

Demoscene Dark Matter – The culture that makes people stay in the Scene

Dr. Andre Kudra

AoC Initiative, Germany | Echtzeit – Digitale Kultur, Switzerland
<http://demoscene-the-art-of-coding.net> | <https://www.echtzeitkultur.org>
e-mail: andre@kudra.de



Dr. Andre “kudrix” Kudra

Abstract

The *Demoscene*, often only referred to as the *Scene*, is rooted in the home computer revolution. Over decades, it shows how skills and creativity can be stimulated and implemented in a digital cultural practice. With producing *Demos* as digital artistic pieces, many of its techniques and mindsets became core influences of digital change, still vibrant today. People attach strong identity to affiliation to the *Demoscene*, which is one of the reasons it is seen as culture. There is a tremendous amount of identity, history, emotion, and community.

At first, this paper dives into what defines the *Demoscene* as a digital culture. To understand its uniqueness, it expands on how culture can be digital. In its main part, the paper goes deep into “the Dark Matter”, i.e., why people join the *Demoscene* and stay. What drives *Demosceners* to tirelessly invest their creativity and time in the *Scene*? Which role does *trust* play to remain involved? Which common values enable trust? And how do these defining factors make the *Demoscene* culture differentiate itself? The paper concludes with a brief critical review and suggested further research.

1. Motivation and Context

The author is part of *Art of Coding* [1], abbreviated as *AoC*, an initiative to get the *Demoscene* recognized as first digital culture of UNESCO intangible world cultural heritages. The paper utilizes and captures discussions that arose in the *AoC* Discord channel [2] in April 2021, right at the end of Revision 2021 [3] and after the *Demoscene* was accepted as UNESCO cultural heritage in Germany in March [4]. It leverages these insights from committed *Demosceners*. It embeds them in a proven and practically applied construct from organizational theory.

For answering the questions posed in this paper, a curious, investigative mindset is warranted, inviting everybody to think about it.

2. Demoscene as Digital Culture

At first, it needs to be understood what digital culture is and what makes the Demoscene unique as such a culture. In general, UNESCO states “that culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs” [5]. Whereas it is not always possible to measure such beliefs and values directly, it is possible to measure associated behaviours and practices. As such, the UNESCO Framework for Cultural Statistics defines culture through the identification and measurement of the behaviours and practices resulting from the beliefs and values of a society or a social group [6].

So how can culture be digital? The discussions on the AoC community platform are clear and revealing: The term “digital culture” is often a simplification of another one, i.e., “works of digital culture”. If it is limited to just the works, then the definition becomes quite apparent: Works of digital culture are the ones which do not exist without a digital medium, contrary to works of “traditional” culture, which can be stored, executed, or performed without usage of digital hardware and software. Works are only products of a culture, not the culture itself, as culture is about people. Hence referring to digital works only is too limited, and a more elaborate definition is

warranted, with adding people to the equation. Culture encompasses creating, exhibiting, and consuming works of people pertaining to it. This allows deriving a definition for digital culture which Sceners are comfortable with:

The works of a digital culture combined with the people who create these works, and those who enjoy them.

Taking this definition into account, why is the Demoscene unique as a digital culture? The Demoscene is a born-digital culture, it is a significant part of the world’s greater cultural heritage. Being related, linked, or blended with other digital cultures, it has some distinctive factors: *Internet culture* or *cyberculture* required networking, *e-sports* means consuming a software product, not creative expression. Industries like *game development* and *movie production* are creativity-driven for-profit endeavours but career homes for Demosceners. Close ties exist with *retro computing* which commemorates and preserves obsolete machinery, as retro platforms frequently serve as Demoscene competition categories. [7] Further to these: Why is the Demoscene worth preserving under UNESCO recognition? In the successful German UNESCO application, the authors focussed on the practices unique to the Demoscene, from coming together, competition, community, self-limitation as motivational driver (like restriction to old technical platforms or limitations in the size of the program code, known as “size coding”), to hacking attitudes, and the fact that demos are only premiered once and usually in person with the audience voting on them. [8] Since its inception, the Demoscene is a best practice example in the sense of the above digital culture definition.



Figure 1: Evoke 2019 Demoparty in Cologne, an atmospheric digital culture experience (Photo by Tobias Kopka)

3. Dark Matter as a Construct

Before analysing the Demoscene as specific case, a theoretical underpinning of the “dark matter” construct is required. Its key constituent is the fact that organizational behaviour cannot solely be explained by its applied management frameworks, types of leaders, or meeting, organizational and goal structures. The observable behaviour of people can almost never be explained by these alone. There must be more to it than these visible and measurable elements of an organization. Potentially it is an even bigger influential factor which cannot be met by the eye.

Organizational theorists hence leverage the “dark matter” phenomenon from astrophysics and translate it into an organizational theory. Dark matter is a hypothetical form of matter, implied by e.g. gravitational effects which cannot be explained by current gravitation theories unless more matter is present than can be seen [9]. Hence a strong analogy can be built between these two domains. Dark matter in organizations has been identified and analysed by various researchers. Common denominator is “positive reinforcement”, which means that the person who shows the desired behaviour is rewarded with something that (s)he likes to receive. [10] [11]

4. Dark Matter of the Scene

Due to the nature of the Demoscene, applying the organizational concept of dark matter is not so straightforward. The Demoscene is *not* an organization. The Demoscene is characterized by *chaordic* [12] organizational style, an interplay of chaotic creativity and (mostly) orderly managed events with good record-keeping of productions. It is only loosely organized with its Demogroups and organizer committees for its multitude of real-life get-togethers aka Demoparties. Those are fundamental for its existence. Chaordic also means cooperation and competition in simultaneity. The Demoscene is friendly-competitive to demonstrate (hence the term “Demo”) and advance its members’ skills, along with strong, border-free community spirit.

Uncovering why people join the Demoscene and stay means diving deep into *Demoscene Dark Matter*. As no distinct organization is available to study, cultural practices are to be investigated instead.

At first, why are Demosceners doing what they do? What instigates, enables, or drives their creative expression? Some sort of a pain, or otherwise a shortage, is identified as an important enabler of creativity. AoC discussion participants are on common grounds that to some extent an “alienation feeling” separates many Sceners from other people or even society in general. This motivates them to create things, to express themselves, with any type of aesthetical means, or usually as such an affinity is present, with technical devices. Not only to express their urge but to deal with the feeling, to cope with it, to be able to bear it. For some, it may even come close to a “self-treatment”. Creative expression may be a solo task for themselves at first.



Figure 2: Sceners getting together and creating their digital works at Evoke 2014 Demoparty (Photo by Tobias Kopka)

When they unite with likeminded others, a fundament is set on which positive reinforcement can occur. Encountering the Scene can be a revelation for such people. It is much more than a meeting point for people sharing the same

alienation feeling and (technical) creative interest. By its very nature, it is a hotbed of mutual positive reinforcement: Sceners join forces to create artistic works out of their personal computers, with a hard and never-ending push of technological limits. Music, graphics and programmed animations or videos, all are put together with special care and curation, in single, short pieces. They strive for frequently meeting at Demoparties anywhere, their community events, for showcasing their mutual creativity, in a sport-like contest, which honours works perceived as top, judged by fellow Demosceners.



Figure 3: Sceners watching Demos at Assembly 2019 Demoparty in Helsinki (Photo by Tobias Kopka)

Tangibly, the Scene provides many ways in which community spirit with positive reinforcement can be experienced:

Likeminded people. Liaising with Sceners with the same urge, attitudes, and beliefs as one’s owns just naturally happens.

Integration. Sceners interact with one another in a friendly but direct manner.

Elation. Sceners are both producing and consuming (in their shared view) over-

whelming and stunning creations, which is an uplifting experience.

Strive for excellence. Sceners appreciate perfection, as do the surrounding others. Being masterful in a discipline, and being aware of it, is immensely rewarding. (This often pertains to “mastering” a certain device, which is a positive reinforcement induced by the thing itself.)

Competitive spirit. Sceners love to enter a comparison of skills in a friendly but direct competition.

Feedback. Sceners receive instant reply. It is always a thrill for them at first to not really know what others think of their work. They are overjoyed when their work is praised by the community. They know they can improve if not.

Impact. Sceners know they are contributing to *their* community, keeping it alive, having an impact, making a difference. Every piece of contributed work counts and is recognized.

Teamwork. Sceners can collaborate with others who have a matching attitude and liking for a specific technology or platform. They combine skills to achieve and produce something they could not have done alone. The Demoscene continuously proves how it withstands and copes with enormous dialectical pressures, from present and future.

Globality. Sceners are aware of being embedded in a global phenomenon which does not stop at country borders and is impaired by jurisdictional hassle.

Safety. Sceners feel safe in *their* Scene. They *trust* its culture. They find a safety zone, refuge or even second family in the Demoscene.

When digesting these cultural practices and points of experiences, it becomes evident that the Sceners themselves are the instruments of positive reinforcement in all their activities in the Scene, for one another. It is the other *people* that make them stick to it, not the celebration of technology or their Demos, which are inevitably their important cultural works. The Demoscene unveils the natural way in which positive reinforcement unfolds in an *organism*, not having to be imposed as in a human-made arrangement like an *organization*. This is the *Demoscene's Dark Matter*, which may even be the key differentiator of this vibrant digital culture.



Figure 4: Sceners happily dancing together at Revision 2019 Demoparty in Saarbrücken (Photo by Tobias Kopka)

5. Conclusion

Potentially the Demoscene culture can never be ultimately defined but applying the Dark Matter construct has proven useful to explain some of its cohesive traits and characteristics. Obviously, a richer and deeper investigation is always warranted, even though already a lot of sociology research has been created and presented on the Demoscene. The *chaordic* features and manifestations of

the Scene seem highly interesting and worth exploring in more detail.

One key purpose of this article, i.e., capturing the gist of the discussion in the AoC context, was achieved. Which produces another interesting research question, not specifically limited to the Demoscene: How can discussions of subject matter experts from basically all domains entertained in online community forums which are “hidden” or at least not easily accessible be preserved and potentially even used by researchers?

An area of further work jointly identified by contributing Sceners is formulating a “Demoscene Elevator Pitch”. This might not be a highly scientific endeavour, but it will be extremely helpful for the community to “sell the Demoscene to a random person so they instantly get it and want to know more”.

Acknowledgements

A big thank-you and major recognition go to fellow Demoscener Ronny Pries who inspired me most to write this paper and basically coined its title.

Without the rich, deep, and highly insightful exchange of ideas in the AoC Discord channel among Sceners on 5/6 April 2021 related to the topic featured in this paper, it would not exist. Greetings to all those involved, via their Discord handles, by order of appearance: ronny^frhlnstlgo, melkor / dedux, DiskDoctor, Argasek, Luisa/Poo-Brain^Rabenaue, the_JWPHTER88, Daigoro, goto80, AmigaX86. Thank you for letting me take part and for inspiring me.

Lastly, I dedicate this paper to my friend Thomas “Mugg” Daden, the hands-on

always-happy-to-help driving force of the retro computing community. Mugg quietly passed away on 13 October 2021 and is sadly missed far beyond the Rhine-Main area, in which he was most active. Exactly three years earlier on 13 October 2018, he held the opening event for his beloved *Digital Retro Park* [13] which he co-founded and -managed with other local enthusiasts. Mugg, for you we will not only *Emulate the Past* [14], we will ensure the legacy of us digital pioneers is preserved for generations to come.

References

- [1] Art of Coding (2021). Demoscene – The Art of Coding: Digital culture as part of the Intangible Cultural Heritage of Humanity. Access date 8 November 2021. <http://demoscene-the-art-of-coding.net>.
- [2] Art of Coding (2021). Community Platform Discord. Access date 8 November 2021. <https://discord.gg/ntASGGN>.
- [3] Revision (2021). Together – Revision 2021 Demoparty. Access date 8 November 2021. <https://2021.revision-party.net>.
- [4] Kopka, Tobias (2021). Demoscene accepted as UNESCO cultural heritage in Germany. Publication date 20 March 2021. Access date 8 November 2021. <http://demoscene-the-art-of-coding.net/2021/03/20/demoscene-accepted-as-unesco-cultural-heritage-in-germany>.
- [5] UNESCO (2002). UNESCO Universal Declaration on Cultural Diversity. Records of the General Conference, 31st Session, Paris, 15 October to 3 November 2001, Volume 1: Resolutions. 61-64.

[6] UNESCO (2012). Measuring Cultural Participation. 2009 UNESCO Framework for Cultural Statistics Handbook No. 2.

[7] Kudra, Andre (2020). AoC | Art of Coding – The Demoscene as Intangible World Cultural Heritage. Bridges 2020 Conference Proceedings. 479-480.

[8] Art of Coding (2019). German UNESCO application of Art of Coding. English translation by Shana Marinitzsch. http://demoscene-the-art-of-coding.net/wp-content/uploads/2020/01/AoC_German_application_Oct2019_pub.pdf.

[9] NASA (2021). Dark Energy, Dark Matter. Access date 8 November 2021. <https://science.nasa.gov/astrophysics/focus-areas/what-is-dark-energy>.

[10] Daniels, Aubrey C. (2016). Bringing Out the Best in People – How to Apply the Astonishing Power of Positive Reinforcement. 3rd Edition. New York: McGraw-Hill Education.

[11] Willuda, Stefan (2018). Reinforced Behavior – the Dark Matter of Organizational Success. Access date 8 November 2021. <https://stefan-willuda.medium.com/reinforced-behavior-the-dark-matter-of-organizational-success-30fc922bc517>.

[12] Hock, Dee W. (1999). Birth of the Chaordic Age. 1st Edition. San Francisco: Berrett-Koehler Publishers.

[13] Digital Retro Park e.V. (2021). Digital Retro Park – Museum für digitale Kultur. Access date 8 November 2021. <https://www.digitalretropark.net>.

[14] SkyMarshall Arts (2012). Emulate the Past. The Gamer Generation. Track 3. Release date 5 November 2012. Access date 8 November 2021. <https://soundcloud.com/hafskjold/emulate-the-past>.