The Future of Jewellery – Are there Ways and Needs to Accomplish a Change in the Development and Especially the Meaning of Contemporary Jewellery?

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Abstract

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This essay will deal with ideas for jewellery in the future. One approach to this issue is, to investigate the meaning of materials which might become rare or even deplete in the future. Along with science and science fiction it will focus on established scientific postulated laws of nature, although some elements might still be pure imaginative speculation. The paper will also explore about academic discourse on value with a focus on understanding jewellery material values connected to rarity as well as value of experience and the increasing need for it in society. It will draw a futuristic picture of change, meaning and development in the field of contemporary jewellery and society.

Content

Introduction

The objective of this paper, written and developed by a jewellery maker with a highly experimental approach to work, is to possibly open people's perspective towards appreciating values which suit to personality and individuality rather than following main stream ideas of non-identity values. Being more specific, there is a huge gap when comparing the consumption and perception of commercialized jewellery to artistic contemporary jewellery today. My aim is to decrease it from a traditional material perception of values towards artistic ideas and individual values.

Since my focus has always been future directed, there is a deep interest concerning the question how jewellery, art, society and our environment will look like in the future. What kind of materials and what value perception will we have hereafter?

If we trust scientific statements, a likely scenario could be that life will change significantly because we are heading for a serious climate change with global warming, melting polar caps, drought, floods and infertility. The change will probably shape our behaviour and our perception of values.[1] It is also a fact that destruction of soil, the social dislocation between the first and third world and the globalization show, that thinking towards the future has not come through our society yet. Resources like crude oil are limited but nevertheless used in mass commodities and disposable items in modern societies. Might these materials, when close to depletion, be perceived as values of ancient memorial treasures in the same way like some species which have been almost eradicated? Could crude oil by then turn into a valuable jewellery material? What kind of value will the very last natural ice piece become, retrieved from Antarctica or Mount Everest?

However, my main interest is not on environmental issues but more to observe, reflect and comment on society's signals and development of change.

Working in the field of jewellery for many years, I noticed in general an increasing need in society for the value of experiences in many different directions, which leads to the question if adornment in the future will be worn and experienced in a different way than today.

Although there are aspects of emotional attachment and appreciation between a wearer and a piece of jewellery, however the main emphasis seems to be always on the sight sense. Therefore I want to investigate by which means jewellery can be transformed or experienced in a physical way. Are there methods to go beyond the visual sense? Could jewellery have more or another value if we combine it with taste, touch, smell or hearing in addition to the visual aspect? A physical experience can be perceived in a stronger way than just a visual experience. To support this argument, I want to highlight some abilities of human senses.

Senses are the physiological capacities within organisms that provide inputs for perception. The nervous system has a specific sensory system or organ, dedicated to each sense.[2]

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[1] F. v. Borries, Klimakapseln, published by Suhrkamp Berlin, 2010, p. 8

[2] Jeremy M. Wolfe; Keith R. Klunder; Dennis M. Levi, Sensation & Perception, published by Sinauer Associates Inc. Publishers, Sunderland, Massachusetts, 2006

Taste - The receptors for taste, called taste buds, are situated in the tongue, but they are also located in the roof of the mouth and near the throat. We have four types of taste buds, sensitive to sweet, salty, sour or bitter. Different tastes are distinguished by various combinations and a more sophisticated sense of smell. Therefore smell and taste are closely related.

Hearing - The ear is the sense organ that detects sound and plays a major role in the sense of balance and body position. The brain combines the input of our two ears to determine the direction and distance of sounds. Hearing is connected to mood, it does in fact generate mood. It creates feelings and emotions like joy or sadness.

Smell - The nose is the organ responsible for the sense of smell. The smell receptors are sensitive to seven types of sensations that can be characterized as camphor, musk, flower, mint, ether, acrid, or putrid. Smell is a part of the air we breathe; therefore we can't turn this sense off. Smell is extraordinary powerful in evoking memories. It is almost impossible to describe.

Touch - The sense of touch is distributed throughout the body. Nerve endings in the skin and other parts of the body transmit sensations to the brain. It is a sense of pressure perception. The world of touch encompasses a world of meaning. Touch alerts us to our general being. Touch is the most important tool for those who have the misfortune to be both blind and deaf.

Seeing - Vision needs to have the work of both the eyes and the brain to process any information. The majority of the stimuli are done in the eyes and then the information is sent to the brain by way of nerve impulses. At least one-third of the information of what the eye sees is processed in the brain. Vision is all about light. The difference between our day and night vision is that our night vision is color-blind. Sight is the most seductive sense of all. It often overrules the other senses and has the power to persuade us against all logic.[3]

"Tell me and I will forget,
Show me and I might remember,
Involve me and I'll understand"
Benjamin Franklin

[3] J. M. Wolfe; K. R. Klunder, Dennis M. Levi, Sensation & Perception, published by Sinauer Associates Inc. Published by Sunderland, Massachusetts, 2006

Science Fiction

Since future is the indefinite time period after the present, it is not simple to forecast the process of estimation in unknown situations. Due to the element of the unknown, risk and uncertainty are central to forecasting and prediction[4]. According to these difficulties, I decided to use the term science fiction rather than "future forecasting" as a means of understanding the world through speculations and storytelling but also with a focus on established scientific postulated laws of nature, since science fiction is dealing principally with the impact of actual or imagined science on society, individuals or having a scientific factor as an essential orienting component.

Science fiction needs not even to be set in the future, but if so, it is not necessary to create an accurate model of the most likely future. The aim of science fiction is to tell a thought provoking, entertaining story. Unlike future predictions, science fiction has the ability to place facts in context and to deliver them with emotional impact.[5]

But mostly science fiction predicts the future or maybe vice versa it is predicted by the future. The question is what "the" future means. There is not only one future, which the use of the definite article "the" maybe implies. The future is not a fixed, tangible thing; it is a psychological and social construct. Each of us has one or several possible models of the future in mind at any given time — both our personal future and the future of the world — and society as a whole also has several possible agreed-upon futures under consideration. These models of the future are created by the human brain, extrapolating from the present situation using information gathered from past events, and they are all inherently flawed because of limitations of the human brain. Even computer models and other calculations are built according to rules devised by human brains, and are equally subject to these flaws. Our *vision* of the future tells us much more about ourselves, our pasts, and our present than it does about the actual future.[6]

The literary term "science fiction" was coined by Hugo Gernsback, who has been called the father of science fiction. In 1926, Gernsback began the magazine "Amazing Stories". The Hugo award for the best science fiction of the year was named to honour him. Although science fiction and fantasy are often lumped together, science fiction (in particular hard science fiction) has always had some connection to science fact. Often such stories are amazingly prophetic. This was true even before they were called science fiction. Of course, the goal of science fiction, like any entertainment medium, is not to predict the future, but to entertain an audience. Even serious scholars trying to predict what societal and technological changes the future holds often get it wrong. It shouldn't be a surprise then that science fiction writers of the past have often been wrong. "No sensible science-fiction writer tries to predict anything," says Frederick Pohl. "Neither do the smartest futurologists. What those people do is try to imagine every important thing that may happen (so as to do in the present things which may encourage the good ones and forestall the bad) and that's what science fiction-writers do daily."[7]

As I mentioned before, the science fiction scenario I am drawing, is taking place in a future set up. I am using this genre functions as a thinking frame in order to allow myself a playful

[4] Dictonary.Cambridge.org.http://www.dictonary.cambridge.org/dictionary/british/science-fiction
[5] D. H. Pink, A whole new mind, published by Cyan Books, London, 2005, p.101
[6] J. D. Levine, How the Future Predicts Science Fiction, The Internet Review of Science Fiction, 2010
[7] D. P. Dern, What Science Fiction Writers Have Learned About Prediction, The Future of Technology 2008, CXO Media 2010

approach in which also an extreme view can be told. A direction will be set on value of experience according to my imagination, that this part will play a crucial role in society. The story will also focus on some crude materials, which will be almost depleted and thus valuable. I have chosen to point out three different materials: crude oil, natural ice and honey, all of them are somehow connected to each other. While the question, if these crude materials will become valuable, when rare, will remain in the science fiction section, since it will be impossible to answer from a scientific point of view, some signs and signals of crude material decrease will be supported from a scientific standpoint. The following chapter is focusing on basic studies of the mentioned materials but also on questions such as importance in society and cause and effect of decrease/depletion. Although I am aware that especially crude oil depletion and climate change are quite controversially discussed issues, among scientists, politicians and people, my attempt is to support and follow the majority of scientist`s opinion.

Science

Crude Oil Reserves - Crude Oil Depletion

Cheap oil supply has been the fundamental driver of the 20th Century's economic prosperity. However, the world's oil supply is fixed because petroleum is naturally formed far too slowly to be replaced at the rate at which it is being extracted. Over many millions of years, plankton, bacteria, and other plant and animal matter become buried in sediments on the ocean floor. When conditions are right – a lack of oxygen for decomposition, and sufficient depth and temperature of burial – these organic remains are converted into petroleum compounds, while the sediment accompanying them is converted into sandstone, siltstone, and other porous sedimentary rock. When capped by impermeable rocks such as shale, salt, or igneous intrusions, they form the petroleum reservoirs which are exploited today.[8] [9]

If a crude oil source is under exploitation, the depletion of oil occurs in the second half of the production curve of an oil well, oil field, or the average of total world oil production. The Hubbert peak theory makes predictions of production rates based on prior discovery rates and anticipated production rates. Hubbert curves predict that the production curves of non-renewing resources approximate a bell curve. Thus, when the peak of production is passed, production rates enter an exponential decline.[10]

The demand of oil is concerned with the consumption over time, and the growth of its demand. During the recent decades, due to rapid urbanization, global transportation and the improved standard of living in the developing countries, oil has become essential and it is consumed at a higher rate. Flourishing economic countries like India and China are becoming huge oil consumers. China exceeded Japan in oil consumption during the year 2004 thus becoming the world's second largest oil consumer after the United States of America. It is estimated that by the year 2025, China would surpass the Unites States as the world's largest oil consuming country, as the demand for crude oil is expected to increase by

[8] T. Appenzeller, The end of cheap oil, National Geographic Magazine, published by National Geographic Society, Washington DC, 2004
[9] Abhijit Y.Dandekar, Petroleum reservoir rock and fluid properties, published by CRC Press, Florida, 2006, p. 1
[10] M. King Hubbert (1956-06), Nuclear Energy and the Fossil Fuels, Drilling and Production Practice (PDF), http://www.hubbertpeak.com/hubbert/1956/1956.pdf, 2008, p.36

five to seven percent a year. [11] According to a study, published in the journal "Energy Policy", world's crude oil demand would surpass supply by 2015 (unless constrained by strong recession pressures caused by reduced supply).[12] However, among scientists there are controversially discussed theories about the date of world's oil depletion, since factors as recession, the total remaining amount of oil and unexploited sources are uncertain. While annual production of a resource can usually be calculated to quite an accurate number, however reserve quantities can only be estimated to varying degrees of accuracy, depending on the availability of information and the methods used to evaluate them.

The most significant key indicator for future prediction is the Reserves-to-production ratio (RPR = amount of known resource / amount used per year), mainly used in the oil and gas industry. Accordingly, today's proven reserves of oil would be depleted in 2055 if today's production of oil wouldn't change. In fact production *does* change. In the last 45 years the annual growth rate of oil production has swayed between 10% and 5.8%. Clearly the growth rate effects how long the fossil fuel reserves will last. An attempt to find the dates at which oil reserves are emptied earliest and latest, the proven reserves can be used (the least amount of oil we expect to have), with a high growth rate of 4.7% annually. There is nothing to indicate that actual production might grow this fast, but it is defendable as it is the largest growth on record since 1986. Thus the earliest date we arrive at is 2033. For the latest date, the knowledge, how large potential reserves might be, is needed. The U.S. Geological Survey estimates the total remaining oil reserves to be at least twice as big as currently proven reserves with a 95% probability, and even up to 3-4 times as big with just a 5% chance. Consequently, it can be assumed that the maximum extract is about 3 times the currently proven reserves, with on average no growth in production. Thus the latest date can be determined of 2146.[13]

Petrochemicals are key components to almost everything which our whole society system is built on. Some specific example might help to illustrate the degree to which we depend on fossil fuel: It is not just transportation and agriculture that are entirely dependent on abundant, cheap oil; all forms of modern technology are petroleum products. Modern medicine, food, and water distribution, the internet, microchips, concrete, asphalt, highways and modern cities are each entirely powered by oil and petroleum derived chemicals. In addition, mass quantities of oil are required for all plastics, all computers and all high tech devices.[14]

Crude oil depletion is truly a turning point for mankind, which will affect everyone, although some more than others, because it is what matters most.[15]

Ice Loss - Global Warming

Global warming is the increase in the average temperature of Earth's near-surface air and oceans since the mid-20th century and its projected continuation. The average temperature

[11] Oil Prices.org, new on oil, natural gas and energy prices, http://www.oilprices.org/demand-for-crude-oil.html
[12] Nick Owen, Oliver R. Inderwildi, David A. King, The status of conventional world oil reserves-Hype or cause for concern? Energy Policy volume 38, issue 8, page 4743-4749, University of Cyprus, 2010
[13] T. Ahlbrandt, U.S. Geological Survey, World Petroleum Assessment 2000, published by USGS, Denver, 2000
[14] M. Savinar, Peak Oil: Life after the oil crash, article excerpt Salon.com online magazine for art and culture, published by Salon media group, San Francisco, 2006
[15] Dr. J.C. Campbell, Peak Oil: An Outlook on Crude Oil Depletion, (PDF) Oxford University 2002,

has climbed 0.74°C degree Celsius around the world since 1880. [16] During the recent decades the temperature has increased progressively, according to NASA's Goddard Institute for Space Studies. Especially the last two decades of the 20th century were the hottest in 400 years and possibly the warmest for several millennia, according to a number of climate studies. Earth is already showing many signs of worldwide climate change. The Arctic is feeling the effects the most. Average temperatures in Alaska, western Canada, and eastern Russia have risen at twice the global average, according to the multinational Arctic Climate Impact Assessment report compiled between 2000 and 2004. [17]

Most scientists agree that the warming in recent decades has been caused by increasing concentrations of greenhouse gases, which result from human activity such as burning fossil fuel, cement production and tropical deforestation.[18] Since the Industrial Revolution the amount of green house gases in the atmosphere has increased enormously, leading to increased radioactive forcing of CO_2, methane, ozone, chlorofluorocarbon and nitrous oxide. The levels are much higher than at any time during the last 650,000 years, the period for which reliable data has been extracted from ice cores.[19] [20] [21] Climate model projections summarized in the latest report indicate that the global surface temperature is likely to rise a further 1.1 to 6.4 °C during the 21st century.[22]

An increase in global temperature will cause sea levels to rise and will change the amount and pattern of precipitation, probably including expansion of subtropical deserts.[23] Warming is expected to be strongest in the Arctic and would be associated with continuing retreat of glaciers, permafrost and sea ice. Arctic ice is rapidly disappearing, and the region may have its first completely ice-free summer by 2040 or earlier.[24] As a result of contemporary increases in atmospheric carbon dioxide, the oceans have become more acidic, a result that is predicted to continue.[25] Other likely effects include changes in the frequency and intensity of extreme weather events (more storms, more rain followed by longer and drier droughts), mass extinctions of global biodiversity, animal species extinctions (e.g. Blue Whale, Walrus, Polar Bear, Tiger, Snow Leopard, Ethiopian Wolf, African Wild Dog, Corals). Due to a study on the basis of mid-range climate-warming scenarios for 2050 show that 15 to 37% of species in sample of regions will be committed to extinction.[26] Also problems of water supplies that have historically come from glaciers and changes in agricultural yields (a challenge for growing crops) might occur. Warming and

[16] IPCC, Summary for Policymakers (PDF). Climate Change 2007: The Physical Science Basis. Contribution of working group 1 to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf. 2009
[17] National Geographic News, Global Warming Fast Facts, published by National Geographic Society, Washington DC, 2007
[18] Understanding and Responding to Climate Change, United States National Academy of Science, National Research Council of the National Academies, http://americasclimatechoices.org/climate_change_2008_final.pdf, 2008
[19] S. Renato, Atmospheric Methane and Nitrous Oxide of the Pleistocene from Antarctic Ice Cores, Science 310 (5752): 1317-1321, 2005
[20] U. Siegenthaler, Stable Carbon Cycle-Climate Relationship During the Late Pleistocene, (PDF) Science 310 (5752): 1313-1317, 2005
[21] J.R. Petit, Climate and Atmospheric History of the Past 420,000 Years from the Vostok Ice Core, Antarctica, (PDF) Nature 399 (6735): 429-436, 1999
[22] IPCC Summary for Policymakers, (PDF), Climate Change 2007: The Physical Science Basis. Contribution of working group 1 to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf. 2009
[23] L. Jian, Vecchi, A. Gabriel, T. Reichler, Expansion of the Hadley cell under global warming" (PDF), Geophysical Research Letters 34: L06805, 2007
[24] J. Roach, Artic Summers Ice Free by 2040, Study Predicts, National Geographic News, published by National Geographic Society, Washington DC, 2006
[25] Future Ocean Acidification, Climate Change Science. U.S. http://www.epa.gov/climatechange/science/futureoa.html. , 2010
[26] C. D. Thomas, Extinction Risk from Climate Change, Nature 424,145-148, published by Nature Publishing Group, London, 2010

related changes will vary from region to region around the globe, though the nature of these regional variations is uncertain. [27]

Honey - The Loss of Honey Bees

Honey bees are the foundational keystone pollinator specie of modern production agriculture that currently feeds us.[28] There are more than 130,000 plants for which bees are essential to pollination, from melons to pumpkins, raspberries and all kind of fruit trees - as well as animal fodder, like clover.[29] Honey is a by-product of pollination.

Without fertilization a seed does not form and the plant has no reason to expend the energy to build a fruit around that seed.

Honey bees are in decline. [30] From 1971 to 2006 approximately one half of the US honey bee colonies vanished. The same has been happening in Europe: 50 years ago, in Germany, the population were about 1.5 million bee colonies whereas last year only 620.000 were counted.[31] In Spain, hundreds of thousands of colonies have been lost and beekeepers in northern Croatia estimated that five million bees had died in just 48 hours within a week. In Poland, the beekeeper association has estimated that up to 40 per cent of bees were wiped out within a year. Greece, Switzerland, Italy and Portugal have also reported heavy losses.

Until today, experts have difficulties to explain thoroughly the fall in honey bee populations. However, there are several likely factors that could have been causing bees loss. Among them are mites and associated diseases, some unknown pathogenic disease and pesticide contamination or poisoning. These factors have decimated and weakened the feral and managed population worldwide. Growers, up until the mid-1980s, rarely had to think about pollination of their crops, also because there was a large feral population of honey bees. These wild populations lived in hollow trees or cavities in structures and provided free pollination for small acreages.[32]

Then an invasive, introduced, small, mite (tracheal mite) which lives and reproduces in the honey bees' breathing tubes killed thousands of feral and managed honey bee colonies. A control for managed colonies was found. Untreated feral colonies died out. Then an external mite, varroa destructor that sucks the blood of honey bees was introduced. Varroa destructor originally came from Asia. This devastating parasite for all intents eliminated established feral honey bees and killed off additional thousands of managed colonies. Varroa continues to weaken and kill managed colonies as effective long-term controls have not been found and fully adopted.[33]

Nevertheless, there are many more pests, predators and diseases that exist world wide that can adversely affect our managed honey bees. In 2007 researcher could find a fungus that

[27] R. Pachauri, K. Reisinger, IPCC, Climate Change 2007: Synthesis Report. Contribution of Working Groups 1,2 and 3 to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Geneva, 2007
[28] compiled by J. Hayes, South East Farm Press journal, published by Auburn, Alabama, 2007
[29] M Leidig, The Telegraph, Honey Bees in US facing Extinction, published by Telegraph Media Group, London, December 2010
[30] compiled by Jerry Hayes, South East Farm Press journal, published by Auburn, Alabama, 2007
[31] J. Vorrath, Das Parlament Nr. 11 15/3/2010, Website der Bundesregierung, published by Deutscher Bundestag, Berlin, 2010
[32] M. Leidig, The Telegraph, Honey Bees in US Facing Extinction, published by Telegraph Media Group, London, 2010
[33] compiled by J. Hayes, South East Farm Press Journal, published by Auburn, Alabama, 2007

causes Colony Collapse Disorder - a mysterious complete absence of adult bees in colonies, with no or little build up of dead bees in the colonies or in front of those colonies - it might play a crucial role to the increase of population as well.[34] [35] Another problem is mono-cropping in agriculture, thus bees tend to starve during some seasons. Also extreme weather and temperature fluctuations seem to play a major role stressing the bees and weakening their immune systems. Another difficulty is improper use and exposure to agricultural pesticides; other environmental toxins have resulted in the lowest number of honey bee colonies since the 1940s. Pollination is in decline while crops needing pollination are increasing. There is a deficit of pollinators. The depopulation of bees could have a huge impact on the environment, which is reliant on the insects for pollination. If bees continue to die off so would the crops they support and with that would ensue major economic disruption and possibly famine. Bees are vital to bio diversity; they are perfect indicators of the state of the environment.

Studying and gathering these facts have been frightening on the one hand, because effects of depletion and its importance in society became clearer to me. The aspect that it is not merely about predicting dates of total depletion for example of crude oil, but more about effects of a sharp decline, which could already cause severe economical problems such as price increase and loss of jobs, is even more alarming. The same can be said about global warming. Visible effects of the average increase of 0.75°C degrees are already startling. What will happen if temperature continues to rise progressively? The loss of bees is concerning as well and it shows the connection among the three sections that all is part of a huge interconnected ecosystem, each element playing a role dependant on many other elements. Any failure of one part can create a domino effect causing disruption throughout the entire chain of life. All plants and animals are vulnerable to climate chaos which seems to be having a major impact. Whether or not we are responsible for climate chaos is not as important an issue as to how mankind will adapt. It is too late to "stop consuming" in order to "save the earth." Those are clichés that don't own up to the way that humans really act. On the other hand, studying about these resources has been a good proof for very likely changes in the future and thus can be seen as reliable scientific facts. Even though it is impossible to make clear future prediction and maybe it is not necessary, however it is important, to generate a solution is the great responsibility of scientists, visionaries and artists and everyone alive right now.

Value and Rareness of Material

This chapter will investigate the creation of values, how value is generated in individuals' mind and being, in society and in the field of jewellery. Furthermore the connection between material`s value and rarity will be explored. For a better understanding theories are important, which have been developed throughout history and on which modern societies are based.

[34] J. R. Chong, T. Maugh, Los Angeles Times, Experts may have found what is bugging the bees, published by Tribune Company, Los Angeles, 2007
[35] Bee Alert, Inc. US National Bee Colony Loss Survey, Primarily Findings with Respect to CCD, Missoula, 2007

"Value is an enduring belief that one mode of conduct or end-state of existence is preferable to an opposing mode of conduct or end-state of existence."[36]

Milton Rokeach

"Ever since that moment when two individuals first lived upon this earth, one has had what the other wanted, and has been willing for a consideration to part with his possessions."[37]

Gordon Selfridge

In a value system, values are ordered in priority to respect to other values. They are often measured by polar scales for example, healthy versus ill, clean versus dirty, active versus passive, modern versus traditional and so on. Values have emotional, mental and behavioural components. Although values are expressed in abstract terms, people generally know what their preferred "state of being" is (e.g. being healthy, not ill). Two aspects of values can be distinguished: values as guiding principles in life, and value as a preference for one mode of behaviour over another. The distinction refers to the desirable and the desired or what people think ought to be desired and what people actually desire – how people think the world ought to be versus what people want for themselves. The desirable refers to general norms of a society and is worded in absolute terms of right or wrong.[38]

Each society has its specific standards of values derived from the personalities of its members and to a large extent, learned and internalized from society's institutions, but values are learned unconsciously, people are only partly aware of them.

Among the classical social theorists are different approaches and perspectives to the theme. However, important are two contrasting schools of thoughts that concentrate on the analysis of values and money in social groups. The sociologist Georg Simmel (1858-1918) analyzes the relationship of money to value. He debates how money determines culture and the whole rhythm of life. Most fundamentally, Simmel proposes a study of money that goes beyond a purely economic approach.[39] From his point of view, values can be differently attached to one and the same object and they are closely connected to objective value, but only in money can any subjective value find full objective expression.[40] The value is determined by the desire that people have to obtain an object, not the use-value of the object.
Although Simmel was influenced by Karl Marx (1818-1883), the main difference between them was that Marx was against capitalism. His theory of value and money develops a detailed economic analysis and argues that the value of money is determined by the forces of production and not by the market conditions of supply and demand.[41]

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[36] M. Rokeach, Understanding Human Values, published by The Free Press, New York, 1979, p.6
[37] N. Cummings, M. Lewandowska, The Value of Things, published by Birkhäuser, Basel, 2000 p.118
[38] M. K. de Mooij, Consumer Behaviour and Culture: consequences for global marketing and advertising, published by Sage Publications, Inc. California, 2004 p. 23
[39] M. Deflem, The sociology of the sociology of money, Simmel and the Contemporary Battle of the Classics, online copy of a publication in Journal of Classical Sociology 3(1):67-96, 2003
[40] T. Dant, Materiality and Society, published by University Press, Berkshire, England, 2005
[41] M. Deflem, The sociology of the sociology of money, Simmel and the Contemporary Battle of the Classics, online copy of a publication in Journal of Classical Sociology 3(1):67-96, 2003.

Both theories are interesting but since they were developed, time passed by and changes in societies have been made.

To come a bit closer to our present society, the French philosopher Michel Foucault (1926-1984) also describes in one of his thoughts how it comes to a creation of value. According to him an object of desire or a need has to be a representative of a certain kind of wealth or value for both parties equally in a process of exchange. To give an example, he states that precious metal is seen as a universal representative for wealth.[42]

Another important but controversially discussed philosopher was Jean Baudrillard (1929-2007). He moved beyond the post modern discourse from the early 1980s to the present. Baudrillard states in his analysis that commodities are not merely to be characterized by use-value and exchange value, as in Marx's theory, but sign-value - the expression and mark of style, prestige, luxury, power, and so on - becomes an increasingly important part of the commodity and consumption. From this perspective, Baudrillard claims that commodities are bought and displayed as much for their sign-value as their use-value, and that the phenomenon of sign-value has become an essential component of the commodity and consumption in the consumer society. For Baudrillard, the entire society is organized around consumption and display of commodities through which individuals gain prestige, identity, and standing. In this system, the more prestigious one's commodities (houses, cars, clothes, and so on), the higher one's standing in the realm of sign value.[43] Baudrillard claims that in the media and consumer society, people are caught up in the play of images, affects and performances, that have less and less relationship to an external "reality," and the media-saturated consciousness is in such a state of fascination with image and spectacle that the concept of values and their meaning dissolves.[44]

Regarding the question whether rareness of material is always connected to value, it seems there is no clear proof to that. Apparently there are strong connections to economies interest, technology, and marketing. For example, Palladium metal has always been rare, but since 1990 the demand has grown steadily because the automobile industry started to use it for catalytic converters. So before this metal gained popularity it was not seen as an important valuable material. The same can be said for platinum metal. Its increased degree of esteem is also a striking example for an excellent marketing concept. In 1975 platinum producers founded an international community the "Platinum Guild" as a dedication for platinum promotion on a high and luxury level. They have been working together with jewellery shops to train, support and provide sales, thus over time, people's value perception for platinum increased.[45] On the other hand, Gold's value is historically a cultural phenomenon. It has been a universal representative for quite a long time until today, but why has gold always been and continues to be valued so highly? Even if we go far back to the old days, gold was so treasured that the pursuit of it led to human violence ranging from war to colonialism to slavery. Gold has been used for ritual objects and jewellery since the sixth century BC and also as a medium for exchange or money. The first known use of gold in transactions dates back about 6000 years. Almost every established culture has used gold to symbolize power, strength, wealth and accomplishment throughout history.

[42] M. Foucault, The Order of Things, published by Routledge, London 1998 ,p. 206
[43] Stanford Encyclopaedia of Philosophy; Early Writing: From the System of Objects to the Mirror of Production
[44] Stanford Enclcyclopaedia of Philosophy, Jean Baudrillard, published 2005
[45] Platinum Guild International, www.preciousplatinum.com

The main reason why gold is seen as so valuable is its scarcity. Even with the estimation that 75 percent of all gold, that has been produced, has been extracted since 1910, gold remains one of the rarest metals found on earth.[46] Mining for gold is a very expensive and difficult process. To extract one ounce of gold, it is necessary to dig and move about ten tons of dirt or rock. It is very laborious and can only be done in certain geographic areas. Other reasons why gold is considered to be valuable are some very unique qualities, for example gold does not rust, corrode or degrade and it does not interact with other elements. One property of gold that contributes to its value is that is extremely malleable and ductile. This means that it can be stretched, pounded and twisted without breaking or cracking, this allows shaping gold into many different forms such as jewellery. Gold is also an excellent conductor of electricity and is used in computer circuits and many computer and audio cables have gold plated contacts.[47] Today we continue to use gold for our most significant objects: jewellery, wedding rings, Olympic medals, Oscar medals, money, crucifixes and religious art. Gold is actively traded on world markets. It is treated as a commodity, and seen as a refuge for investments during tough economic times. Investors believe that gold will always keep its value, while currencies and stocks will not.

All of these aspects contribute to the conviction that gold is so valuable, also because everyone agrees that it is.

These facts lead to the questions, if other rare (precious) metals are following a logical price consequence according to their scarcity? Comparing the physical abundances, by weight in the earth's crust, the metal iridium is the rarest. It is about half as rare as gold.[48] It is followed in order by gold, rhodium, palladium, platinum and silver. Although iridium is the scarcest, but its price is modest because its utilities are minor and it is not as popular as gold or platinum, people are not so emotionally attached to it. Rhodium has a similar price increase as palladium (which I already mentioned above). Until 1985 it never traded above $1000 per ounce, but it rose to $5350 in 1991, and then moved up to $10,000 in mid 2008. Analysts cite the boom in the use of rhodium for automobile catalytic converters, combined with chronic work stoppages at South African mines where most of it comes from. Aside from the converters, rhodium serves to harden platinum and palladium and appears frequently in jewellery, especially as plating over white gold.[49]

Although most content of the historical theories referring to their time they were developed, some of the thoughts are still up to date; for example, throughout history until today, humans have had phenomenal similarities in desire and value perception. After studying and gathering these facts, it is even more believable that mass media and marketing today are able to shift, steer, manipulate and control values also with the methods Baudrillard mentioned. Mass media have also a big impact on material culture in the field of jewellery. Thus taste and style can be shifted in specific directions. So as seduction animates and routes our desire through things, we tend to want, the thing seems always just beyond our reach. We feel this gap as a lack or a resistance to our desire to possess.[50] Commercialized jewellery promotes with messages like eternity, rareness, purity, beauty and uniqueness and these terms are used as metaphors for material values. This

[46] http//: www.goldsheetlinks.com/production 2.htm, World Gold Production, Data from USGS Historical Statistics, 2006
[47] World Gold Council, 10 Old Bailey, London, United Kingdom
[48] M. Winter, Webelements.com Scholar Edition, University of Sheffield, UK, 2010, http://www.webelements.com/
[49] BASF-Catalysts- Metal Prices, http://www.catalysts.basf.com/com/apps/eibprices/mp/
[50] N. Cummings, M. Lewanddowska, The Value of Things, published by Birkhäuser, Basel, 2000, p. 142

might be one reason why precious metals and gemstones are still dominant in mass consumption.[51]

I am most interested in the fact of our scarcity economy. This means that our entire economy is based on the idea that resources for survival are scarce and therefore valuable. Once science is able to effectively manipulate material at the quantum level abundance will be the law. This however is a trade-off, because we will be dealing with a dismantling of nature. Other problems could emerge in a post-scarcity economy like out-sourcing of human activity, and runaway economic models.

Value of Experiences

"This post-modern universe is one of hyper reality in which entertainment, information, and communication technologies provide experiences more intense [...] The realm of the hyper-real for example amusement parks, malls and consumer fantasylands, TV sports, and other excursions into ideal worlds, may shape an individual's thought or behaviour."[52]

Jean Baudrillard

Experiences are becoming a new source of value. An experience means to enjoy an action or event in a personal, memorable way. The value of experience was long time largely underestimated and unrecognized. The possibility to "experience" a special service has become a growing customer need. While rushing for lower and lower prices for commodities and goods, people on the other hand are more and more aware of the money and the time they pay for services and moreover of the ways of turning them into memorable experiences.

Experiences offer a new value, different to the other value factors. It is important that an experience is inherently personal. It is created within the customer. Perhaps the most straightforward approach to making objects more experiential is to add elements that enhance the sensory interaction. Rich with sensations each experience derives from an interaction between the event and the individual's state of mind and being. While the work of the experience perishes (e.g. the played theatre play, the sung song, the eaten meal), the value of the experience lingers in the memory of an individual who was engaged in the event.[53]

One aspect of experiences is entertainment, from plays and concerts to movies and TV-shows. Over the past few decades, however, the number of entertainment options has exploded to encompass many, many new experiences.[54] The customer is engaged by companies in a special and personal way. So every time, when a company engages a

[51] Platinum Guild International, www.preciousplatinum.com
[52] Stanford Enclcyclopaedia of Philosophy, Jean Baudrillard, published
[53] B. Joseph Pine, J. H. Gilmore The Experience Economy: Work Is Theatre & Every Business a Stage, Harvard Business Press Books, Boston, 1999, page 12, 13
[54] B. Joseph Pine, J. H. Gilmore The Experience Economy: Work Is Theatre & Every Business a Stage, Harvard Business Press Books, Boston, 1999, page 2

customer in such a personal, memorable way by staging an experience, it will be this new form of a valuable action. However, staging experiences is not just simply about passively entertaining customers but the more, engaging them with active participation. Theming an experience is therefore important and means scripting a participative story.

There are four different main areas of staging experiences: entertainment, escapism, education and aesthetic.

The Entertainment - The experience is passively absorbed through the senses. Entertainment provides not only one of the oldest forms of experience but also one of the most developed and today, the most commonplace and familiar. Examples for this realm are cinema, theatre and opera performances.

The Educational - With educational experiences the guest absorbs the event unfolding before him. Unlike entertainment, however, education involves the active participation of the individual. To truly inform a person and increase his knowledge, educational events must actively engage the mind and/or the body.

The Aesthetic - In this experience, individuals immerse themselves in an event or environment but remain passive. It includes for example visiting an art gallery or sitting at the Café Florian in the old world Venice.

The Escapist - The guest of the escapist experience is completely immersed in it, an actively involved participant. In fact it is the opposite of pure entertainment experience. Escapist experiences are not just about embarking *from* but voyaging *to* some specific place. Examples are theme parks, casinos, virtual reality headsets or chat rooms.[55]

To summarize, while guests partaking of an educational experience want to *learn*, of an escapist experience to *do*, of an entertainment experience want to *sense/see*, those partaking of an aesthetic experience just want to *be* there, while many experiences engage primarily through one of the four realms outlined above, most in fact cross boundaries.

The reasons for the development and increasing need of value in experience in our society are various. Partly the answer lies within technology, which powers so many different experiences and partly with increasing competitive intensity which drives the ongoing search for differentiation. But the main reason of experiences as a value factor resides in the nature of economic value and its natural progression. Another reason seems to be the rising wealth, e.g. as a man's response to increasing affluence can be found in an increasing frequency in having festive meals.[56] Sometimes a limitation of availability of a product can help as well to increase the value. So a mere ownership of a hot item can turn a good/object into an experience, heightens the experience of having *one*.

Since the time after the second world-war, the relationships between customers on one side and goods and services on the other side have changed continuously. First utility values of products have been placed at the center, e.g. durability, reliability, technical perfection. Now the experiential values of the offers are emphasized. Products are no longer offered as

[55] B. Joseph Pine, J. H. Gilmore The Experience Economy: Work Is Theatre & Every Business a Stage, Harvard Business Press Books, Boston,, 1999, page 30-35

[56] T. Scitovsky, The Joyless Economy: The Psychology of Human Satisfaction, Oxford University Press, New York, 1992, p. 67

means to a specific purpose, but as an end in itself. They should satisfy themselves, independently of their applicability.[57]

The reason why I am studying value of experience and why I would like to include it in my work is, as follows: As I mentioned before, the focus in the current field of contemporary jewellery is primarily set on passive factors but to my opinion, a physical/active experience could be perceived in a stronger way, than just a visual experience. Why not including other senses, for example taste, smell and touch? Also another fact will play a main role in my work: performing perishable moments, to support the idea of the story and to add more value to it.

When designing experiences, however it is important to consider detailed questions, such as, what should the guest/wearer do? What can be done to improve the aesthetics of the experience? What could I do to make the environment more inviting, interesting or comfortable? What information or activities will help to engage them in the exploration of knowledge?

Considerations about Contemporary Jewellery

Working for many years in the field of contemporary jewellery, it is not difficult to become dissatisfied with some aspects within the scene. Regarding these problems, lead to think about the question: Are there possibilities to contribute to a change in the development of jewellery materials and their value perception, especially for contemporary jewellery art towards the future? Moreover, how will the whole field develop, how could I creatively think about modifying the general approach? Here some negative facts:

Artistic jewellery has a lack of popularity in general and a very small business market, compared to traditional products. We rarely find it on the body of end consumers. The basic cause of this problem is, that this kind of adornment demands a more or less high degree of personal identification, thus many people are simply not bold enough to wear it. Another reason is certainly also because the actual market with its mainstream taste and its idea of certain material values is far away from the scientific community in which an artistic statement usually dominates a piece, no matter of material choices, sizes and aesthetic appearances. In addition I believe that culture and especially art will always have a tricky relationship to consumption because art idealism seem to have a fundamental disconnection with the capitalist marketplace in common. No arts and crafts project has been financially viable for long, unless it transgressed the principles of the movement by resorting to cheap labour or mass production.[58]

Although many jewellers try to reshuffle the perception of traditional values, the field can be divided in a more experimental section and a more commercial group (and of course some in between), due to the very different mainstream taste. For the group who approaches their work more experimentally, it can be said that there is no longer any hierarchy in materials. Starting point for this kind of work can either be a deep investigation

[57] G. Schulze, Die Erlebnisgesellschaft, Campus Verlag, Frankfurt am Main, 2. Aufl. 2005, p. 13
[58] Edited by G. Adamson, The Craft Reader, published by Berg, Oxford/ New York, 2010, p.135

concerning materials and techniques or a conceptual approach, in which the choice of material can be strongly connected to the narration of theme and statement. In this artistic approach, jewellers are aware that the value of their work is not necessarily connected to the value of material, but the value of the idea, story or concept. The more moderate group of jewellers whose work is still artistic but towards commercialisation has fewer problems to find clients when jewellery contains elements which are perceived as universal representative values such as gold, silver and gemstones.

As mentioned before, there is almost no market and no demand for this kind of art, also because there is almost no awareness in our society. Not even well known artists can usually survive in this system without doing any sideline or supplementing their income through teaching. If we compare artistic jewellery to the fine art field, there is a lack of commercial business, but why? It is not always clear why the demand has persisted in some fields but not in others.[59] However a big problem from my point of view is that we jewellers prefer to "stay" with our work in the frame of experts in order to be understood and to get recognition, but we also need to create a broader demand in society for it.

The gallery system which is still the main way of promoting our art, does not work well for many artists (except for those who work towards commercialisation). That shows the market conditions as well as little demand for artistic jewellery. Even though many jewellers still belief in the system of an idealised role-sharing between artists and gallery owner, (the artist is solely working in a sheltered refuge/studio, while the gallery is promoting and selling), I have doubts that this model still reflects the reality of the market, nor is it necessarily an ideal set. To my experience many customers like to get in touch directly with the artist to share the same perception on values, and especially if the story of a piece is more conceptual, in order to a better understanding for their work. Another problem of the galleries is that it reaches just a certain target group.

One more problem is how we jewellers present our work. Why do we exhibit quite often without placing any context? Predominantly we can see adornment in white cube system set up's which are not always appropriate because it does not show any body relation.

Benjamin Lignel, a well known French jeweller and critical thinker is writing about promotional problems in the field. His thoughts: "Jewellery lives in those places and proliferates through media that are not its own: photography, graphic design, power point presentations, the written and the spoken word. There is a wide discrepancy between the implied end-goal of our profession (to create work that finds its justification in its interaction with users - as collectibles and functional objects) and the actual 'life' of jewellery objects. They live in print first and foremost "[60] I strongly agree with his statement, even though I am aware that pictures and graphic design are quite important and helpful especially for branding and recognition value.

While reading about this issue, I came across an interview with Soetsu Yanagi, a Japanese scholar and theorist. To the question what is lacking in the artist-craftsman's field, he replied: "From the very beginning the products are made for art collectors and becoming disconnected from the life of the people. The artist craft-craftsman separates him from need, and thereby divorces himself from the people around him. If the artist-craftsman

[59] Edited by G. Adamson, The Craft Reader, published by Berg, Oxford/ New York, 2010, p. 349
[60] B. Lignel, "CCTV", Klimto2.net, 2010

continues isolating himself from society, he has a responsibility to admit with humility that his position of self-expression is one of insufficiencies. [...]"[61]

Ideas for the Future of Jewellery

This chapter is brainstorming and focusing on some creative ideas, from raising awareness, to marketing, promoting and exhibiting solutions for contemporary jewellery. During my post graduate studies I have been highly motivated and encouraged to develop own ideas, influenced by the academic environment but I also want to pick up on great ideas class mates or other artists generated.

In my opinion a better awareness for the value of our work in public might be achieved if we promote it to a broader audience. One tool could be to get a better network connection for using more mass media like television and newspaper because they are still important for people's opinion formation, taste and education. The internet, so far has not achieved a bigger shift yet, but however it is promising because we might have not fully discovered the right way of promoting and addressing our work. The difficulty of transferring value from a three dimensional work into a two dimensional image can be improved with videos and pictures also with jewellery shown in worn condition. The enormous data amount in the vast net can be a problem as well, since our work can easily be "drowned" therefore it is a good idea to place it well and easy to find. The virtual world is growing constantly thus "Second Life" for example; with its possibilities of making business in different creative cultural sections could be one option to exploit. I belief that people in the virtual world follow their life style and desire in similar patterns but they might be encouraged to dare more, and to be more creative than in real life.

Other alternative ideas could be to place the work in an uncommon background, depending on theme we could choose a collaborative context which could lead to more attention, for instance, why not displaying a certain political work at a political "hot spot"? Dana Hakims jewellery project about the Middle East conflict "I care a lot" was an interesting initiative also because there are not so many political projects out there. The integrated and related panel discussion within a gallery exhibition context was progressive and uncommon as well. Some time ago, I was impressed by hearing about another very engaged and bold project. Daniel Barenboim, musician and initiator/conductor of the East-Western Divan Orchestra, which consist of musicians from Israel, Palestine and different countries of the Middle East, followed the idea of performing a concert in Ramallah (2005) which is a critical political area in the Middle East. The aim of the concert /ensemble was to promote a better understanding between Israelis and Palestinians for a peaceful and fair solution of the Arab-Israeli conflict. For many members it was a challenging and risky project but nevertheless it did not fail. Choosing this special area for a concert made this project historically unique. Through media reports it became popular far beyond the actual target group. Maybe there are more possibilities in some social areas we have not taken advantage of?

[61] Edited by G. Adamson, The Craft Reader, published by Berg, Oxford/ New York, 2010, p.169

I am convinced that makers can be very good promoters on their own, and launch alternative exhibition and sales platforms such as artist-run spaces, online shows, private exhibitions and self-publications. It is definitely worth considering also other exhibition places than galleries since it always reaches just a certain target group. Last year a class mate developed an idea to exhibit jewellery in a hair dresser's shop. I liked the approach because firstly people who never attend a jewellery gallery could see our work; secondly customers were able to perceive the pieces worn by humans, and thirdly showing interesting work in a stylish but inartificial environment on well and trendy dressed people can surely be perceived aesthetically in a positive way. Are there even more and other areas we could think of? One idea of showing adornment could be other cultural and public spaces like museums. What if each of the staff was wearing a piece of jewellery (combined with fashionable clothes). Additionally some pieces could be exhibited and sold in the associated museums shop. Also a special art café which focuses on cultural offers like exhibitions and performances could be an option. For all those ideas the staff can be included and used as a presenting showcase.

Depending on work there are other alternative options to exhibit and promote. I am convinced there are possibilities to collaborate also with other fields. For example to my opinion it is quite interesting to merge art and science. While science sometimes can be perceived as a bit "dry" and theoretical, art on the other hand, can have a more playful approach. Thus both fields could benefit from each other. If a work is inspired by, and connected to science, it could be exhibited in the same or similar context. A while a go I read about an interesting event: A travelling project initiated by a medicine endowment (in Germany) wanted to raise a broader awareness for colonic cancer in society, they set up a huge (bowel) organ as a sculpture. People were able to walk through; on their way they could gather information and at the same time they could gain experience. Even though this project had little to do with art because the aim was more about education and experience, nevertheless it might have been an option to show related art and contemporary jewellery.

I am aware of hierarchical differences between the fine art field and craft but nevertheless I am also open for collaborations in this direction. If a jewellery project is strongly connected to art, in concept and appearance, an interesting combination with fine art can be made. To exhibit together or next to each other could show connections, boarders and differences, both parties could benefit from each other. It also would be a helpful option to decrease hierarchical stereotype thinking, since many artists working in the fine art field think about craft just in terms of mass production, handicraft, and skilled, useful and pretty objects. Another aim would be to trigger the attention of art collectors who are willing to spend tremendous amounts of money on objects, installations, and performances in the fine art field.

The whole experience design sector with its growing demand can be exploited and might serve as a collaborative partner since it apparently offers a good business. A German agency with several branches in shopping malls and diverse online offers, sells more than 350 different possibilities of experiences, from extreme adventure ideas, like house running, body flying, bob running, and air boarding, to cultural experiences like dinner in the sky events, to creative seminars, like graffiti workshops, body painting, burlesque photo shooting and many other offers. Depending on the work, there might be possibilities for us to participate. If a work has special experience and performance features, for example a jewellery piece which can be eaten, it might be able to fit into a suitable sellable event, of

course combined with a perfect and understandable background. The most interesting event (and the only one which picked up on an experience idea) around the "Schmuck" fair in Munich last year was a group of students, who created a little interactive jewellery factory with an assembly line in which a customer was directly encouraged to participate and "help" in the production process of a jewellery piece. Thus not the final product was most important, but the entertaining and interacting experience a customer could get. Other directions in which people can be invited to get a special experience combined with jewellery might be worth to think of. From entertaining events, e.g. motto parties, to escapist happenings e.g. voyage to virtual worlds, to aesthetic encounters e.g. being at special places or educational experience, e.g. participate in a hobby jewellery course.

Most jewellers focus primarily on the object itself: how it performs. What if the attention is centred instead on the individual's use of the object? The focus would then shift to the user: how the individual performs while using the object. That approach would lead also to more exciting exhibition concepts, the human body directly involved. A striking example caught my attention, the exhibition "Ladies First" initiated by Otto Künzli. In the frame of an annual student exhibition at the Academy of Fine Arts in Munich, ladies were invited to exhibit a piece of contemporary jewellery. While wearing, they were encouraged to move, eat, drink and talk. Dressed up in their ordinary clothes, it offered an ambivalent, strange but successful combination in which the audience could focus on each individual's performance.

So far, there are not many jewellers, who promote their work differently; however I want to mention Yuka Oyama's "Schmuck Quickies" (jewellery quickies). In this performance the artist created spontaneously customized jewellery for volunteers according to their idea, made of cheap recycled materials. From my point of view it was a remarkable and innovative way of rising awareness for contemporary jewellery in a playful manner. Especially those people who never would attend any gallery were invited, since the set up took place in different shopping malls and other public spaces around the world. It was a helpful project for raising awareness for individual values (especially material values) to a broader audience.

Conclusion / Discussion

Writing this essay was an important starting point to create an academic foundation to the project's theme. The paper investigated issues in a broader sense, according to questions with different subjects, in order to draw a dystopic science fiction picture of the future. One main focus, the studies of scientific facts about resource's decline and depletion, especially oil, can be summed up as a very crucial element in discussions and predictions about possible coming times. The gained knowledge about resource dependence and its complex interweavement into modern societies could clarify the relevance of the material as well as its interconnection to other elements in the whole ecosystem. It was mentioned before that already a sharp decline of crude oil supplies could easily cause severe economical problems due to enormous price increases. To prevent this from happening, it is an enormous challenge for scientists, politicians, visionaries and artists to discuss and generate new ideas and solutions for adequate energy sources and material replacements.

Another main area explored the discourse about values in general and their connection to scarcity. From a rational point of view, a direct relation cannot always be found between a rare material and its value perception. Especially the strong appreciation for gold has been remained on a non explainable, phenomenal level. If crude oil will be highly valued when almost depleted, once in the future, can not be answered, there are too many unpredictable factors, hidden in the unknown, which can not be considered yet. However, to study about values in general was helpful for a better understanding about human reactions and value convictions within a society but also on a global level.

Another chapter was dealing with value of experience. The paper could prove societies increased demands and significance for it. At the same time it could be demonstrated a shift in value perception, from merely consuming commodities and goods towards consuming memorable and personalized designed time. The studies could ensure the assumption that values can be manipulated and directed. It also showed that desirability and value perception are closely connected to trends, mega trends and brands.

The part -considerations about the field of contemporary jewellery- revealed difficulties within the system, like the gallery situation, but also problems outside the scene, for example, the lack of popularity of contemporary art jewellery on an international level. As a conclusion it can be said, that not every jeweller faces the same problems. It very much depends on how sellable a work is and how ambitious artists are, including themselves in the money making process. Anyway, as mentioned before, there are many more jewellers who have to supplement their income by means of teaching or doing any other side-lines, thus colleagues are usually complain about their very bad economic conditions.

To take in a positive discourse about aspects and ideas for changes, according to stated difficulties, the final chapter was important. Providing a brain pool of thoughts for a variety of working methods and artists who focus on different highlights, it can be seen as a positive approach or invitation to deal with the negative aspects by applying creativity also for marketing strategies and business ideas to overcome eventually particular problems.

Connecting a subject about resources like crude oil to the medium of jewellery might be perceived as strange and/or incoherent because people usually relate adornment to something beautiful, whereas oil is generally seen as a negative, political, environmental and problematic substance. However, if we compare traditional jewellery materials like gold to oil, some similarities can be found: It is not without reason that oil is also called "Black Gold". Global economics, from the past to the present show, that both materials have been treasured highly, also in a way which sometimes leads to war and human violence. Both of them represent status and wealth. While gold has been valued for showing power and for keeping it as investments, oil on the other hand has been valued for its very useful consuming possibilities. Both materials are responsible for severe ecological and environmental problems when mining and extracting but nevertheless, no one stops consuming or stops digging because the desirable will stay with us as long as human beings exist.

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