Alienated Digital Identities

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ABSTRACT

Digital identities allow friends to like us, governments to analyze us and media platforms to monetize us. As the internet has evolved, so has the creation, storage and access to digital identities. This paper presents the notion that modern digital identities are no longer natural extensions of the user, but alienated entities that exist outside of their control. To justify this claim, this research analyses the externalized storage of digital identities and how this lessens the user's inherent rights and access to them. It introduces concepts such as "derivative" digital identities and how the over-valuation of company stocks contributes to this alienation. The goal of the research is to justify the need for users to reclaim the ownership, storage, and access to their digital identities. This paper proposes a technical guideline and discusses the benefits and challenges of developing such a system.

Keywords

Digital-Identities, Alienation, Decentralization, Digital-Self

1.TECHNICAL ALIENATION

1.1. Creation

With the advancement of data tracking and mining technologies, ever more parts of the creation of digital identities are delegated to software systems. As users browse the internet, they are constantly leaving behind traces of their digital selves. Platforms collect these "digital-prints" and analyzed them to reveal and make accessible user attributes that were once invisible. [1]

1.2. Storage

The externalized storage of digital identities on remote servers have broken the intrinsic bond that a user has with their digital identity, removing their inherent right to this data, allowing for the creation of artificial permanence which enables digital identities to transcend their owner's existence.

1.3. Access

Due to the externalized storage of digital identities, users' connection to them have become mediated not only by interfaces and APIs [2], but private enterprises. However, derived from the physical user, digital identities are therefore an intrinsic part of their

being. This can be similarly compared with the genetic bond that an offspring has to their parents which is different than the social connection with friends. The current mode of access between the user and their digital identity is a diminishment of this natural connection.

2.VALUE ALIENATION

In today's world, digital identities are the foundation for many industries, from advertising to transportation. The sections below peels back the value make-up of digital identities, revealing their alienation and what this means for the user.

2.1. Inheritance

The base layer of a digital identity's value is inherited from the user as it primarily functions as a unique identifier for this physical being.

2.2. Attention

As users spend more time and energy interacting through their digital identities, value is generated through attention both actively as a form of intentional interaction, and passively as a function of machines and mining processes. Described by Bellar, "looking has been posited as labour by capital." [3]

2.3. Commodity

As a user's attention becomes ever more valuable, the interests of platforms and advertisers become bound to users' digital identities. For instance, Facebook's existence depends on its access to these identities as a means of providing advertisers with data. Advertisers, in turn, rely on this data to promote their products. As explained by Marx, "a commodity is an external object, a thing which through its qualities satisfies human needs of whatever kind," [4] which adeptly describes the current state of digital identities.

2.4. Derivatives

In 2007, platforms like Facebook gave third-party developers access to their users' digital identities. Now, developers can directly build "derivative profiles" on top of these datasets. As a result, a single digital identity may now simultaneously serve the needs of a dozen different applications, turning platforms like Facebook into traffickers of digital identities.

2.5. Stocks

The value creation driven by market mechanics is added to digital identities as companies go public. In the case of Facebook, this is measured through its stock price, which is based on advertising income and user growth, both of which are the results of the platform's ability to commodify users' digital identity. Therefore, Facebook's market cap is the accumulative value of its users' digital identities. However, if Facebook's stock is to continue growing for the next 10 years at 25% annually, the price of a single

digital identity on Facebook could be valued at almost 10 times what it is today, at close to $2,000USD [5]. Additionally, as users are likely to own multiple digital identities on various platforms, it is possible for the aggregate value of a user's digital identities will be worth more than the user's value on the labor market. The binary representation of human beings will one day be valued more by society than humans themselves. How much of this value has flowed back to benefit the user?

3. RECLAMATION

The inability for users to own and store their digital identities is one of the root causes of its alienation. To solve this problem the power and rights of access to centralized databases must be redistributed back to users. All data related to a user's digital identity such as text, images, and metadata should be stored on and accessed from a decentralized file system like IPFS [6] or Bigchaindb [7], which are maintained by the community that it serves.

3.1. Technical Requirements

To successfully reclaim a user's digital identity, this new system must satisfy all of the below requirements:

Ownership	Data must be in the complete control of user.
Architecture	Data must NOT be stored in privately owned centralized storage.
Access	The system must provide granular access rights similar to traditional databases.
Performance	It must not be any less performant then centralized storage.
Compatibility	It must be compatible with existing protocols like HTTP.
Open Source	All code and products must be openly accessible to public audits.

3.2. Benefits

3.1.1. Choices

Currently, users are locked into platforms because they are dependent on them to access their digital identities. Additionally, there is no way to import existing digital identities from one platform to another easily. Users must rebuild their entire digital self from scratch. By owning their digital identities, switching platforms would become seamless, thus breaking their dependence to platforms.

3.1.2. Competition

The difficulties in competing with established social networks have stagnated innovation in the field. A new entrant, apart from having to attract a large user base, must also develop the technical infrastructure to manage and securely store users' digital identities. With the use of decentralized file system, platforms can just "plug into" the already existing network and function without the need to host their own database. As a result, this will lower the barrier to entry thus, drive innovation within the social media space.

3.4   Challenges

1.   Infrastructure

Although the underlying storage systems exist, much of the necessary infrastructures that make current digital interactions possible is still absent in IPFS or Bigchaindb. Essential tools such as ORMs and Access Control Lists still need to be built.

2.   Legal

With the alteration of the storage of digital identities, will require the signing of new legal contracts between users and platforms. These documents need to detail the access and usage rights such that the terms and conditions focus more on the protection of the user's power and rights to their data.

3.   Definition

The definition of what is public and private still lives in a gray zone. As described by Bratton, " [users] cannot possibly claim that anything and everything any sensor senses about him/herself is really a part of his/her expanded sovereign person." [8]

4.CONCLUSION

Over the past decades, digital identities have evolved from the crude user operated identifiers to complex social commodities owned by media conglomerates. The inability for users to store their digital identities and the lack of understating for its sources of value have made them alienated from their users, revising their role in society. Within the next decades, alienated digital identities will have a tremendous impact on users both psychologically and physically. The goal of this paper is to provide an alternate perspective on our relation to digital identities and justify their reclamation, in the hope of making the ownership of our future more equitable.

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