer to the power of Big Tech is posed by ‘Web3’ developers. In the next section, we will take a closer look at Web3 and examine whether this new internet can be a possible solution for creative makers.
Paragraph 3.

Web3 as a promising perspective for creatives?

In our search for open and fair revenue models for creatives, it is difficult to ignore a development that receives a lot of attention from many crypto investors: Web3. This development is relevant to our research, as a number of applications for Web3, such as NFTs and DAOs, could be of interest to creative makers. Web3 adherents stand for the same ideal; Web3 enthusiasts also say they are looking for applications that stay away from platformisation. In this paragraph we explore the potential of these technologies and their underlying ideas. While those ideas are inspiring, Web3 is nothing more than old ideas parading as new ones, as we'll argue in this paragraph.

Web3 is the successor to Web1 and Web2. Web1 is the internet before 2005. Web1 was decentralised and consisted of a large number of independent servers. You could host such a server or set up a server yourself. Web1's internet consisted of a large amount of static web pages. These pages were mostly informative. There was limited opportunity to respond as a website visitor via an HTML form; in the first instance you could only leave a message in the 'guest book'. Web1 later also became the internet of the online forums, which ran through the same HTML form. Interaction with Web1's servers was slow.

The centralisation battle of Web2

From 2005 until the present day we have been engaging with with 'Web2'. The era of Web2 can be recognised by interactive web pages, as opposed to the static documents of Web1. Web pages are becoming dynamic and the interaction with the server is no longer just via a form, but via the programming language in the browser (Javascript). That degree of interaction between users compared to Web2 is of a different order than Web1. The amount of user generated content has taken off with the arrival of Web2. As a user you can now leave different forms of content in addition to a written response. Web2 was – compared to the static pages of its predecessor – a considerable technical step forward and made many new applications possible.

Web2, however, also has its drawbacks. When Web1 evolved into Web2, the internet went through a major turn of centralisation. Users moved to popular interactive web pages such as the Hyves and (the) Facebook. Owners of those pages monetised their users' behavior and kept it (and control of the platform) to themselves. The platforms as we know them today were born.

To illustrate the difference between Web1 and Web2, we can examine WhatsApp which was spawned by Web2. You can only communicate via WhatsApp if the recipient also downloads
Whatsapp. Otherwise, the other person will not receive your messages. In comparison, with the e-mail protocol from the Web1 era you could reach another person by e-mail, regardless of whether they use Outlook or xs4all. As a Web user, in order to reach someone, you will have to download the app that person is using – whether you like it or not. So it's hard to get around popular apps like Whatsapp, regardless of the reputation of the owner. The messages and photos you send via Whatsapp cannot or can barely be send to other platforms - if there is an alternative where you can reach the same group of people.

The old and the new Web3
And then there's Web3. Web3 has been around for years. The term was coined by Tim Berners-Lee, one of the founders of the worldwide web who called Web3 the semantic web. In addition to linked web pages, the semantic web also consists of linked data structures. Where Web1 and 2 used to be a web of pages, the semantic web makes the content of those web pages transparent and universally available. The current Web3 that we hear about today is not Berners-Lee's original Web3. The term "Web3" has since been appropriated by crypto investors and framed as the inevitable successor to Web2. When they speak of Web3, it is about an internet service that uses a 'decentralised' ledger system (blockchain) on which cryptocurrencies such as Etherium run. Web3 claims that – unlike the platforms that have become so dominant with Web2 – users are at the helm of this internet. That sounds like a pleasant idea (and we'll get to that later in this paragraph).

Packy McCormick, one of the crypto investors who popularised Web3, has defined Web3 “as the internet owned by builders and users, organised using tokens. Using exchangeable and non-exchangeable (non-fungible) 'tokens', users can appropriate pieces of the internet themselves. With non-fungible tokens (NFTs), the owner receives (non-legally enforceable) certificates of ownership over parts of the internet. This can be anything - services, art, tweets, photos, etc.

NFTs could be a way for creative makers to take control of their content. They are then not dependent on a platform (you often cannot transfer 'content' published on large platforms to other platforms). After all, online content is infinitely shareable, but these unique certificates that refer to a digital object are not. NFT holders would thus be able to undermine the power of major Web2 platforms.

In addition to NFTs, there are also DAOs, decentralised, autonomous organisations. With DAOs there is no central authority, but the founders or members determine the organisational structure, rules and agreements in so-called 'smart contracts' in which participants in that organization have, for example, digital voting rights. This may concern the distribution of money or the development of a protocol. The smart contracts execute these commands automatically after voting. The agreements are stored in a blockchain.

The Irony of Web3
Web3 sounds like an enticing perspective. On the face of it, it's an open decentralised infrastructure that anyone can participate in and that seems to stay away from the
platformisation dynamics of Web2. The end user is in charge again. But mind you, those who paint this ideal have often put their money on this crypto Web3.

The irony is that we as simple users or creative makers do not have access to such a ledger with our mobile phone or via our browser, as researcher and entrepreneur Moxie Marlinspike describes in his critical reflection on Web3. Companies therefore offer a service to enable access to that node and, on the basis of data collection, also build improved APIs and gain access to all kinds of transactions. That in turn makes you look suspiciously at the centralised platformisation dynamics of Web2.

In addition to these technical “flaws”, we could consider the phenomenon of cryptocurrencies as a form of hyper-platformisation. The currency, usable for everyone in the ‘ordinary world’, strictly regulated and supervised, has been appropriated in the world of Web3 by a number of (often already privileged) investors. This group colonises the regular payment system by persuading people to do all kinds of basic economic transactions in cryptos.

They do so because the number of coins, the shares in a currency, is finite. Cryptocurrencies generate an (artificial) scarcity, from which the designers and early investors then reap the benefits. As they generate more demand (‘you have to get in now!’) their cryptos become more and more valuable. As a late starter, you will see your savings evaporate with every jump that the volatile currency makes.

Cryptocurrencies suddenly look a lot like an unsolicited intermediary who tries to earn money from you. Web3 appears to be another attempt by investors to offer a new, centralised service, this time under the banner of “decentralisation.” Crypto investors seem to be looking for a problem that can be solved with their Web3, as critics sometimes say.

Promising ideas

It seems that Web3 and blockchain don’t seem to solve Web2’s biggest problems. But we’re not completely back to square one. The renewed attention to the importance of decentralisation certainly appeals to the imagination.

The decentralised autonomous organisations (DAOs), a non-hierarchical organisational form of Web3, consists of a group of individuals who, on the basis of their skills, contribute to online art or code, for example. That sounds interesting to creative makers who can unite in this way without a centralised entity, as it used to be a publisher or a powerful, disruptive platform that sets the rules, as seen in Web2. These types of organisations are often easily accessible: in principle anyone with the internet can contribute. An example of a DAO is the artist collective Tara Digital Collective, which has an online gallery for artists who are often

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6 [https://moxie.org/2022/01/07/web3-first-impressions.html](https://moxie.org/2022/01/07/web3-first-impressions.html)
underrepresented in the art world (and provides advice to artists who lack technical knowledge or experience other barriers).\(^7\)

Not all of the ideals behind DAOs, but also behind NFTs, sound sympathetic. As a creative maker, the idea of legally enforceable ownership (in a registry) of digital art, music, movies and books can sound appealing. The big recurring question with these kinds of innovative ideas is 'how do you make these agreements possible and keep them afloat without depending on cryptocurrencies'? This question is about mutual trust on the world wide web. And that cannot simply be answered with the flat revenue model of Web3.

Nevertheless, both concepts help us think about how open and fair revenue models should be shaped. They generate ideas about how you could organise yourself as an artist online and how you could collaborate without (or with minimal) intervention from third parties. These are fundamental questions, which must be answered before we start talking about technical 'solutions'.

\(^7\) https://www.taradigitalcollective.com/
Paragraph 4.

Creativity cannot be captured in uniform platforms. Why ready-made platforms do not offer a suitable revenue model for creative makers.

Creative makers who want to earn income from their fans via digital channels are often forced to make use of the perverse business models of Big Tech platforms. This is at the expense of the quality and diversity of online content (see paragraph 2). Platforms increase existing competition between creatives for attention and make them dependent on advertising revenue to indirectly receive financial support from their audience. Commodification prevails online: relationships are drawn into the market and expressed in terms of money. Big Tech platforms like Instagram force content creatives towards revenue models in which transactions dominate the relationship with their audience.

In the second paragraph, we concluded that many digital revenue models for creative makers encourage the commercial nature of the internet as it exists today. To build a better internet, we need to consider the questions: how do we want creatives and audiences to interact online? What does that mean for the relationship between creator and audience and the content they exchange? And what revenue models and technology can then support their choice?

Waag works on open, fair and inclusive technology; as such we use the Public Stack: a model that reveals the underlying assumptions and values of technology. The goal is to develop technology that respects human rights and has an eye for public values. The starting point is not the shareholders (private stack), but people who make their own choices about how they use technology and - together - shape society.

In search of cooperation and solidarity

Which values do we want to see more in the foreground of (online) revenue models? Instead of individualisation and competition, we are looking for solidarity and cooperation in communities. The current business models on the internet stand in the way of community. Artist Yin Aiwen evocatively describes how platforms have contributed to the development of

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8 https://publicstack.net/
an internet that revolved around ‘subject-oriented communities’ into an internet of ‘persona-driven’ platforms. In response to this individualisation, we crave communality.

We are convinced that creative makers, still in a precarious social position and often self-employed, benefit especially from cooperation and solidarity: both with their public and with other makers. This was confirmed in conversations we had with artists about digital tools they use for income and interaction with audiences. The Big Tech platforms cost them a lot of time, require a specific form of content and give little opportunity to receive direct financial support from audiences. Our exploration also revealed that this group could benefit from some additional income from their audience to complement ever-shrinking funding options.

Our desire to further explore solidarity and collaboration between creatives and their audiences stems from our earlier exploration of web monetisation: MicroDonor. We experimented with the Coil standard to enable internet users to make microdonations to journalists, open source developers and artists. One of the conclusions was that individual creatives can benefit from joining forces to serve a larger audience with their work or content. Another outcome of that exploration was the need for a more stable income stream, which one-off donations cannot guarantee.

**Micromemberahips: web monetisation for collectives**

How can a revenue model support solidarity and collectivity instead of undermining it, as platforming does? We are looking for a solution by means of a thought experiment: Micromemberships. We visualised this conceptual model in mock-ups.

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9 https://so-far.xyz/issue/on-platform-design-part-i-from-subject-centred-communities-to-persona-driven-platforms
Micromemberships are small subscriptions to collectives of creative makers, possibly linked to their (online) work that can be seen, listened to or read. ‘Micro’ because it concerns small amounts per month. ‘Membership’ because, unlike donations, a membership is based on a community of members. Members do more than just transfer money in exchange for entertainment; they are members of a group and - more or less - actively contribute to it. The concept invites two-way traffic between creatives and audience.

There are similar concepts that have found their way onto the internet in new forms of journalism. Editors such as those at De Correspondent have used membership models to create a new relationship between journalists and the public. Well-curated discussion sections changed the work of journalists; writers interacted with their audience and involved them as experts where relevant. The Correspondent worked with Professor Jay Rosen on a project to map out membership models for editorial boards: The Membership Puzzle Project.\textsuperscript{10}

\textbf{Resisting the platform trap}

But the exploration of open and fair online revenue models for creatives leads us time and again to centralised, monolithic platforms and profit maximisation for the middlemen. After discussions with various artists about Micromemberships, it turns out that with our concept we ourselves also fall into the trap of a uniform platform solution. The interface (shown above) puts profiles of very different collectives next to each other in a uniform way, presses

\textsuperscript{10} https://membershippuzzle.org/
them into the same mould and puts them in competition with each other. This concept is a one-size-fits all solution, while every collective and community needs something different.

Our initial elaboration of Micromemberships leaves little room for the messy reality of maker collectives. These are often loose communities in which people are involved to varying degrees. How can we support this technically? In our mock-up, the makers can set the minimum amount and period for which people can become members. On the pages of the collectives in our interface, you could show who is part of the collective and how the money is distributed, transparently and accessibly. But the question is how this works for a changing collective of makers.

The appeal of the blockchain
In the search for commonality and decentralised organisation of collectives, some creative makers are turning to blockchain applications such as distributed autonomous organisations (DAOs) and non fungible tokens (NFTs). It is no surprise that visual artists, designers and musicians are attracted to NFTs and DAOs. They offer the promise of decentralised networks, made up of people from all over the world. A look at the applications of DAOs and NFTs reveals that in the world of Web3, there is a promise of an intimate relationship between (digital) revenue models and the involvement of a community in the production of work, whether collaborative or not. For example, artist and composer Holly Herndon recently launched a DAO project called Holly+.\(^1\) The artist trained a machine learning algorithm on her own voice and allows an audio sample to be converted into a clone of her voice on holly.plus. Members of a DAO decide on who can use holly.plus and on the development of new tools for holly.plus.\(^2\) The income from commercial use of holly.plus is managed and distributed by the members of the DAO. The project raises issues of authorship, intellectual property and revenue sharing.

We conclude that distributed autonomous organisations are interesting concept in which communities receive and distribute resources. But we see many snags in applications of a blockchain (see paragraph 3). Despite the promise of decentralisation, we mainly see a lot of centralised services and the applications are very clouded by speculation. NFTs evolve around individual tradable property; also, the 'membership' tokens that give voting rights in DAOs can often be bought. Isn’t this emphasis on individual ownership of tokens (fungible or non-fungible) at odds with common resource management? Not to mention the ecological footprint. Where we want to keep a revenue model open and fair, there is no real place for DAO or NFT in terms of implementation in the current blockchain ecosystems despite its pursuit of decentralization.

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\(^1\) [https://holly.mirror.xyz/54ds2IOnvthjGFkokFCoa14EabytH9xjAYy1irHy94](https://holly.mirror.xyz/54ds2IOnvthjGFkokFCoa14EabytH9xjAYy1irHy94)

\(^2\) [https://holly.plus/](https://holly.plus/)
Need for diversity of possibilities and relationships

There are so many artists with so many practices, yet there is a limited palette of online revenue models. For practices and collectives with diverse forms of work, there is no ‘one size fits all’. We need to break out of the rigid platform restrictions.

After our exploration, we argue that there is a need for a kind of Memberships Guide for Micromemberships; this guide aims to assemble technical elements into a MicroMembership model that fits well with the practice of makers, with specific attention to the ethical considerations in the tech stack. Not only do we want to open the black box of web monetisation, we also want the tech stack to comply with the principles of the Public Stack, such as safeguarding our fundamental rights and public values.

Building blocks for Public Stack Micromemberships

What does it take to make long-term donations to collectives of creatives? That comes down to a number of technical building blocks and the social relationships they need to support. If we open the bonnet of online revenue models, we see a combination of, for example, a customer management system to maintain lists of members, transaction handling between different account holders or accounts in different currencies, a registration module to register membership and communication channels such as chat or email to maintain contact with the audience/members. Perhaps maker collectives also need software to support them in making decisions as a collective or the distribution of resources. Think of solutions such as Cygnet, developed by Black Swan Trust, which uses quadratic voting to determine which project proposals will receive joint funding.

For all these building blocks of Micromemberships, creatives have to make choices about how they want to interact with each other and their audiences. The elements mentioned above make many different MicroMembership constructions possible: from a Patreon-like website to a crowdfund button in your browser to a chat group with a joint bank account.

The choices are about the type of relationship you want to put in the foreground. The ready-made packages offered by Patreon, for example, deprive creatives of choices about the type of relationship they want to have with their audience. Once creatives have determined what kind of relationships they want to foreground, the task of making ethical decisions about the technical building blocks to support the relationship follows.

If the solution is to comply with the principles of the Public Stack, it is important to select technical building blocks that make use of open standards and open-source development and that have an eye for public values such as transparency, privacy and user autonomy.

Guides to the technical construction of membership structures have been published before, particularly for news editors. See for example The Public Media Stack: a guide to help news editors make ethical decisions about the software they use for their practice with a chapter

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13 https://membershipguide.org/
14 https://trust.support/feed/black-swan
on 'engagement & monetisation', initiated by Matt Locke.\textsuperscript{15} Or see The Membership Guide with a section on the Tech Stack, initiated by Professor Jay Rosen and De Correspondent.\textsuperscript{16} These are fine initiatives, but the technical building blocks proposed in them leave much to be desired in order to comply with the principles of the Public Stack. For example, these guides mention as a plus that in Patreon, the pricing model is clear. But that pricing model means the middleman skims five to 12 per cent of transactions, even as the platform is used by more than 200,000 crowdfunding creatives. We also want to get rid of the problematic tracking by services like Google Analytics, which is mentioned in the Membership Guide as an option for gaining insights about users.

An overview of technical building blocks that are more compliant with principles of the Public Stack can be found in the Public Spaces kitchen.\textsuperscript{17} But there is a need for a comprehensive guide, with good options for putting together a Micromemberships stack.

We are still missing parts for the Public Stack Micromemberships guide. One question is about the protocol for transaction processing. Which protocol allows creatives and the public to do small periodic transactions among themselves (peer-to-peer), without skimming off a percentage by an intermediary party? And one that is also available to an informal collective of makers, without a business account and without hiring an intermediary such as Adyen? The Interledger Foundation is working on Rafiki, a standard for exchanging currency between wallets all over the world.\textsuperscript{18} The infrastructure consists of nodes that do the conversion of the currencies. The nodes do not belong to the developers of the currencies; any party can become a node. It is an interesting attempt to enable decentralised transactions between organisations and individuals. Unfortunately, we see that the transaction handlers are all crypto-based platforms (such as Ripple). So this solution does not yet meet our needs.

Another question is the informality of collectives versus the formality of transactions. A possible answer can be found in Open Collective.\textsuperscript{19} Open Collective offers a toolbox for informal grassroots communities and open-source development communities to raise funding, meet legal requirements for receiving grants or manage money. Collectives can receive donations or grants through fiscal hosts and distribute them within the collective without having to be a formal organisation themselves. The host manages the donations that come in, and takes care of accounting and tax matters. If the hosts charge a fee from the collectives they support, then Open Collective receives part of that money. Open Collective shows how formal organisations can play a role in supporting informal communities that they work with or care about.

\begin{itemize}
\item \textsuperscript{15} https://publicmediastack.com/workflow-stage/intro-to-report/, https://publicmediastack.com/workflow-stage/audience-engagement-monetization-products/
\item \textsuperscript{16} https://membershipguide.org/handbook/planning-your-membership-move/building-our-membership-tech-stack, https://membershippuzzle.org/about
\item \textsuperscript{17} https://spoekeuken.publicspaces.net/tools
\item \textsuperscript{18} https://interledger.org/developer-tools/tools/
\item \textsuperscript{19} https://opencollective.com/
\end{itemize}
The preceding paragraphs are some initial thoughts on a Micromemberships guide as the guide is not yet complete. The guide also will never be an answer to all the needs of creative content makers who want to break away from Big Tech: a tech stack for Micromemberships offers an answer to visibility and findability online. It also remains a challenge to connect all the necessary technical building blocks without too much technical knowledge.
Conclusion

We began with a search for open and honest online revenue models. Away from Big Tech, away from platformisation, focused on collaboration. The search led us to the concept of Micromemberships: long-term crowdfunding of small amounts to a loose collective of makers. The diversity of making practices and communities made us realise that there is no one-size-fits-all solution.

We have become accustomed to being offered ready-made partial solutions or a fully functioning product. This has advantages (ease of use), but also disadvantages. It is not transparent how the technology exactly works, who benefits from it and whose data is up for grabs. Only the shareholders of these platforms have these insights. It also forces creatives of online content all into a uniform mould and into competition with each other. These are not the relationships we would like to see supported by technology.

A guide to possible tech stack elements would offer a solution. We have named technical building blocks to shape Micromemberships. The next step is to find software modules that comply with the principles of the Public Stack: open, fair and inclusive. Then, the most important thing remains: to design a MicroMembership model that matches the wishes of a collective and the relationships that they want to establish with each other and their audience. We propose to move away from uniformity and bend technology back to our will. With room for diversity and messiness, we offer a genuine solutions to the problems of platformisation.

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