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DON QUIXOTE, THE ISLAND AND THE GOLDEN AGE SOME EXPERIENCES AND DIMENSIONS OF WORKING "FREE" AND "OPEN SOURCE"

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First, I would like to thank Luis Jure, our host. For all he did to invite us to this conference. And for giving me the opportunity to talk about a subject which I come upon again and again: What are we actually doing when we use and develop "open source" or "free" software? Which traditions are we continuing?

1 A story

Después que don Quijote hubo bien satisfecho su estómago, tomó un puño de bellotas en la mano, y, mirándolas atentamente, soltó la voz a semejantes razones:

— Dichosa edad y siglos dichosos aquéllos a quien los antiguos pusieron nombre de dorados, y no porque en ellos el oro, que en esta nuestra edad de hierro tanto se estima, se alcanzase en aquella venturosa sin fatiga alguna, sino porque entonces los que en ella vivían ignoraban estas dos palabras de tuyo y mío. Eran en aquella santa edad todas las cosas comunes; a nadie le era necesario, para alcanzar su ordinario sustento, tomar otro trabajo que alzar la mano y alcanzarle de las robustas encinas, que liberalmente les estaban convidando con su dulce y sazonado fruto. Las claras fuentes y corrientes ríos, en magnífica abundancia, sabrosas y transparentes aguas les ofrecían. En las quiebras de las peñas y en lo hueco de los árboles formaban su república las solícitas y discretas abejas, ofreciendo a cualquiera mano, sin interés alguno, la fértil cosecha de su dulcísimo trabajo."

When Don Quixote had quite appeased his appetite he took up a handful of the acorns, and contemplating them attentively delivered himself somewhat in this fashion: "Happy the age, happy the time, to which the ancients gave the name of golden, not because in that fortunate age the gold so coveted in this our iron one was gained without toil, but because they that lived in it knew not the two words "mine" and "thine"! In that blessed age all things were in common; to win the daily food no labour was required of any save to stretch forth his hand and gather it from the sturdy oaks that stood generously inviting him with their sweet ripe fruit. The clear streams and running brooks yielded their savoury limpid waters in noble abundance. The busy and sagacious bees fixed their republic in the clefts of the rocks and hollows of the trees, offering without usance the plenteous produce of their fragrant toil to every hand." "

The appetite must be appeased. Then we can talk about a social state of happiness which we seem to remember, in myths like the jewish-christian-muslim paradise or the golden age of Ovid. A state in which no labour was required to win the daily food. Everything is there, we only have to grasp for it. Clear streams and open sources, and look to the bees and their republic, their organisation of society: fragrant toil

It is no politician nor an economist speaking here. It is a fool and a swarmer. It is someone with concept of reality, that clashes with reality, and although the reality beats him in these clashes, he continues. He continues to see, in the most simple things, something else than common sense does. Wind mills are giants for him, the barber's basin is Mambrin's helmet for him, and galley slaves are innocent for him. He is missing some of the boundaries which are substantial for functioning. The boundary between phantasy and reality is non-existent to him, even if he looses some teeth when reality hits him. The boundary between the job, in which you must be reasonable and predictable, and the leisure time, in which you are allowed to be a dreamer, a player, a fanatic or even some kind of addict; in which you are invited to read books as journey into another world, for a time, for you regeneration — this boundary is non-existent for him, too. He walks in books as if they were reality, and he walks in the reality as if it were a book. And with him walks Sancho Panza, the representative of the body in all these Phantasms, who decided to join Don Quixote not at least because an island was promised to him:

"Thou must know, friend Sancho Panza, that it was a practice very much in vogue with the knights-errant of old to make their squires governors of the islands or kingdoms they won, and I am determined that there shall be no failure on my part in so liberal a custom; on the contrary, I mean to improve upon it."

2 The Island

There really was no failure on his part in so liberal a custom. He really improved upon it. We are here. We are here on an island. We are here on an island which without any doubt was given to Sancho Panza by Don Quixote.

Open Source is an island. What are you using — Ableton Live? Max Msp? What, Csound? It works?

When I once worked on a piece for live electronics with an instrumentalist, she asked me about the software I was using. I told her that this is a program which is not very well known. I told her that it was once created at the MIT, and is now developed by a group of people, without money. I told her, it is about sharing and collaborating.

And this works?!? — she asked.

We are on an island which is not even marked on most maps. So it worked? At least on our island? Has the *golden age* come again? Are we perhaps the bees, fulfilling *fragrant toil to every hand* in their particular *republic*?

3 Bees and Humans

Bees are animals which developed around one hundred million years ago together with the flowering plants. They populate the earth in about twenty thousand species. The whole population can hardly be estimated. Even one species, the western honey bee, has only in Germany a population of about fifty billion individuals.

Humans are animals which separated around five million years ago from the other apes. First they developed in different species, until around fifty thousand years ago the *Homo sapiens* expanded. It is the only species left today, populating the earth in around eight billion individuals.

Humans are characterised by the excessive usage of tools. They used tools to hunt down their prey and kill the competing predators. About ten thousand years ago they started to systematically shape the earth. They changed plants and animals according to their needs and lived in quite diverse forms of social organisation. They used tools to build houses, to catch animals, to cultivate the earth, or to kill other humans.

The computer is a particular tool. We can call it an empty tool which is being filled by programming, by writing on cells of memory. Because of this procedure, in adding devices for input and output (sensors and motors, microphones and loud speakers), the computer can become every tool possible. By this, it replaces the former devices. With a keyboard as input device it replaces the typewriter. With a digital-to-analog converter and a jack for an audio cable, it replaces the grammophone. With a programming language like Csound it replaces oscillators, resonators, filters, sound generators.

It is because of this global ability, which is a substantial property of the computer, that global questions arise in its field and usage. The most complex tool of human history is at also so empty, that simple and fundamental questions come up again. One of these questions is: How do we live together, how do we work together? And how did we come onto this island?

4 How it began

In my case it was like this. I learned Csound in the mid nineties, while I studied composition. First I understood nothing. "p4" — what the hell is this?!? But I was, perhaps because of my preceding studies of literature, quite fascinated about this strange language, about these words which pretended to have a meaning: soundin, endin, oscil and filnam. Yes, there was a manual, kind of dictionary, even already called "canonical", I think — but how can I understand a description which itself operates with unknown words? What is initialization, what is performance — or is this opcode to be used in a theatre performance? No, all opcodes are described like this. So: goto skipinit ...

But I cannot help it, how cool it is to play back a sound from the hard disk by two lines of code. And it is for free, how convenient. And so I learned, with interruptions and centimeter for centimeter, Csound, and

used it, again and again, and in the long run more and more, for my compositions. In particular for what formerly has been called tape music: composed pieces with a fixed duration, with and without instruments. I wrote a score by hand on paper, and then transferring this score into the Csound score was quite straightforward. This is the strength of Csound, my teachers told us; if you want to make live electronics, you must use Max. in

Max indeed looked nicer and was faster to learn, but the longer I used Csound and the better I understood it, the more I liked it. First it was a pain, but then learning it was really fun. And then I subscribed to the mailing list, and participated, in reading, as spectator, and learned a lot from the others, the ones who were writing. And I liked the tone of this mailing list; I had been also on other lists, for a shorter time, but here I stayed. I think it has to do with what we read at the first day of every month, thanks to our admin:

This is the monthly reminder. The Csound list welcomes posts from people with ALL levels of skill, from the newest newbie to the most serious hacker or established composer. The subject and tenor of the posts varies dramatically depending on what the current concerns are. Newbies are sometimes afraid to post because they read discussions about the incomprehensible deep inner workings, and all they want to know is how to get a sound to come out of their computer, or advice on how to get mobile sounds. Rest assured that your question will be answered quickly, and (usually) in a helpful and courteous manner. We've all been there. Please post. vii

5 The difference

But I still was only a spectator. I learned a lot about subjects I did not know before, and I got to know many people, because of their Emails, how they were reacting, how they were talking, and what they said. Meanwhile I taught, and in particular I liked to teach Csound, and on one day in a one-to-one lesson with a student I came upon the creation of impulses and impulse trains. There is the *mpulse* opcode in Csound, and that was the description in the manual:

ares mpulse kamp, kfreq [, ioffset]

Meanwhile I knew that *ares* had nothing to do with the greek god of war. Moreover it signifies a result (*res*) which appears as an audio signal (*a...*). And of course, *kamp* is the amplitude of the impulses, and *kfreq* determines how frequently the impulses appear.

My student and I read the syntax and followed the explanations, and as we wanted to get an impulse train, we changed the *kfreq* input parameter. If we start with kfreq=1, that's once per second. And if we want to get more impulses per second, we had to increase: kfreq=2, kfreq=3, and so on. *Claro*.

But it was wrong. We increased the number called *kfreq*, but the impulse train became slower rather than faster. With a smaller number, the train became faster.

A mistake! An error in the manual!

My student laughed and said: Now I know that I will never use Csound. I did not laugh and thought: Should I tell them?

"Them", "they" — these were the big remote men who made the program and wrote the manual. Perhaps I was wrong and they laughed at me. Or — not really preferable — they ignored me. No one would answer.

It was so hard! I know that there are some who do not know these problems. They may laugh about these anxieties. But I also know, not at least because of my students, that these feelings, the feelings I had before my first post, are typical for many others.

Perhaps it was at last kind of a moral instance which made the difference.

I thought: I am using Csound since years, without doing anything. Should I not give something back to the project?

Or I was not willing to fall under this judgement of Don Quixote:

"Those are giants; and if thou art afraid, away with thee out of this and betake thyself to prayer."viii

Me? Prayer? So don't be afraid, or be afraid but write anyway. I wrote, read and corrected several times, finally pushed the "send" button, and — the mail was being read, and Andrés Cabrera, at this time responsible for the manual, replied and said: true, and: I will change the description.

Wow!

It worked.

6 Software.Communism

So was this the entrance to paradise? Did Don Quixote lead me back to the *Golden Age*, where *the words* "thine" and "mine" are not known, and all things are in common? Have I arrived in software communism? Let's hear what Eric Steven Raymond has to say about the question whether sharing in open source communities has something to do with communism.

<"It makes me really angry when people do this [= tell these things]", Raymond says.>ix

Perhaps it was lucky that the Free Software movement originated in the USA. Because of this, we can omit discussing words like communism. We can omit discussions about Marx who described communism as a state in which the associated producers regulate their interchange with nature in a rational way, so that the true realm of freedom can begin in which human energy is an end in itself. We can omit discussions about Thomas Morus in whose *Utopia* is written: Where everything is measured by the value of money, there can never be justice nor happiness. We can omit discussing Saint Luke in whose *Acts of the Apostels* is written about the first christians: And all who shared the faith owned everything in common. They sold their goods and possessions and distributed the proceeds among themselves according to what each one needed. They shared their food gladly and generously. **ii

What a great trick, not to speak about common property, but speak about freedom! What time it saves! And the more, if you do not only speak about freedom, but take it!

But — what is freedom?

7 Two times four freedoms

For the framework, or so to say the constitution of our island republic, we know what freedom means. We know the four freedoms: to execute the program, to read the source code, to modify the source code, and to distribute the program. Again, this is *claro*, and we all know that in a mood of good humour this constitution has been written down in the language of the surrounding world, the world of property, in the form of licences, in which they endure since decades.

But these four freedoms only establish the framework. Instead, I would like to speak about four other freedoms which I experience in our community:

The freedom to come and to leave.

The freedom to act.

The freedom to collaborate.

The freedom to share.

I would like to describe in which ways I experienced these freedoms, and I will try to explore why they are important for me, and how they relate to the surrounding sea.

8 Freedom: Come and Leave

We come and we leave. None of us has signed a contract to be a member of the Csound community for one, two or five years. We simply come, we go for something, and at any time we leave. We work on the code, on documentation, on examples, on frontends. Some stay for a short time, some for a long time, some for a very long time. It is all about a good mixture. If there are too many changes, there is a lack of constancy. If there are too few changes, there is a lack of renewal.

There is something like "the one" entrance: the first email, the first bug report, the first contribution to code or examples. But for most of us there are movements of coming and leaving on a smaller time scale. There are periods in which we work intensively for and with Csound, and there are periods in which we do nothing, or in other words: we left for a time. The project is open for it.

I cannot find this radical and fundamental freedom in other contexts in which we work together. In particular our main job, to win the daily food, as Don Quixote calls it — in this job we sign a contract in which we obligate ourselves to certain duties. Someone can expect this and that from us, and in exchange we receive a salary for it.

We do not have these duties on our island, and because of this absence another responsibility arises. No one forces me to, but I on my own will decide to take over this or that, for a time, starting right now. Menno wanted to see a working and musically interesting example for each opcode — so he did. Many of us wanted to see an up-to-date online textbook — so we started the Csound Floss Manual. xiii Andreś, Rory

and Steven wanted to see modern frontends in different designs — so they created CsoundQt, Cabbage and Blue

It is a personal responsibility, for a time.

9 Freedom: Work something out

To be there for a time means: do something. Freedom in this project is the freedom to do something. Many things are waiting to be done, or we want something new to put into effect. Be it testing, be it to publish some examples, be it writing new opcodes — freedom here is mainly the freedom to care about a piece of this island. We are a community of doers, and our product is something which again lets us do something: lets us make our music.

What is now the relationship of this "do-ocracy" to the structures which we usually experience in our societies? I think it is a contrast to the fact that we experience our life mostly as consumers and spectators, with the strange satisfaction of first to be ruled and then to complain about it.

As consumers we put the money which we received by our contract to work on the table again and exchange it for a product which has been made by others. As there was an expectation on us, we now expect this product to work for us. This is its duty.

Most of us are also consuming politics. We let others act for us, we "give our vote", and then, let's look what they, them whom we gave our votes, do. And this habit is not only valid in "big politics", it is valid in many "little politics". I once was elected as president of a society, a german "Verein". I saw my main function in coordinating the activities of the members. But later I realized that most of the members had a very different view on it. They said: Hey we elected you! Now do! You are our government now!

I think it is mainly because of my experiences in the Csound community that I really feel good in communities where anyone can do anything, and feel annoyed in communities in which the members mainly want to observe and consume. Not sure I should blame Csound for it ...

10 Freedom: Work together

As we planned the Floss Manual, we were a group of about half a dozen people. We agreed that such a textbook is long overdue. A textbook in which the knowledge of us and others comes together rather than everyone working on his own isolated tutorial here and there. So we agreed about an outline, we distributed the chapters to be written amongst us, and we scheduled a date at which the chapters should be finished. Writing was done online in a kind of Wiki so that each of us could see, comment and correct what everyone else did. It should be motivating to see what the colleagues already had written, shouldn't it?

No. It did not work. At the scheduled date perhaps a quarter of the text wo be written was finished. Much too little to publish.

So: let it die, or look for another way. In this case the way was that Alex, Iain and I came together for a week to write as much as we could. Over the years I experienced several times this search for the appropriate way of collaboration as something which decides about things to become or not to become. Again in the Floss Manual this procedure is a paradigm:

- 1. I write to the mailing list: Hey guys, it would be great if someone could write (update) this chapter. Please let me know.
 - Reaction: Zero.
- 2. I write to someone personally: Could you think about writing (updating) this chapter?

 Reaction: All of them answer. More than half of them say: yes, my pleasure (and indeed do it); the others mostly say: I'd love to but I cannot find the time.

We are a community of individualists. We are here because we don't like any company to tell us what we have to use. And we are here in complete freedom. No one can force us to anything, also not by any moral pressure.

There is a lot of energy coming from this motivation. We are glad to see things moving: if the website is in a better shape or if newcomer can install our software easier. So we have to look for ways in which the energy can flow and things can evolve.

I learned a lot on this subject in the Csound Community, also for other contexts. I have learned to look more and as creative as possible for ways which make things happen, instead of only trying one way and then complain or attack if it does not work.

11 Freedom: Share

Collaboration has to do with diversity. It is stronger and deeper if we come together as being different, and then do something in which each of us is special and which he enjoys most. You can write good opcodes but perhaps no so good articles. You can write good examples but are perhaps unable to spread them. You don't like to test code but you like to bring people together.

It might be one of the problems of sharing that we think of it too much as something which is homogeneous and which can then be partitioned like a cake. For eight persons we must divide it in eight parts so that everyone has something, so that no one gets pain from eating too much and the others don't remain hungry. This way of sharing, for being a part of the whole, is only the fundament for a deeper meaning of sharing. To *get* this part is only the condition to *give* something to the others, and what we give is essentially different and uncomparable.

If we are able to create the conditions for this meaning of sharing, for sharing this diversity and uncomparableness, based on absolute freedom — then I think our project will stay vivid and diverse. This way of sharing is not organised by licenses and morality but by attention and friendliness. And this is not at all something private.

12 Why

So — if this all is that nice and satisfying: why then don't more people come to us, or to other Open Source projects, and the common property increases, and the golden age, finally, arises, for all?

"Tell me," Don Quixote said, "seest thou not yonder knight coming towards us on a dappled grey steed, who has upon his head a helmet of gold?"

"What I see and make out," answered Sancho, "is only a man on a grey ass like my own, who has something that shines on his head."xiv

An ass is not a dappled steed. It is not only by nature much smaller and slower, also it is stubborn, so that you can need a lot of time to move it just one step.

And a brass basin is no golden helmet. It can be used for a rasor, but it cannot be used to make money from it. And you will not be put in honor if you carry it on your head, but everyone will laugh at you.

If we got it right from clever Sancho, the answer to the why question is twofold: it is about time, and it is about money. And both are bigger subjects, because again they point to how our societies are built.

13 Time

Let us put aside the billion dollars of advertisement^{xv} which sells apples for pears and do not even picture our island on their maps. Then, I think, the main reason for most people not to use and develop Open Source is the lack of time. You simply have to put a lot of time into it.

How could it be different? We are no longer customers but part of a community. There is none who optimises a product in a way that it is most easy to use for anyone. Rather than clicking three times, you have to read some different, often outdated descriptions which you find by browsing the net. Some is not working, at least not immediately, and actually it is always the same: We are not a company, we are a community. If you ask, you will get a reply — usually in a helpful and courteous manner. But this means that we actually always have to "enter": join the mailing list, post in a forum. This means: we need time to spend with this. And this time we do not have, at least not as surplus, as abundance. Not as "free" time.

I am probably not the only one who spent years to get my audio hardware to run under Linux in a reliable way. And looking at my students who first have to learn what an audio device does, what they should observe when they select one, what are the different connections and options etc — I really understand that they are happy to use their Mac and happy only to install a driver, and that's it. We all actually want technical devices to work functionally while steeling as little time as possible.

And we all, as parts of the development, we all know how much more could be done, and how much we do not accomplish because we don't have enough time. Csound development could be a full time job, for more than one person. And the documentation. Iain and me have not updated the Csound Floss Manual

since two years, although it would be necessary, to cover so many new features. And each of us who does anything in this project knows how much more *fragrant toil* waits, kindly asking to be done ...

But why don't we have time for it? What does this tell about our life? Doesn't it mean that an important and substantial question (how do I want to live) is being answered by time pressure?

What does it tell us that important decisions happen like this?

14 Money

None of us earns a cent with the work we are doing here. Someone calculated that in the Debian project some billions of dollars are kept regarding the work of the contributors.*vi And if we calculated what John, Michael, Victor, Steven and many others have put as highly qualified work into our project, we would also come to considerable amounts.

The good thing is: In this way these are gifts. We make gifts to each others. No one can expect something, no one will be payed for something. So if I do anything, I do it because I like to do it, or because I took the responsibility, and I give it to all as a gift. This is a special quality of this community: to know and to appreciate gifts. It would change if we got money for someone to be payed for Csound development. I am not against it, of course we would have more development, but something would change. The one in charge would look on his working hours. He would have to look not to work too much, even if it is fun. And we would have expectations, and if he were not good at work, we would think how we could fire him. It would not any more be a gift.

But: It is said that Buddha lived from gifts, from begging, every day, going out with his begging bowl, but we cannot pay our apartments with gifts, nor the bread, nor the computer, and also not the journey to Montevideo, to join the Csound conference. So we have other jobs, more or less closely related to Csound, but no job where we are payed for Csound development. And this is the second reason why we are here on an island. Not only that we have little time because we are busy with other things, above all we have to earn our money out of other activities. This means that from the economical point of view, Csound is a hobby. For none of us it is, but in the frame of our economic order it is a hobby.

And again: What does this fact tell us about the society in which we live? By which mechanisms is a salary generated? Mechanisms with a rationale in their own logic, but what if this rationale leads to the fact that less than one hundred humans possess the same as the poorer half (so four billion) of all humans?** Why aren't there mechanisms which distributes money for socially useful work? What does this fact tell about our society?

15 The Galley

Don Quixote raised his eyes and saw coming along the road he was following some dozen men on foot strung together by the neck, like beads, on a great iron chain, and all with manacles on their hands. With them there came also two men on horseback and two on foot; those on horseback with wheel-lock muskets, those on foot with javelins and swords, and as soon as Sancho saw them he said:

"That is a chain of galley slaves, on the way to the galleys by force of the king's orders."

"How by force?" asked Don Quixote; "is it possible that the king uses force against anyone?" viii

Is it possible that the king uses force against anyone — should we laugh or cry at this question? Laughing: As it obviously is against all reality. Kings, emperors, leaders, presidents were and still are as a matter of fact those who started wars in the past and do it today. Obviously they are the ones who restrict, exile or kill those of "their" people who do not agree. At least they *could*, because they have the *power*.

Crying: As there is also another meaning of 'king'. For this meaning, a king is the symbol of the society. His body is a distinguished, untouchable body representing the body of the society as a whole. In this meaning it is indeed impossible *that the king uses force against anyone*, unless the society is built on violence. Quite similar, the *Dao De Jing*, written two and a half thousand years ago in China, states:

The best of all rulers is but a shadowy presence to his subjects.

Next comes the ruler they love and praise;

Next comes one they fear;

Next comes one with whom they take liberties.xix

The best of all rulers does not act. He does not use force against anyone. He is the empty hidden center around which all things rotate. He ist there for not to be there.

Does the naive sentence from the knight of the sad countenance perhaps reminds us of something we have forgotten for a long time? Perhaps he gave us our island to remind us of some simple things. That there should be a king which is not able to use force against anyone. That there is work without money which can be fragrant toil. That it is fun to create things together. That true freedom has a lot to do with the absence of property.

And Sancho Panza must be there for the sake of our stomachs.

- i German version at http://joachimheintz.de/category/texte.html
- ii Miguel de Cervantes Saavedra, El ingenioso hidalgo don Quijote de la Mancha, I, 11 (text after https://gutenberg.org/ebooks/2000)
- iii Don Quixote by Miguel de Cervantes, Translated by John Ormsby, I, 11 (text after https://gutenberg.org/ebooks/5921)
- iv Don Quixote I, 7
- v http://csound.github.io/ https://en.wikipedia.org/wiki/Csound
- vi https://cycling74.com/ https://en.wikipedia.org/wiki/Max (software)
- vii Csound mailin list 1 september 2017: https://listserv.heanet.ie/cgi-bin/wa?A2=ind1709&L=CSOUND&P=4392 viii DQ I, 8
- ix Movie "Revolution OS" 1:03:51 (https://www.youtube.com/watch?v=jw8K460vx1c)
- x "Freedom in this field can only consist in socialised man, the associated producers, rationally regulating their interchange with Nature, bringing it under their common control, instead of being ruled by it as by the blind forces of Nature; and achieving this with the least expenditure of energy and under conditions most favourable to, and worthy of, their human nature. But it nonetheless still remains a realm of necessity. Beyond it begins that development of human energy which is an end in itself, the true realm of freedom, which, however, can blossom forth only with this realm of necessity as its basis." Karl Marx, Capital Vol. III, Ch. 48 (text after: https://www.marxists.org/archive/marx/works/1894-c3/ch48.htm)
- xi "Quamquam profecto, mi More (ut ea vere dicam, quae meus animus fert) mihi videtur, ubicumque privatae sunt possessiones, ubi omnes omnia pecuniis metiuntur, ibi vix unquam posse fieri, ut cum re publica aut iuste agatur aut prospere, nisi vel ibi sentias agi iuste, ubi optima quaeque perveniunt ad pessimos, vel ibi feliciter, ubi omnia dividuntur in paucissimos nec illos habitos undecumque commode ceteris vero plane miseris." Thomas Morus, Utopia, page 64-65 of the original edition (http://ds.ub.uni-bielefeld.de/viewer/image/2006024/3/)
 "But as a matter of fact, my dear More, to tell you what I really think, wherever you have private property, and money is the measure of all things, it is hardly ever possible for a commonwealth to be just or prosperous unless you think justice can exist where all the best things are held by the worst citizens, or suppose happiness can be found where the good things of life are divided among very few, where even those few are always uneasy, and where the rest are utterly wretched." More: Utopia, Ed. George M. Logan et. al., Cambridge 1995, p. 101
- xii Acts 2, 44-46
- xiii FLOSS = Free (Libre) Open Source Software. Floss Manuals = a platform founded by Adam Hyde to write and publish free manuals for free software. Csound Floss Manual = the textbook in this collection about the Csound audio programming language: http://write.flossmanuals.net/csound/preface/
- xiv DQ, I, 21
- xv Apple and Samsung spent already 2013 more than 700 millions of Dollars only for smartphone advertisement. https://www.mactechnews.de/news/article/Apples-Smartphone-Werbebudget-stieg-2013-fast-auf-Samsung-Niveau-158162.html oder http://www.kantarmedia.com/us/newsroom/km-inthenews/2018-campaign-ad-spend-will-be-in-the-billions
- xvi https://en.wikipedia.org/wiki/Debian#Cost_of_development
- xvii "The bottom half of the world's population owns the same as the richest 85 people in the world." Working for the few, Political capture and economic inequality, Oxfam 2014, p. 2 http://www.oxfam.org/sites/www.oxfam.org/files/bp-working-for-few-political-capture-economic-inequality-200114-summ-en.pdf

xviiiDQ I, 22

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