coordinated, mondial actions of all people responsible in industry, in religion, in politics, in culture. If this coordination and cooperation is not realized we are just lost. Therefore let us try to use also the new technology to «forge» unity for global and mondial cooperation and coordination for creating a new harmony between the virtual society and the natural world. A possibility which we really have before us today, perhaps also tomorrow. However, if we don't take the necessary steps in a short time, the option of harmony between both can be definitively lost.

<div align="right">**F. Vandamme**</div>

THE TWENTIETH/TWENTY-FIRST CENTURY: THE VIRTUAL LEARNING SOCIETY

At the end of the twentieth century we see the start of a new revolutionizing internationalization gulf, a world globalization combined with enormous progress of new technologics. Where in the pre-industrial and industrial revolution, the substitution of manpower by machines was realized, we see that not only this is accelerated but becoming even more penetrating by the substitution of human intelligence by machine intelligence. This last substitution has as a consequence that the need for traditional workpower is drastically reduced. We can even expect that the traditional manpower in 2020 will be reduced with 93%. The service sector and education will now see the dramatic reduction of manpower, which has and is still going on in industry. Moreover through the internationalization and globalization (Internet), countries with low and informal social institutionalization will take what rests of traditional manpower over by these countries and cultures with a very cheap, but highly preformatted labor, in other words. We can expect that this will lead, like it happened in the 16th century to a very dualistic society, with a large poor community and a small rich top. We can also expect new ideologies to arise, to find new answers for social organization. This can very easily lead to social instability and insecurity. But it is also true that this scenario isn't necessary. **The new technologies can on the contrary lead a very stable society.** Indeed **for the first time the possibility is created that work is generated for everybody.** «The right of work for everybody' has always been a beautiful but irrealistic wish. But the new technologies have changed all this too. It is true it has destructed and is still going to destruct traditional work. But it can generate enormous

<div align="center">19</div>

and unlimited new types of work. To understand this process and its consequences is not easy but important. If we are not fastly becoming aware of it, inevitably we arc going to a disaster, instead of constructing a better world, with a plurality of better and more developed cultures …

1. From the Material dominant to the Virtual dominant Economy : Virtual Money, Virtual Work, Virtual based Hierarchy, Virtual Wealth

For centuries, we have a scarcity economy. We had very low productivity. The productivity is mainly oriented towards the transformation of goods : materials. Through the industry, with its organization of manpower, through the sophistication and automatization of the tool use, we have a basic problem of overproduction. The market phenomenon that is the equilibrium between offer and demand, where the demand is socially a very complex and manipulated phenomenon becomes crucial. The social, cultural, subjective aspect of the needs becomes even much more important than the material aspects. As a consequence the production, the productivity, the industry grows enormously and the management of these processes through money becomes also much more complex. One sees that slowly but surely the «money» itself is also becoming dematerialized : virtual. Slowly but surely, the gold standard is weakened through all kinds of subtle mechanisms in the 20th century and finally entirely eliminated. So rather strangely, money becomes the measure of all values, the controller of all economic activities, the final rewarder of all activities and merits, and at the same time money has become a pure symbol, a linguistic sign, whose functionality is entirely determined by its environment and the trust in it by its users. Most importantly however it works, it functions.

Most strangely however the concept of «work», of remuneration, etc. has not seriously changed. Still today we use the basic pre-industrial and industrial concepts of working and remuneration. Working is the transformation and distribution by people of the material goods. Remuneration is determined on thc merit in the process of the production : transformation and distribution of these goods : so the handworker, the manager, the banker, the investor, all have there merit in this process and therefore they are and have to be remunerated. Indirectly the teachers, the government, the healthcare, the police, etc. as they are helping to create the conditions for stable production, they have also indirect merit and are paid for it.

So we see the danger of the growth and development of thc virtual moncy while at the same time one is sticking to the old material concept of working in an era where

the material work including the related services are fastly taking over by machines, robots, computers. So we have the prospects of 97% of unemployment in 2020!

But the development of money, and its transformation from material (gold) over paper money, towards : virtual money is a clear and pretty paradigm. «Work» has to follow this transformation from «material» to «Virtual Work». And all of a sudden in the same way as the shortage of gold doesn't limit the economic transactions though the transformation to virtual money. So also the shortage of material work doesn't have to limit the production, the working. The dematerialization of «work» for up to 99% we can expect in the future, and **this dematerialization of work opens the way for the first time in history for work for everybody. But this work will be virtual work: socially relevant but only related to material transformation in rather rare, limits cases** (note 1).

In the same way, the hierarchy construction which has been in western cultures so crucial and so strongly based, motivated and most and for all **expressed by material goods/wealth** will in the same way be substituted by virtual goods and wealth. **But first of all let us be aware that the final justification and motivation of hierarchy has always be through concepts, promises, dreams. The material goods have rather played a role for the confirmation and decorum of the virtual justification of the hierarchy.** The important chance today is not a change from material to virtual but **rather from material to virtuality too in the confirmation and decorum of the hierarchy.**

2. The Challenge of the Virtual Society/ Company and its Answer : the Virtual Learning Society/ Company and Culture

A lot of problems and challenges are today clearly present. How to realize a smooth transformation from the material dominant culture/society/ company towards a virtual dominant culture/ society/company. Such deep transformation normally induces social, economical, cultural, religious and political unrest and destruction. The vital challenge is to realize a smooth transition, without these destructivity which can easily cause some regional stagnation, which taking into account the internalization and globalization can start an irreversible set back.

The only other way open to guarantee a smooth transition towards the virtual society is :

1. Fast development of the infrastructure for the virtual society
2. Fast mass integration in the virtual society
3. Fast and smooth integration of the material and virtual processes

All this requires an active, proactive, conscious and cooperative effort of all responsible people : politicians, managers, workforce, religious leaders and military leaders formal and informal ones : to realize the learning societies/companies/ cultures. A learning society/company/culture in which adaptation and accommodation is central in an environmental group/individual harmony perspective, with openness for creative innovation: rule based and rule transcending innovation, in view of ameliorating cooperation, coordination and communication for the sake of ascending in a dynamic harmonic society of societies, of culture of cultures, of society of companies.

At the same time being prepared to change it standards, its norms in either direction in view of a long-term amelioration of the dynamic harmony. Short-term amelioration anyway may not endanger long term harmony. Moreover, stability is also a very crucial feature. The effort for realizing short term amelioration in harmony has to be evaluated and judged in the perspective of its eventual negative effect on the global be it dynamic stability, which is also a vital parameter of dynamic harmony.

3. Outline of some central Features of the Virtual Learning Society

We can make some extrapolations on the expected features of an efficient answer to the future virtual society as we see it under construction. Such extrapolations are based on the past cultural transformations in the western world and outside it, as well as on the tendencies and changes observed within the present social, economic, cultural structures and their effects; disturbances and ameliorations they create in their immediate or distant environment (in time and space).

The main features of the virtual learning society we extrapolate are :

1. Visual/3D dominance
2. Virtual action oriented
3. Virtual group oriented
4. Cooperation oriented
5. All material use will be minimized

6.   The virtual work is oriented towards an optimal use of the material backbone be it only indirectly after the nth level.

7.   Learning is predominant virtual action oriented : skills are learned and ameliorated on the basis of virtual action.

8.   Concerning knowledge of facts, a lot of time is spend on the knowledge of the past, and the social, economic history and the historic role of virtuality in human and non human culture and its growing importance, and how this is integrated in the virtual management skills.

9.   A rotation system is elaborated so that everybody is involved in 3% of his time in productive material transformations in one way or another. About 30 to 50% of his time is related to involvement of enrichment of skills for realizing material transformation through virtual activities. The rest of the time is used for collaborative communicative and coordinating virtual and real activities for personal and group development of different kinds : religious, sexual, sport.

10.   The virtual activities will be an 80% interpersonal collaborative activity. Of this, 70% will be virtual interpersonal (through a virtual medium) and 30% traditional interpersonal with virtual tools.

References

Vandamme, F., 1992, The Knowledge Professional, the Knowledge Company, the Knowledge Economy, the Knowledge Society, Newsletter, vol. 7, nr. 4, pp. 35-36.

Vandamme, F., Hamerlinck, A. & Muller-Malek, H., 1992, The meta-knowledge Company, Library Bulletin, vol. 7, nr. 2, pp. 21-24.

Vandamme, F., 1993, Virtual Reality - Augmented Reality for Cooperation, july-august, Newsletter BIKIT, pp. 125-128.

Vandamme, F., 1993, Virtual Reality - Augmented Reality for Cooperation, CCAI, Vol. 10, nr. 4, pp. 357-366.

Vandamme, M. & Vandamme, F., 1993, V/AR as KIT-Refinement, Library Bulletin, vol. 8, nr. 8, pp. 121-124.

Vandamme, F., Sorñe, V. & Vandamme, M., 1994, Training Space Definition within Virtual and Augmented Reality, in L. Taruffi, Virtual Reality in Education, Training and Disability, SIRV, Bologna.

Vandamme, F., 1994, Business Process Systems, Annual Report BIKIT, pp. 16-24, Gent.

Vandamme, F., 1994, CIM and V/AR, BIKIT Library Bulletin, Vol. 8, nr. 11-12, pp. 173-174.

Vandamme, F., 1994, The Information Super Highway, in Business-opportuniteiten van de informatiesnelweg, IIR, Antwerpen.

Vandamme, F., 1995, *Virtual and Augmented Reality : Challenges and Successes,* Virtual Reality World '95, Stuttgart.

Vandamme, F., 1995, *Multimedia, virtuele en uitgebreide realiteit en educatie,* in : Persoon en gemeenschap, Tijdschrift voor opvoeding en onderwijs, 47ste jrg., april/mei, nr. 8-9, pp. 305-316.

Vandamme, F., 1996, *Virtual Science Parks better or complementary to real ones ?* BIKIT Library Bulletin, vol. 10, nr. 6, pp. 79-80.

Vandamme F., 1997, *3D-Visualization, Network Use and Business Process Systems,* in : Gausemeier J. (ed.), International Symposium on Global Engineering Networking, part II, Heinz Nixdorf Institut, Paderborn.

Vandamme, F. & Reremoser, M., 1997, *Virtual Work : their Dangers and how to avoid them,* in : Vandamme F., Towards the Virtual Society, The Phoenix Series, Gent.

Т.А. Бегалова

OCTOPUSI — УНИКАЛЬНЫЙ ПРОЕКТ ФЛАМАНДСКОГО СООБЩЕСТВА ДЛЯ РАСШИРЕНИЯ МЕЖДУНАРОДНОГО СОТРУДНИЧЕСТВА

Интенсивные курсы по улучшению университетского менеджмента, проведенные на высоком Европейском уровне в рамках проекта OCTOPUSI в сентябре—октябре 1997 г., были организованы в Офисе международных отношений Гентского университета (Бельгия) как часть стратегии расширения межуниверситетского сотрудничества Евро-Азиатского уровня.

Участники программы были приглашены из ведущих университетов 6 стран: Вьетнам, Китай, Монголия, Россия, Украина, Южная Африка.

Общей чертой этих университетов являются хорошие образовательные и научные традиции, мощный кадровый потенциал, известные выпускники, ведущая роль в своем регионе, стремление к интеграции в мировую образовательную систему, по недостаточная акцентированность структур университетского менеджмента на интернационализацию образования.