

How to avoid the end of the world



A practical guide

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Premise

We live in a terrible situation: people die because of war, of hunger, and inequalities are coming back forcefully, just like abuses and depersonalization.

Identity of human being is seriously at risk, from abuses, difficulties, pressures, expectations, psychological problems.

Society sets standards to respect and those who find themselves failing, those who are not able to overcome it feel refused, useless, often they lose the sight of themselves, their will falters and in the end, many times they let go, sometimes suiciding.

On the contrary, those who conform, adapt, manage to integrate, lose themselves, reduce their personality, annihilate themselves.

In addition to the problems that concern humanity, there are the really serious environmental problems caused by mankind, which sometimes are ignored, but are perhaps the greatest danger to human survival.

In this text various themes are dealt with and a solution is proposed, primarily political and social to the various problems presented.

My hope is that these tips can be followed and considered valid, and that the world can continue in a certain direction, in a future in which people are truly equal, in a future in which some fundamental rights are guaranteed, in a future projected to the stars.

Personally I firmly believe that these points here exposed, this method, can be adopted in my country, in Italy and I intend to work so that the situation in which we find ourselves will change.

People really need a better world, people really need hope.

On the new social model

- **Stage 0**
 - Research
 - Research in the fields of informatics, robotics, engineering, economy, social, industry, must be pushed to the maximum, in a convinced and decisive manner, as this is the basis of all the functioning of this system and the subsequent phases.
 - Establishment of training courses concerning the most disparate professions
 - These will serve both to give individuals the opportunity to choose which career they want follow, and to make technological growth in the various sectors more efficient and faster.
 - Energetic self-sufficiency of the country, possibly through renewable sources.
 - This step is necessary both for the future realization of robots and for the functioning of these ones, nevertheless the energetic self-sufficiency will greatly reduce the dependence on other nations.
 - Everyone shall own a home and will be able to have health and nutrition, at least at the basic level.
 - To do this in addition to a change in the management of monetary resources in order to guarantee food to anyone it will be necessary the temporary expropriation of housing.
 - Temporarily will be taken, starting from those who have several houses, some rooms, which will be donated to the homeless, the needy.
 - The houses will belong to their legitimate owners, the situation will be temporary, until new houses or public housing are ready.
 - The owners of the houses can draw up a list of preferences, starting from the first house, inviolable, up to the least important, which will be the first to be temporarily taken away.
 - Nourishment in the initial stages will be very simple and reduced, but sufficient, while health, given the above mentioned research will quickly become better.

- This is the most delicate phase because it is the first, it is the one in which it must be avoided in any way that something goes wrong, especially because the population may not forgive mistakes. Everything else depends on the success of this passage.
- Through Stage 0 the foundations are laid for the whole apparatus to be supported later: the work force, the research, the reduction and then the disappearance of the flows of money, the fight against the problems, the recognition of multiple rights, the abatement of inequalities.
- If we want to give a slightly superficial, but effective, interpretation of Stage 0, we could say that this defines the objectives to be achieved, establishes certain concepts in the minds of individuals, certain ideas to be reached and on which to base oneself.

- **Stage 1**

- Robotization

- Through the robotization of many jobs it is guaranteed:

1. That the needs of the country will be satisfied in terms of food resources.

- The productivity of a specialized robot (or an assembly line) guarantees a higher quantity of resources collected, processed and distributed.

- In addition, the risks at work are reduced, since fewer people will undertake a manual career..

- However, it is necessary to progress in the field of research, since in many areas only prototypes have been developed and mass production has not yet started.

- The sectors of greater and more immediate diffusion will be the construction, agricultural and distribution sectors.

2. That the choice of a job is therefore dictated only by desire and propensity and no longer by obligations of various kinds

- Since survival is guaranteed to every individual, everyone will have the opportunity to choose how to act and how to relate to society. In other words it will be the attitude inside each one to dictate his choices, not external problems (for the most part)

- Assurance on the rights of dignity

- The fundamental rights that will be guaranteed by this system are:

- Right to food and health

- Right to a house

- It will also be given the freedom to each individual to choose what to do with their own lives and the dignity of the people will be preserved.

- Honor system

- Functioning

- There is no more circulating money, the money belongs only to the state and is used only for the foreign market.

- The system of honor establishes bands, from 0 to 9, which establish the properties that individuals can possess.

- The various jobs are inserted by default in a band, but the merits, successes, awards can make people climb the bands.
- The criteria for structuring the subdivision are essentially two:
 - Possibility to replace workers with machines, with robots.
 - An easily replaceable worker does not play a too much important role, because if he would come to miss, a robot would be ready to replace it. For this he will have lower quality goods, which if we want, as a concept is similar to the low salary of an unskilled worker. What makes the difference lies in the possibility of social climbing, in the ease of access to it.
 - Practical utility for the Society
 - The concept is similar and dual to the one described above: at this stage it is necessary to reward and stimulate those professions that in one way or another help the process to be completed. An artist, a historian, a journalist, also if important and commendable they do not give an immediate practical response, do not produce a tangible good or a primary service.
 - Take care: with this I am not discriminating these professions, which I consider subjectively to be among the highest to which man can aspire, I'm just giving a criterion that unfortunately must be followed for reasons of necessity.

■ Bands

0. Band 0 (initially closed) Unemployed

1. Band 1: Shopkeepers-Athletes-Public Services

- Retailers will mainly have the role of distributing products to citizens, which is easily automated.
- The Sportsmen have a remarkable ability to climb the bands being able to quickly get successes in their fields. Furthermore, the job itself is not very useful for the progress of society.
 - An excellence in sport, like an Olympic champion, a Formula One driver, a first dancer, a Serie A player, etc... will belong to a much higher band than common athletes, like players in the city team or drivers of minor competitions.
- Generic public services carry on a relationship of intermediaries with the public, similar to retailers and will be more and more easily automated in the future.
 - For example, the management of information is increasingly automated and self-managed through informatic portals, which, once they are designed, need only maintenance, but not that much specialised personnel.

2. Band 2: Artists-Fishermen-Farmers-Breeders-Researchers-Workers

- Artists, although similar to sportsmen, require slightly more mental preparation, and through their work they can spread culture, which is certainly good for society. In the same way of sportsmen there are considerable margins for improvement.
 - If not for the "cultural" role attributed to the artistic figures I would have placed sportsmen on the same level, but in terms of profits to society, in addition to simple entertainment there is something more.
 - An orchestra conductor, an acclaimed painter, a songwriter or a world-renowned actor or a showman with high ratings will belong to a higher class than an actor limited to city performances, a writer who has not (still) succeeded, to a local TV presenter.

- Fishermen, Farmers and Breeders are slightly more difficult to replace with robots than previously listed workers, and also require high physical and psychological effort.
 - There are ethical issues concerning the killing of animals for the needs of the (human) species. Whether these are resolved or not is not considered in this discussion, but in the case in which the breeding and slaughter of animals continue to be relevant for the feeding of mankind, it is necessary to give some value to these jobs.

It is burdensome for the psyche to continually and mechanically kill living beings, especially if there is not even an active hunt behind it, but it is simply a butchery job.

In this case it is advisable to automate everything as much as possible and, if possible, to invest in the production of synthetic meat.

Different case for breeding for the purpose of derived products, such as dairy products or wool.

In the case of fishing (not fish farming) it is necessary to recognize the long periods of absence necessary for deep-sea fishing, as well as the risks involved in this activity for smaller boats.
- Researchers are probably one of the fundamental pillars of the whole system, however the role of the Researcher is easily accessible once a course of study is completed. That said, the chances of improvement are noticeably high.
 - Given the assumptions it is reasonable to assume that the number of researchers increases significantly. Therefore it makes sense to make a generic Researcher start from a low band, because any minimum success would lead to raise it.
- The Workers are another of the supports to the whole system, but they are replaceable by machines with sufficient simplicity.

- A skilled worker will certainly belong to a higher class, but a common factory worker does not have this weight for society, since in 90% of cases a robot will do his job more effectively.
 - In any case it is necessary to take into account the risks at work and the fact that the employment is at the foundation of scientific / industrial progress.
 - In addition, those involved in the maintenance of robots (if they were not other robots) should be kept in high regard.
- 3. Band 3: Employees in the Social-Pharmaceutical Sector-
Nurses-Biologists-Chemists-Archaeologists-Restorers
 - Employees in the social sphere play the fundamental role of dealing with all the people in difficulty, for the most disparate reasons, the role of managing groups of people, interpersonal exchanges, situations that are difficult from a human point of view.
 - The attention to the inner problems of individuals, as well as the support to the personalities in difficulty and the struggle for any problems and rights must be held in high esteem, since they are fundamental for the interchange between the bands and the various professions.
 - The production of medicines is part of the medical system and as such has a very high place, both for the studies behind it, both for the utility, and for the difficulty in replacing the human mind with a robot.
 - A similar reasoning can be given to the position of nurse, which is certainly important in all medical settings and difficult to replace.
 - Biologists and chemists perform well-targeted research and development tasks. Although the figure is similar to that of the Researcher, a Biologist or State Chemist carries out a well-directed work, aimed at a purpose and serves to speed up progress.
 - Archaeologists and Restorers perform a manual work that requires a huge study, has a high physical and

psychological stress and is considerably difficult to replace.

4. Band 4: Teachers-Law Enforcement-Engineers-Architects-Politicians-Psychologists

- Education at all levels is the strongest base of the whole system. The role of the master, professor, teacher is practically sacred, as well as requiring, depending on the specific case, a study that is decidedly onerous and a high level of competence in human relationships.
 - Information will certainly be more accessible, but there is a difference between studying independently and being educated.
- Law enforcement is always necessary, and while it is easy to improve, one must not forget how much the people who perform these tasks can put their lives at risk.
 - The social climbing, through the system of honors and promotions is certainly accelerated, so clearly a general will belong to a higher band than a lieutenant or a simple soldier. But remember that often this happens for the great competence of individuals or for the risks to which they are subjected.
- Engineers are used to push progress, to make ideas feasible, and the studies to practice this profession are terribly difficult. The robotic-information-energetic engineers will be very important for the functioning of the whole system.
 - Although presumably more people will belong to this profession it makes sense to make it of high prestige in order to attract and entice with the goal to progress more quickly.
- A little parallel to the engineers, the architects will have an eminent role in the system, allowing the management of space, resources, territory. In addition, alongside the engineers the architects will allow the construction of industrial facilities necessary for the operation of the whole structure.
- Politicians hold big moral responsibilities and heavy burdens in their hands. Political studies are certainly

heavy. Furthermore the robots will not replace these figures.

- In any case, there are politicians of different caliber, based on the role played.
- Also remember that unlike contemporaneity (in Italy) there will not be that much of a difference in level between class 1 and 5, and they will be much closer and the distance will not be very palpable.
- The role of Psychologists is perhaps equal to that of teachers: since prevention is better than cure, the more people will be able to understand themselves, manage themselves, the less the risks and cases of crime will be. Moreover, in a less oppressed world, depressive factors will increase, first of all the boredom, factors that must be properly understood, analyzed and contrasted.
 - Let's consider that boredom will be very dangerous and one of the main problems of the new society.
 - Besides it will be important to manage emotional issues, depression, suicidal tendencies, homicidal tendencies, obsessions, violence etc ...

5. Band 5: Doctors-Judges-Lawyers

- Doctors save other lives, they are, at least at present, practically impossible to replace with machines and medicine studies are probably the most complex and difficult.
- Judges and Lawyers play the role of guaranteeing justice and making this as close as possible to the law. Having a practically non-replaceable moral task, a large amount of studies and a high level of responsibility they have been put in this position.

6. Upper bands: There are other bands above 5, up to 7 or up to 9, but in these you can not stay by default, but only through the social climb, only through merit.

- Let's see why eliminating money would remove multiple problems.
- First of all, let's identify these "problems"
 - a) Subjugation of one or more individuals to others.

- b) Annihilation of dreams and hopes in favor to what is profitable
- c) Discrimination between more and less wealthy.
- Now let's examine them:
 - a) There are various ways to maintain control over another individual they are: power properly said, money, sex, favors, addictions, violence.

Eliminating money from society would ensure that no one could ask someone else for money, as this would no longer have any value and would not even exist.

Control by power (which would be reduced in general) would also decrease.

Control through drugs would be decreased in parallel, because the production of these would be cut off as illegal, and the possible drug manufacturer could not sell them for money. He could always exchange them for something else, like favoritism, sexual favors, property, but certainly not for an economic return.

Prostitution, production and sale of drugs, corruption, theft and robbery, lace, mafia, child labor would greatly decrease.
 - b) In contemporary society we tend to seek success in earnings, in economic stability, in wealth, rather than in self-affirmation, in personal satisfaction, in the attainment of our own dreams and personal aspirations.

Sometimes the two things coincide, but very often not, because for example a job for which you are brought, a very specific passion are not at all profitable and maybe are looked at with sufficient, doubt, skepticism.

Therefore an individual could fall back on something else that instead is suitable for society, competitive and sought after.

This also involves family traditions, the transmission of a clientele from father to son, situations of discrimination towards new personalities who may approach a small circle of professionals.

To give examples, many members of faculties such as engineering, medicine, jurisprudence, architecture are there

or because the profession will be very economically advantageous, or because they have a study started or because they have to meet expectations in the family or in society. Obviously there will also be those who do it for passion.

Still many individuals interrupt their studies and are content with manual work because it is necessary to bring money home rather than invest in knowledge and future and often can not even dream of wanting to pursue an artistic career because this would be seen as silly or foolish and not useful . Or a very intelligent personality could be forced to follow a scientific career even if he wanted to devote himself to manual or agricultural work, just to appear suitable for those around him.

Giving some standard bands on which to base themselves, a high capacity for social climbing and a minimum well-being to anyone greatly reduces the pressure imposed in all these situations, since it becomes much less important from an economic point of view what you choose and then you leave space to free choice. Indeed, at a later stage, voluntary unemployment will be left open.

- c) By combining the two problems discussed above, it is evident that the discrimination between rich and poor, "acculturated" and "ignorant", powerful and not are strongly reduced: let's imagine various cases.
- A worker can not be forced to work unlawfully or more than what is agreed in exchange for extra money, since the employer does not have this money to distribute, in fact the employer in a company is reduced to an individual who monitors, controls and manages all the operation of the activity.
 - A person can not be forced to have sex for a fee, since there is no such thing as economic payment. At the limit it could be used a form of addiction, but as said before the trade in drugs and other substances collapses in the absence of circulating money.

- An individual will not be forced by the family, by tradition, to choose a path, but will pursue his own personal aspirations.
- A young couple will not find opposition about marrying because of a possible economic distance between the partners and the objections in this sense will be practically not valid anymore.

Let's clarify some situations:

- Private property and the gift:
 - Private property is maintained, and one can do whatever he wants of his own possessions. These can then be transferred to another individual as a gift.
So a father can give his son his car even if for example the son belongs to a lower class.
Certainly this fact can cause forms of corruption and control / power, but much less than before.
So the band determines what is guaranteed by the state, but this does not exclude anything coming from the outside.
- The band 0, the inactives, voluntary unemployment:
 - The people who choose to do nothing are guaranteed the minimum and nothing more.
- The retired / hermits:
 - Some people may choose to retire to live in nature, detaching themselves from society. In principle they will be considered as belonging to band 0, except for some specific cases. For the rest nothing will change, their properties will continue to belong to them in order to ensure that at any time they can return to use them.
- The economists:
 - The profession of economist is totally overturned and becomes in principle an overseer of the functioning of the whole system. It will be considered band 3 or 4.
However, especially in the initial stages it will have great regard because it will avoid errors and situations that could put in difficulty the operation of the whole thing.

▪ Stage 2

- Stage two provides for the abolition of the various previously built bands.
 - This will obviously only be possible in a well-established and stable society, in which no greater importance will be given to the position in society and there will simultaneously be a strong development of the ego, of the individual and a high social conscience, a high degree of community.
 - At this point, scientific research will have to expand even further towards new frontiers, one above all the preservation of humanity. To do this it is necessary to expand into the cosmos, hence the true focus of the whole discussion, the focal point, the end and the beginning, the ultimate reason for which we must necessarily overcome the current situation in the world: terraforming, which it will be discussed later.
- We can imagine the world in phase 2 as an ideal place in which each person is at the same social level as the others, regardless of what his activity is.
- In this "perfect future" hunger will disappear and individuals will follow their inclinations without any gain, they will do what they want to do for their own pleasure, out of pure interest.

The world of the future

- Cities
 - Transportation
 - The city will mainly use public transport, such as subways or trams, and then more and more bikes and other vehicles of the same kind will spread. Finally it is possible that along the main and secondary arteries there are "tapis roulant" similar to those already seen in some airports, which connect the various areas.
 - Cars, motorcycles etc ... will be reserved only for law enforcement and other special situations (ambulances, removals and similar), while for generic deliveries, the diffusion of drones will be more than enough.
 - The vehicles owned, as well as trucks and the like will be crammed in special parking areas in the suburbs (separated into public and industrial), easily reachable by public transport, from which the vehicles will be picked up in case you travel, in highway for example or excursions etc ...
 - Public green
 - Due to the new transport management in the city the roads will be able to be filled with greenery, there will be new space for parks, meadows and sports fields.
 - The problems related to the large size of the trees will be reduced and in general the city green will increase, as well as the care and management of the same.
 - Forms of architecture that combine beautiful, useful and flora will flourish and spread, while giant steps in the development of artificial intelligences that can take care of monitoring the situation and managing it will be done.
 - Homes
 - The houses will be all anti-seismic and highly ecological, depending on the preference of the owners highly technological or not, but certainly energy efficient.
Home automation will become widespread, almost overwhelming, as well as kitchen robots, for hygiene (even outside homes).

- Even the most modest dwellings will have a personality, there will be no crumbling or ugly places, unless it is a request, a characteristic or a choice of the owner.
 - Architecture and engineering will therefore be increasingly combined with nature and aesthetic sense, so that there will be a renewed harmony between man and environment and perfect efficiency and usefulness.
- Society
 - Trade
 - Most of the private supply chains will disappear, or rather they will unify: mass consumer products such as foodstuffs or the hygiene sector will be treated by the same chain of sellers. This distribution will presumably be automatic: it is reasonable to believe that jobs like the cashier or the charcuterie will tend to disappear.
 - Quite different is the case of craft products, behind which production lies passion and tradition, that is why a dairy instead will flourish (since well supported and recognized), as well as a particular farmer who produces a rare variety of a plant (for example Pachino's tomatoes)
 - Instruction
 - From the point of view of the structure of the teachings it will not change much, however there will simultaneously be an elevation of the average level and an exploitation of the studies independently (perhaps through robots disseminators, which although they can not replace teachers can support them for the simplest sections)
 - In any case, the work of the teacher will be greatly enhanced with a consequent increase in personnel. Therefore the number of students per class will be reduced and this is one of the reasons why the level will improve. Another reason will be the breaking down of crime and poverty, with the result that the school will be fully understood, in all its importance.
 - The same thing will happen at the university level, only that the elimination of money and therefore the weight linked to an enrollment will favor greater equality of the various universities, so that there are no university of series A and

series B and eventually the choice of a given university will be made by virtue of convenience and existing faculties.

- For obvious reasons private schools will disappear, or rather there will no longer be a distinction between private school and public school.

○ Art

- The artistic field that unfortunately is still considered useless, invalid, unnecessary, will finally be fully recognized and valued for good.
- With greater usability of the sector, artistic movements, currents and ideas will flow faster and follow one another through discoveries and research, aimed at elevating human capacities in this field.
- Many more people who bring art into their hearts will have the opportunity to express themselves and communicate freely, without running the risk of not being able to keep up, of not being able to find their place in the world

○ Humanistic

- A speech very similar to the artistic one could be done for the humanities, however I preferred to treat it separately because it is not necessarily artistic.
- The individual, the humanity of the person, risk disappearing, getting lost, for various reasons, from the devaluation to the lack of incentive for the sector, to the disappearance of individuality. Well, equating to other areas the humanistic and giving it a renewed emphasis, in a short time we will see a recovery of all that apparatus that was likely to get lost, a new literary spring (and not only).
- Nonetheless, the philosophical field will be pushed ever further and above all the psychological one (which is also scientific) will become more accessible and much more widely used, which is positive, since taking care of the mind will become one of the major highlights of the whole society of the future.

- Science
 - Medicine
 - Medicine will take different directions, counting on a greater number of researchers and a greater availability of resources:
 - Search for a cure for the most widespread diseases.
 - Search for a cure for the rarest diseases.
 - This area will now have a great improvement because the absence of funds and the possibility of obtaining what is needed without particular problems will guarantee greater attention to issues that are currently not very important, as they are not broad-spectrum.
 - Development of bioengineering and human survival in hostile environments
 - Biology
 - Biology will study and protect ecosystems, manage them and design new ones in view of terraforming.
 - Not only that, but the renewed attention to the environment will lead to new challenges for the healing of open wounds, such as pollution and overheating.
 - Physics
 - The frontiers of physics will be wide open in investigations in every direction, ranging for the most disparate topics.
 - Through greater attention to the needs of the various research teams, the instruments will be perfected and more efficient, moreover the greater number of brains that will converge in the subject will speed up the pace at which the discoveries follow each other.
 - In view of the future, given the challenges that terraformation will pose, physics will see a growing number of enthusiasts, attracted by new goals and equipped with the appropriate skills they will be able to get passionate about the subject and help society to go even further in search of progress, looking of solutions to the problems that we will see later.

- Engineering
 - Aerospace (and mechanical) engineering will have a wide range of tasks to be carried out, from extraterrestrial shipments, to the design of more efficient transport means, to drones and other aircraft.
 - Energy engineering will be one of the pulsating hearts of the new society, always open to new challenges, looking for ever better solutions.
 - Robotic engineering (with related information technology and electronics), with due attention, will be the true center of the new society, the keystone and the fulcrum. Precisely for this reason it will have to be carefully considered.
 - The robots will range in every field: distribution, transport, medicine, services, cooking, construction, industry, environmental care, shipping, space.

The Terraformation

1. What is the terraformation

- Definition
 - Terraformation is the process that has as its ultimate goal to obtain planets suitable for hosting life as we know it on planet Earth.
- Hybrid terraformation
 - Hybrid terraformation consists in tracing and reaching planets that meet some or all of the requirements necessary to host life, for example the position within the habitable zone, and therefore make them completely habitable.
- Complete terraformation
 - Complete terraforming involves the total transformation of a planet, whatever its characteristics are, in order to make it habitable
- Earths generation
 - Stage purely theoretical and exaggeratedly advanced, it involves the transformation of energy in mass in order to create star systems and planets ready and suitable for life. (Nice to dream eh?)

2. Why terraforming?

- Reasons of need
 - There are some motivations for which it is necessary to go to live in new planets: the exaggerated exploitation of our planet's resources, the technological progress that will require to exploit even more and the mere increase of the population that needs more and more space.
- Non-binding reasons
 - Other reasons that drive terraforming are scientific research from an experimental standpoint, the need of man to find an outlet for his thirst for adventure and freedom, and to fight boredom. Finally also the survival of animal and plant species through reproduction in other environments.

3. How to terraform

- Terraformation shipments
 - The terraforming expeditions have the purpose to modify the conditions of a planet in order to make it suitable for life under all parameters. Generally they should be 100% automated shipments.
 - Machinery plant
 - We will send, on spaceships, machines for example for mining and production of water, carbon dioxide, oxygen and robots to carry out control and maintenance tasks.
 - Already at this stage, the first buildings can potentially be built.
 - Primary robots
 - The robots sent with the shipments take will keep the larger machinery (which are actually robots) in operation, will check that the processes are carried out correctly and will prepare the surroundings for the following phases.
 - These robots also have the purpose of building more machines and additional robots on site.
- Fertilization shipments
 - These expeditions have the goal of bringing life on the appropriate planet, practically.
 - They can be 100% automatic or already have human staff.
 - Ark ships
 - The ark ships contain life forms, developed or not, for example seeds or adult plants, embryos or developed specimens, robots suitable for the care of the species and their plant, possibly personnel specialized in this field and ready to inhabit the new world.
 - From a practical point of view, the habitat must first be colonized with bacteria, microbes and plants, then simple animals and gradually up to the most complex species.
 - The complete process, at least in the initial stages of the whole project takes years, then I imagine that the technological advance will give the start to a speeding up of everything.
 - Secondary robots

- Differentiated automata, able to resist or to the high pressures of the sea depths, or to falls from considerable height, must keep everything under control, preserving the few initial specimens of the various species and taking care of their development, favoring all the processes of reproduction and growth.
 - Some of these robots can kick off typical activities of mankind, such as breeding or farming.
 - Colonization expeditions
 - Spaceships designed to transport individuals who chose to go to live on another planet lift off to colonize it.
 - In some cases they could be automated ships loaded with embryos. (Possible ethical problems)
 - Interstellar Navy
 - Diplomatic and military body that deals with transits between planets, colonization, possible relations with alien races, the defense of civilians from unforeseen events.
 - Subsections of research and exploration, designed to conduct all the terraformation process.
4. Related problems
- Find the suitable planets
 - Although giant steps have been taken in the discovery of new planets, only a limited number of these can satisfy at least some of the requirements needed to be habitable. Even fewer are those that satisfy almost each one. Moreover, the range of action is still small, limiting only to the stars closest to the sun.
 - Reach the chosen planets
 - If the identification of the aforementioned planets is already difficult it is currently impossible and impracticable to travel in the space. The only extraterrestrial body that can be touched by humans is the moon, while probes and robots have gone to the ends of the solar system, but nothing more. Moreover, the times for these activities are very long (these are months or years only for very close celestial bodies)

- Get the appropriate atmosphere
 - Before that on earth the environmental conditions necessary to accommodate life became possible it had already passed millions (if not billions) of years.
 - However, man has proved incredibly effective and quick in influencing the climate (unfortunately negatively, here on earth), so this is a problem that can be overcome.
- Generate the magnetic field
 - The magnetic field is one of the ingredients necessary to ensure the prolongation of life on a planet for its anti-radiation effect. Unlike the climate and the external environment, it is an intimate characteristic of the celestial body in question, dependent on the composition of its nucleus and other technical questions on the planetary structure. Therefore it would be incredibly difficult to generate one for a planet that might not have it.
- Implanting life
 - Leaving aside the predictable ethical problems that the whole business involves, which I suppose must be treated separately, it is still terribly difficult to bring life practically. To give an example, imagine we have a dry area and want to turn it into a jungle, certainly man is able to do it, because he is already able to do the opposite here on earth and with technological progress everything will be simplified, but it is not so easy and above all the scale of work is much greater.
 - Realize stable ecosystems
 - If bringing life is already difficult, let's imagine keeping it. Presumably the animal and plant landscape of the planet earth is not copied, but only a part of it is implanted, which must be able to function and balance itself. Just think of food chains, biological niches, concepts such as symbiosis or parasitism. For example, if a specific orchid reproduces only through the pollination of a specific hummingbird, one necessarily means carrying the other, or having to replace it with special robots, but this, in addition to raising any ethical problems, also raises some practical ones, because it is inconvenient.

- Economic and social problems
 - Currently, in the world the research must obey the laws of the economy, the lack of funds is a terrible cut to any project. Even governments are able to clip the wings of initiatives of any kind. Biological and spatial research suffers like all the others. If you do not begin to concentrate the resources of mankind on the progress to which we are aiming in this text, you can never reach it, if not in very long times. Without going into details about the concepts of money, funds, capitalism etc ... (which in case I would treat in different texts as more ethical matter than scientific) it is enough to know that if the social situation on Earth does not change everything that is described in this text it will remain pure abstraction for a long time, while if accompanied, supported and not hindered it can become reality.
- 5. Benefits and issues resolvable through terraforming
 - The terraforming is not mere imagination and scientific speculation without an end, but has an enormous usefulness for the human race, with regard to the following topics:
 - Demographic growth
 - Overpopulation
 - Human beings are increasing more and more, they continue to require space both to live and to produce what they need. If issues such as pollution or the use of energy can be resolved, mere overcrowding can only be slowed down unless births are prevented or mass killing or programmed wars are scheduled. To avoid these two terrible and drastic measures, it is in my opinion better to aim for the colonization of other planets.
 - Lack of resources
 - Although there are ways to get huge amounts of energy even without causing serious damage to the environment (more or less feasible or science-fiction methods, but certainly different from the current), there aren't instead solutions to mining excavations, deforestation, enlargement of crops, except renouncing these activities, resulting in the need to find artificial substitutes. Although this is possible (certainly not easy), however, it is

disappointing and a bit sad. A proper and measured exploitation on more planets, in my opinion is better, but I realize that the thematic can be subjective.

- Extinction of species
 - Surely man should stop causing directly, or indirectly (through pollution, for example) the extinction of many animal and plant species, but there is also a so-called "natural extinction", which provides, without going into detail, that over the millennia some species disappear and new ones form.
 - To fight both (even if they are two profoundly different ethical issues, both on artificial extinction, on natural extinction and some people may consider one or the other or both to be correct) it is possible to colonize the various planets with different species which in different situations could expand and reproduce more easily and without risk. Some species could become extinct on one planet, but be dominant in another, for example.
- Need for freedom and adventure
 - Man has always wanted to explore, to go further, to discover, to go beyond. An escape from contemporary society, a new place to start over, new lands to explore, but also interplanetary travel, sailing among the stars. Colonizing new lands would open the door to all the most dormant needs of the human soul, at least to those more "romantic".

6. Bases

- To sum it all up, it is enough to say that there are several bases necessary for the terraformation to begin to develop:
- Support from the human race (the states that make up our world)
- Resolution of all arose moral disputes
 - This is important because having a solid base, avoiding disputes, possessing certainties, being supported by society helps to act in an orderly, pragmatic, efficient manner.
 - In practice it is necessary that there are no internal obstacles to the development of these processes.
- Advanced scientific progress
 - Similar to moral certainties, having a solid scientific basis, adequate technology and impeccable preparation are requirements that must be satisfied before starting all the final processes of terraforming.

7. Consequences

- Separation of humanity in several parts, some will remain, others will go away (obviously voluntarily)
 - A bit like when America was discovered, at the beginning only a few went to the new world, then more and more people. Now the situation is about mutual exchange and technology has broken down the natural barriers that existed in the past.
- Expansion of human civilization and level crossing in the Kardasev scale
- Possible contact with aliens (for those who believe in the existence of extraterrestrial civilizations)
- Improvement of the lifestyle of every human being.
 - It should be enough to think only of the amount of resources circulating due to new commercial and non-commercial routes.
 - Not only that, but the sense of despair and abandonment that society currently suffers can be "cured" by giving new impulses, new goals, new ideals that by now are almost disappeared or suppressed.
- Salvation for the global ecosystem of the Earth

8. Risks

- Contact with any extraterrestrial life forms could also be a risk
 - Although there is no evidence of the existence of aliens, if contact should take place we are not aware of the nature of it. Therefore caution is advised and also a theoretical preparation.
- If entire planets were to become factions they could line up against each other and set off wars on a scale never seen before, but the level of civilization reached beforehand will hopefully avert this possibility.
 - History teaches us how the colonies often rebelled against the motherland. From a more open point of view it is hoped that problems of this kind will no longer exist, as the motherland will not boast forms of jurisdiction over the other planets, but the relationship will obviously be equal.
- Not all shipments could be successful
- There is a risk that some planets may be exploited to ghettoise someone or even be used as prisons. Although far away as a possibility it is always better to avert it.

○ **Appendix I**

Applications of "Stage 1" to the Italian situation

- Taking Italy as a starting point, we immediately see a set of problems of a practical nature to face: assuming to undertake Stage 1 at the national and not global level, then relations with other nations and with the European Union must be managed. The money that will no longer be used within Italy will anyway have to flow in and out of it, since it will still be necessary in relating to the other powers.
- Speaking of the money it will be needed to manage mortgages, debts, banks, because these things will no longer have any value.
- It is also necessary to adjust the political situation, which is currently very serious, towards a new stability based on values of fairness, justice, solidarity, progress and research.
- Whatever the method for achieving the ideal situation there is the possibility of encountering obstruction. This is part of the functioning of the world, the opinions of others must be respected and fought, but this can also be a block in some situations.
- The bureaucratic apparatus could present itself difficult to manage in view of the necessary changes. It is therefore appropriate both the intervention of experts in the sector, and sometimes avoiding directly interfacing with the bureaucracy.
- If we want this text wants to place among other objectives that of dissolving hostilities, broaden the horizons of thinking of others, push in a certain direction social and political thinking in order to exploit this same pressure to make real and actualize the content exposed in these pages.

○ **Appendix II**

Mars as an example of terraforming.

- Suppose that for 2025-2030 Mars is reachable within a reasonable time. This is very likely given that already the travel times for one-way probes are already around the year.
- In the meantime, the world, or at least a part of it, has greatly developed the knowledge in the engineering, aerospace and robotic fields.
- A very large, massive spacecraft is then designed with a high load capacity. This is controlled from the ground, does not require any pilot (as is normally the case for launching satellites or probes).
- This ship is loaded with various types of robots:
 1. Extractors, which will deal with obtaining raw materials on Mars, necessary for carrying out the processes that will serve there.
 2. Builders, who will build buildings and other robots.
 3. Workers, who will work to make Mars become habitable.
- The ship also acts as a laboratory and remits, moreover or through the same, or through another vehicle a way must be found to provide Mars with a magnetic field.
- The process could take from 10 to 20 years, but if you could maintain the magnetic field then the temperature would rise, the robots would be able to change the planet's atmosphere very quickly and the production of water should not be a problem .
- Toward the year 2050 then another spaceship would start, probably also automated, in order to bring plant species, insects and other animals.
- The landing spot of this will obviously be well prepared, an area rich in water, flat, studied in detail.
- From here life will begin to spread, to expand, to colonize the whole planet.
- An alternative to single large ships would be the use of more smaller ships, but in my opinion it is better just a big one, at least at the beginning of the process.
- By 2100, or probably even before Mars will be habitable by man, the houses, at least the simple ones, will have already been built by the robots on the spot.

- First shipments of scientists, researchers, soldiers and volunteers will start and then interplanetary traffic will begin to become a reality
- The estimates of the times are not, of course, well founded, but personally they could also be shorter, given the abilities shown by man, actually only by a small percentage of humanity.
 - Let me explain: currently 80% of the world's population lives in poverty, ergo it is not part of the "innovative" part, for obvious practical reasons. The potential hidden in this 80% is huge, just think about what the remaining 20% is able to design, this part which in reality is not a 20%, but it will be, more or less 25% of this 20%, so a 5% of the total or so. Imagine what you could reach in a short time with 100%. Imagine.

○ **Appendix III**

Use of the text and interpretation of the contents

- What should be clarified is that the content of this text is purely speculative and theoretical, although supported by logical bases.
- It is therefore necessary the approach of experts of the various sectors to evaluate the feasibility of the various solutions dealt with and in general the content is not to be taken literally.
- For example, the transition between the various phases of the socio-economic structure can not be clear or immediate, so we must evaluate, weigh and understand the exact dynamics to implement the processes.
- The details and the various facets are not thoroughly analyzed, purely for the fact that they are not my competency. The goal was to expose, direct, show the possibilities, the ideas, the eventualities that could be met.

Finally

I thank Monica for the work behind the cover, I owe her.

I thank all the relatives who spurred me to write this text, or rather debating with me they have made it possible to realize the idea.

Thanks also to all the friends with whom I have continually discussed and treated the various issues, thanks to the person to whom this text is dedicated, without which I probably would not have even begun to trouble myself, thanks to all those who have had discussions about the various areas, thanks to all the people who struggle every day to survive and find their place in the world, thanks to those who unfortunately move the global situation in the opposite direction, gave me the conviction in my abilities, in my ideas.

Thank you.

I must make a clarification: it is possible that what is written here is completely false. Or it may not be successful, it may be hindered ... the ideals shown here may never bear fruit. If this were to happen, the world would evolve in different directions and I would appeal to all those who were to make the above mentioned concepts their own, be smart and careful not to succumb, that the world is ruthless.

And now an exhortation:

There is hope for a better world, I ask you to understand it in these dark times. I wanted to show the feasibility of a more honest, more functional future, I hope I managed to show this possibility.

Have faith in humanity, in its potential, as tremendous as it is formidable. This ability of man according to how it is addressed can produce frightful, or great, magnificent results. I hope we can aim high, that we can leave behind a past of injustice, hatred, crime, marginalization, hypocrisy; I hope that the coming world, in which future generations will grow, will be different, peaceful and harmonious, because the responsibility of the life of others is in our hands.