

# L R I

# SYMBIOSIS DESCARTO-ACKERMANNO-FILKORNISED: WHY AND HOW?

FRANOVA M

Unité Mixte de Recherche 8623 CNRS-Université Paris Sud – LRI

04/2005

Rapport de Recherche N° 1406

#### **CNRS – Université de Paris Sud**

Centre d'Orsay LABORATOIRE DE RECHERCHE EN INFORMATIQUE Bâtiment 490 91405 ORSAY Cedex (France)

# Symbiosis descarto-ackermanno-filkornised: Why and How?

#### Marta Fraňová

Laboratoire de Recherche en Informatique Bât. 490, Université Paris-Sud, 91405 Orsay

**Abstract:** This paper is a scientific popularisation and presents the first key to understanding technologies considered or even proved by the standards of modern science as impossible to produce. The main obstacle for the perception of this key is an incorrect understanding of relativity that leads to the absolute power of opinions, points of view that put aside and even into a position of illegality, the role of a professional diagnosis and of the "invention from nothings" (not to be confounded with the creation or the invention "from nothing" or even with the creation "from scratch"). The paper presents also major differences between an excellent workman and a professional. These are vital for understanding the price of the "invention from nothings".

#### Introduction

Steven Covey, in his best-seller *Seven Habits of Highly Effective People* presents three pictures to "demonstrate clearly and eloquently that two people can see the same thing, disagree, and yet both be right". The truth, by his conclusion, is an affair of psychology. Let us have look at this picture:



I will not ask you to participate at the experience proposed by Stephen Covey, I give immediately the two images presented by Stephen Covey to show you what people can see in this picture. Some recognise there a young woman, some an old woman. Only a trained eye of an artist, or someone used already to this kind of pictures may be able to see them both, and this "see" is not seeing simultaneously, but rather "knowing" it mentally. So let us have a look at the imitations of a young woman and the old woman hidden in this particular picture and be conscious that people participating at the experience were ready to fight for the rightness of their points of view.





**Convention 1:** We shall call "woman + woman" the first picture. Since Stephen Covey does not give the name of the artist who made it, we shall call him René. We shall call Pierre the author of the first imitation (on the left), the picture of young woman, and Paul the author of the picture of the old woman.

**Remark 1:** This seems an unusual start for a scientific popularisation, but it may be interesting to note that if Ancient Egypt had these three pictures at its disposal, I believe that we would be, today, all Egyptians. In other words, these pictures have not only interest from technological point of view, as I shall show in this paper, but they concern the survival of the Civilisation. Thus, they concern not only the Art to Conquer and to Govern incarnated in the symbol of the Gordian knot to be untied, and not to be cut, but they concern also the Art of "immortality" as incarnated by the symbol of Phoenix rising from its ashes ("from nothings" and not "from nothing", not "from scratch"). These three pictures can be shown to be far more important than the picture used to represent the Ying/Yang. They are a start for understanding the main difference between the occidental civilisation and the civilisation as it seems conceived by Chinese. They are also a start for understanding technologies that are possible to produce only if the standards of the modern science are correctly adapted to handling the particular conditions and circumstances in which such technologies, technologies that rise "from nothings", can be invented. They are also a start for understanding the incompleteness of the present patent law, the incompleteness that is one of the reasons why such technologies have no chance to come out. In this paper I shall restrict myself only to technological and legal aspects of these three pictures.

Remark 2: Stephen Covey did not realise what a treasure passed unnoticed in his hands. This is not surprising, as he is a very good observer able to resume all his beliefs in seven principles, recently completed by the eighth in his recent book *The 8th Habit*: From Effectiveness to Greatness. He is a very good workman that justifies his work and his points of view by a strong reference to the God. This allows me to point out three **differences** between an excellent workman and a professional. The **first** — the sole permitted reference of a professional concerning the God is: "Help yourself and the God shall help you". The faith of a professional is expressed in his Professional Credo and is based, among others, on the effective materialisation of the ancient formula "Know yourself and you shall know the Universe and its Gods". This means that instead of a reference to a divine scale, a professional stays on human scale without intervention of the Emotional Bank Account promulgated so much by Stephen Covey (Seven Habits of Highly Effective People, p. 188-190). The **second** is that a professional never expresses publicly his "opinions". His liberty is reduced to present a professional diagnosis. These three pictures allow understanding this particular restriction of liberty of professionals. The **third** difference between an excellent workman and a professional is that while a workman can limit himself to a presentation and a transmission of a finite numbers of principles to everybody leaving the God to take the responsibility for dangerous secondary effects not foreseen by this workman, a professional has to give only to professionals and to people suitable to become professionals a possibility to know how to construct a "generator of assets" designed to manipulate correctly the infinity of secondary effects and secondary effects of those secondary effects and serve also, whenever necessary, for self-adaptation and self-justification of this generator.

This is to note that while Stephen Covey works in the framework of excellence, a professional works in the framework of exceptional. Excellence means a possibility of improving, exceptional means perfection in the sense that nothing can be added or extracted without destroying the Whole. The picture "woman + woman" is perfect in the sense that you can neither add nor extract something without destroying the illusion, the possibility to see a young as well as an old woman. Such perfection, even though its possibility is contested by the standards of modern science, is required as soon as the Survival of the Civilisation is concerned. This shows the necessity for a qualitative modification of the standards of the modern science. From excellence, leaving the question of the Survival of the Civilisation in the hands of the God, it is necessary to come to the exceptional that put this responsibility into the hands of the mere humans. Stephen Covey exploited the three pictures in the framework of excellence, let us see how they can be used in the framework of the exceptional.

### Points of view vs. Professional Diagnosis

Stephen Covey is happy to show with these three pictures that two persons can look at the same thing, see different things and both be right. This makes me rather unhappy not only for him, but for the whole Civilisation. Almost everybody will agree with Stephen Covey for the simple reason that the relativity of the truth is widely approved and vulgarisators of Albert Einstein are even ready to fight for their verdict that the relativity of the truth is proved by his scientific results. They do not realise that the results of Einstein do not speak of the relativity of the truth but, among others, they warn us that the simultaneity is impossible to perceive by an external observer moving and not adapting his measures, his tools, to the perception of the simultaneity even while moving. Thus, those that perceived either one or other woman in the picture "woman + woman" were, in the same way as Stephen Covey who had all the elements in the hands concluding at an "affair of the psychology", unable to detect in this picture a materialisation of a logical absurdity: the simultaneity of the presence of a young woman and a not-young woman. Expressed formally, we have here a materialisation of the simultaneous presence of A and not-A. Logically, it is impossible. Practically, materially, it is. However, the suitable tools for handling the simultaneity are required. It is not an "affair of the psychology", it is a matter of the technologies, it is a matter of a huge amount of money as well as of the "miracles" performed by a human invention.

The work of Stephen Covey is useful to make people conscious of possible different points of view based on the possibility of various interpretations of things. A thing, in this attitude, is a sort of art-work that is possible to interpret in various ways and nobody is hurt. People fight no more, each of them being happy with his own form of the truth. A long term secondary effect of this is the reign of the indifference and clans and sects formation. Each of them has its own truth. These three pictures, for a professional, are a possibility to show, by a professional diagnosis, that not only one should not claim that nobody is hurt if these points of view are respected, but also that the whole Civilisation is put in danger if such points of view are tolerated by the laws relative to the patents.

#### Points of view and the Patent Law

Let us look at our three pictures not as pictures, but let us imagine them as technologies. "woman +woman" becomes a technology invented by René. Its particularity is that it makes real something that is not possible to produce in a logical, standard framework.

The technologies of Pierre and Paul represent something that an observer not knowing the technology of René would consider as fairly good. And the patent law? What is its position? And we can now see that there is a difficulty that the present law is unable to handle. Let us ask: Are the technologies of Pierre and Paul counterfeits of that of René? And while it seemed that the notion of counterfeit is the sole legal term where the verdict was irrevocably: "Yes, it is a counterfeit." or "No, it is not counterfeit." but never "It is more or less a counterfeit." we have here a situation that was not foreseen by the lawmakers. For some, they are not counterfeits (they do not express the particular feature of the simultaneous presence of A and not-A). For some, they are counterfeits (it is true that they do not express the particular feature of the simultaneous presence of A and not-A, but they can mislead a consumer and motivate him to buy a cheap version of "woman + woman" without considering the secondary effects of cheap versions). In other words, we have here a case similar to that what happens in Spielberg's movie Terminal. Let us recall that in Spielberg's movie the person in charge for security does nothing to transmit this information of the defect in the law to superior instances in order to force the lawmaker to correct the law and create the immediate measures to render the life of the victims (Tom Hanks in the movie) of this default honourable. In our real case, let us have a look what happens if the law does not proceed immediately in correcting its default concerning the notion of counterfeit.

### Synergy vs. Symbiosis

The key word of American business, of the American life style, is the notion of synergy. In his *Principle-Centered leadership*, Stephen Covey writes (p. 37): "Synergy is the state in which the whole is more than the sum of the parts. Principle-centered people are synergistic." To specify more clearly his perception of synergy, let us add his words from *The 7 habits of highly effective people* (p.185): "Before moving into the area of Public Victory, we should remember that effective interdependence can only be built on a foundation of true independence. Private Victory precedes Public Victory. Algebra comes before calculus."

Thus, formally, we can represent the formula of synergy as understood today  $1 \oplus 1$  is more than 2

where the operation  $\oplus$  represents the "synergetic addition". It is necessary to note the presence of **independent** entities 1 and 1. Using the words of Stephen Covey we can say that each 1 in this formula has reached already its Private Victory, its independence. By this fact, the 1 that wants no more to participate at a synergistic interdependence can always come back at least to its Private Victory. Coming out of the "more than 2", this 1 preserves its identity. I shall leave you now to think of all the possible synergistic relations between the image of Pierre and the image of Paul, the young woman synergistically linked to the old woman. (A note for Stephen Covey: As a mathematician I can assure you that you are wrong when you claim that algebra comes before calculus. Look at the picture "woman + woman". Algebra and calculus create the same kind of picture.) The society, as build on principles of Stephen Covey, is a synergy of clans, of families (see The 7 Habits of Highly Effective Families), of "ones" reaching already their Private Victory. If you are a handicapped person unable alone to reach your Private Victory, you will remain, for your whole life, a handicapped person supported (or not) by the charity of private donors. Moreover, the Private Victory is measured by what kind of instruments? By the instruments based on the reign of the synergy, on the sovereign reign of 7 or 8 principles of Stephen Covey. The danger of this kind of self-reference (synergy measured by synergetic instruments) is apparent as soon as one becomes familiar with the notion of symbiosis.

Theoretically, I was taught the notion of symbiosis in biology thirty years ago. (I do not remember well the biological side, so do not insist on the fact that I am wrong from the biological point of view. What counts is my formal description.) Our professor spoke about a fungus(?) and an algae(?) that "lived together". When researchers separated very carefully the two bodies, both *died*. And this *death after an attempt to separate* symbiotically related organisms is what I want to be remembered.

## Symbiosis descarto-ackermanno-filkornised

The image "woman + woman" is a "symbiotic organism". It is perfect in the classical sense of the word Perfection. You cannot separate them without destroying the Whole. As Alexander Pope says in *An Essay on Man*:

All in exact proportion to the state;

Nothing to add, nothing to abate.

In other words, take a copy of this picture, take a Tipp-Ex and eliminate all the essential parts that represent the old woman. Do you obtain the young woman? NO! If the reader tries to imagine the way used by René to draw the picture "woman", it may be that he is able to imagine a chaos of points by which the artists starts on the paper and that is not comprehensible for an external observer until the last point completing the picture is put down. Imagine now Pierre and Paul observing René while performing his work on his drawing. Pierre gets the "idea" of a young woman, Paul gets the "idea" of an old woman. They both go home and produce quickly their own image. René is not yet ready but when he wants to present his picture, everybody says: This is already known and it was performed even better. (A note for the lawmaker: Imagine now the images as technologies. Paul and Pierre got partial perceptions of the René's work, they created the respective technologies and ... in the present world of competition they serve to kill completely all the financial supports that René could ask for his technology declared impossible to obtain by scientific standards. The questions for the lawmaker: What René can do? Write another version of Spielberg's Terminal? And what about the Civilisation that lost a technology that might be the key to a true Progress, the key for the Survival of the Civilisation?)

Yes, the artist starts from nothing, or to be more exact, *from nothings* (from a "chaos of points", as Phoenix, from ashes), but the final picture, the Ideal, is clearly present in his head from the start. Phoenix in the form of ashes knows that he wants to become Phoenix. This enables me to give the following definition.

Definition 0.1 (Fraňová, 1982-2005):

Let us consider the formula

(1) 
$$nothing + nothing = 1$$

I shall call a **symbiosis descarto-ackermanno-filkornised** the property of any system the conception and production of which can be characterised as a "**creation of a Whole from nothings**".

The indication of the years 1982-2005 signifies that I worked in this period on several systems that incarnate the symbiosis descarto-ackermanno-filkornised. One of them is a technology for a completely automatic construction of recursive programs. This technology is proved to be impossible to obtain by the results of Kurt Gödel. However, Kurt Gödel works in a logical system, and as such, it is impossible to handle the logical paradoxes like the simultaneous presence of A and non-A. The image "woman + woman" shows that a logical impossibility does not signify the impossibility of a material implementation. Thus, Kurt Gödel is correct to say that logically it is impossible to obtain the technology. However, materially it is possible to implement it when one knows perfectly well how to conceive and produce systems that incarnate the symbiosis descarto-ackermanno-filkornised. The question, of course is, how to do it. My Constructive Matching methodology (see the publications on the page http://www.lri.fr/~mf/recman.pub.lri.html) treats this question for the technology to automate completely construction of recursive programs. (A note for industrials: The development of this technology is interrupted for similar reasons as those that caused the interruption of the work of René trying to produce a picture logically impossible to imagine.) My book Brevet épistémologique — Créativité Formelle: méthode et pratique — Conception des systèmes « informatiques » complexes is a cultural and procedural answer to this question adapted for all new and revolutionary technologies of this epoch as well as of those of the future. This allows me to make a reference to Alexander Pope:

If vain our toil,

We ought to blame the culture, not the soil.

**Remark 3.** The number 0.1 associated to the definition of this chapter signifies that this definition is not yet completed. For a researcher, by the standards of the modern science, it is unacceptable to present a "work" that is not yet completed. However, the picture "woman + woman" enables me to illustrate that the construction of this picture cannot follow standards that say: you obtain a first element (a young woman) and then, when it is completed, you add the second element (an old woman). This is to point out that the notion of symbiosis descarto-ackermanno-filkornised makes a reference to other notions. It is symbiotically linked with other notions. Thus, the definition 0.1 is to be considered as a sketch (an art-work) that contains visibly one useful information (a possible image of a young lady), however, the whole picture is at least as complex as the picture "woman + woman". This is to point out that if this paper is not accepted by a Journal able to disregard the standards of modern science in this particular case, allowing thus a "key reference" to this paper, the work on the technologies requiring the fundamentals of the symbiosis descarto-ackermanno-filkornised will never come out, simply for lack of financial support. But, as I have pointed out, the technological importance of the symbiosis descarto-ackermanno-filkornised, representing lot of money, is nothing as compared to the survival of the Civilisation.

**Remark 4.** An interested industrial will note that while the first efforts on the implementation of the technology (impossible logically) resulted in the publication

M. Franova: *Precomas User's Guide*; Rapport de Recherche No.375, L.R.I., Université de Paris-Sud, Orsay, France, September, 1987,

the further developments were enumerated not as usual for implementation by the version 2., 2.1, 3. and so on, but the publication

M. Franova: *Precomas 0.3 User's Guide*; Rapport de Recherche No.524, L.R.I., Université de Paris-Sud, Orsay, France, October, 1989.

presents clearly the number 0.3 as expressing that the Whole, the "version 1" was not yet reached. In other words, the system Precomas is comparable to the picture "woman + woman". The picture "woman + woman" is comparable to the notion of the symbiosis descarto-ackermanno-filkornised. Precomas, similarly to the picture "woman + woman", is to be a *perfect system*. The symbiosis descarto-ackermanno-filkornised is a property of perfect systems (impossible to exist by the standards of modern science).

#### **Cultural Note**

If to be a perfect in a certain sphere, What matter, soon or late, or here or there? The blest today is as completely so, As who began a thousand years ago.

Alexander Pope: An Essay on Man

The creation "from nothings" is not a new idea of invention. Among others, Francis Bacon calls it "experiments of light" in the chapter XCIX of *THE NEW ORGANON OR TRUE DIRECTIONS CONCERNING THE INTERPRETATION OF NATURE*:

But then only will there be good ground of hope for the further advance of knowledge when there shall be received and gathered together into natural history a variety of experiments which are of no use in themselves but simply serve to discover causes and axioms, which I call *Experimenta lucifera*, experiments of *light*, to distinguish them from those which I call *fructifera*, experiments of *fruit*.

Now experiments of this kind have one admirable property and condition: they never miss or fail. For since they are applied, not for the purpose of producing any particular effect, but only of discovering the natural cause of some effect, they answer the end equally well whichever way they turn out; for they settle the question.

Let me insist on the following: "experiments of this kind have one admirable property and condition: they **never miss or fail**". My Formal Creativity ('Créativité Formelle') can be seen as the *cultural and procedural* basis of "experiments of light" mentioned by Bacon.

For those that are interested in "pictures" that contain more "elements" than two, as it is the case for the picture "woman + woman", have a look at the four precepts of Descartes presented in his DISCOURSE ON THE METHOD OF RIGHTLY CONDUCTING THE REASON, AND SEEKING TRUTH IN THE SCIENCES. If you try to separate these precepts you simply obtain something different. Those that do not perceive this side "woman + woman" of Descartes' "four" precepts fail to understand Descartes even if they were able to repeat his work word to word. These four precepts are a procedural description of the creation "from nothings". They concern the second key to understanding the invention of "perfect systems", of the "creation from nothings". This second key is the generator of assets the particular property of which is to be the Asset. More about the symbiosis descarto-ackermanno-filkornised, as well about dynamical systems developed on this principle in the past as well as in the ancient socialist Czechoslovakia shall be presented in the paper La « folie » de Veda Slovaque

et du brevet pour les systèmes de sécurité descarto-ackermanno-filkornisée ou Comment un vice de fabrication du Droit de la Propriété Intellectuelle et Industrielle fait perdre des milliards à la France.

#### **Novelty**

A superficial reading of the previous part of this paper might mislead the reader to a conclusion that there is nothing new in this paper. It is true that the pictures presented by Stephen Covey were known to him already several decades. Moreover, as I have insisted myself, the idea of "invention from nothings" is as old as the Civilisation, and the beginning of my Constructive Methodology falls to April 1983. So, why this paper is novel? The answer consists in pointing out three facts presented in this paper.

First, my *discovery* of the potential of the three mentioned pictures for an elementary, and even trivial illustration that the absolute power of the logical rules and standards may be an *obstacle* for a material implementation of "ideas", "ideals" or technologies that are absurd in the framework of these logical rules.

Second, my *discovery* of the potential of the picture "woman + woman" for an elementary, and even trivial illustration of the possibility of perfect systems (denied by the modern standards that focus solely on open, closed and logical systems), where the *perfection* is not an affair of the beauty and of aesthetic considerations, but of the technological property. The picture "woman + woman" and the paper *La* « *folie* » *de la Vérité et la conception des systèmes complexes*; Rapport de Recherche No.1398, L.R.I., Université de Paris-Sud, Orsay, France, Février, 2005. (http://www.lri.fr/~mf/RI.1398.pdf) show that the claim that nothing and nobody is perfect is just a claim of an ignorant. It is a claim that should not be tolerated.

Third, my discovery of the potential of the picture "woman" for an elementary, and even trivial illustration of specific features of the conception and the implementation of my Constructive Matching methodology. It shows that my claim from the start of my work (in April 1983) that the system for automatic construction and verification of recursive programs shall be obtained only if one thinks of everything and simultaneously from the start is not a nonsense as it is perceived by the experts in Automated Reasoning. They simply do not know the "invention from nothings". Their ignorance and their absolute power of the decisions about the work on the systems that do not fall into their domain of competence is the main obstacle for industrial implementation of technologies that can have a capital importance for the development of robots able to reprogram themselves depending on the environment they find themselves. Yes, it is the question of the research that concerns the works of the robots in the space, far from the direct control of humans. But the question of medical research is concerned as well. As far as I am informed, maybe incorrectly, today, the research on medicine drugs elaborated "from nothings" is non-existent. And these are not the sole domains where "to think of everything and simultaneously from the start" is to become a generator for new and even revolutionary technologies. The picture "woman + woman" presents a very good test for our own perception of the words like "me", "you", "we", "they". In other words, it is a test of means on which your own perception of the Happiness is built. Finally, let me mention the importance of this picture for your own perception of the Ancient formula "Know yourself and you will know the Universe and its Gods". This Ancient formula points out the necessity to come from static considerations concerning the picture "woman + woman" to the consideration of perfect systems that are dynamical. My book mentioned earlier deals with the technological aspects of such dynamical systems. It is a *culture* that allows to implement not only perfect dynamical industrial technologies, but also to make from a life of everybody a perfect dynamical system with the Happiness as its by-product. Thus, once again, I shall make a reference to Alexander Pope:

If vain our toil, we ought to blame the culture, not the soil.

#### Conclusion

The systems descarto-ackermanno-filkornised incarnating the descarto-ackermanno-filkornised symbiosis are so important that it is not possible to speak about them in a short document. The paper *Systèmes descarto-ackermanno-filkornisés*: *Définition et Applications*; Rapport de Recherche No.1384, L.R.I., Université de Paris-Sud, Orsay, France, Mars, 2004. (http://www.lri.fr/~mf/RI.1384.pdf) demonstrates that without the knowledge of the culture that allows to perceive the Whole of descarto-ackermanno-filkornised systems, their formal presentation is as comprehensible as is the equation (1) defining a creation of a Whole from nothings without the use of the picture "woman + woman". In other words, without an adequate culture they are not only incomprehensible but also, in the standards of the modern science, they are considered as absurd.

The Atelier de la Créativité Formelle (www.lri.fr/~mf/atelier.cf.html) is designed to become an international center co-ordinating — on a world-wide scale — the work of professionals (and of workmen trained especially for this purpose) on these systems, including the research of such systems in the history of the Civilisation. The culture of these systems shall thus be developed to create technologies and social improvements (including those suggested by Francis Bacon in his Advancements of Learning) impossible to achieve in the framework of standard science of today because of, among others, of a dangerous ignorance of the necessity of the notion simultaneity and the widely accepted non-difference between points of view and a professional diagnosis. If this difference is not protected by the law, a self-exhaustion of the Civilisation is to be expected.

Finally, the picture "woman + woman" shows another property of a professional: true Modesty. A professional remembering this picture will always be very careful before claiming the knowledge of a Whole created by someone else. He will not claim to perceive a whole while he does not know perfectly well the "generator of assets" leading to this Whole. He will read and re-read the Pope's *An Essay on Criticism* before expressing any disagreement with a professional work of someone else.

# Acknowledgment

This paper is dedicated to the memory of late Academician of the Slovak Academy of Sciences, Professor Vojtech Filkorn who has foreseen the world-wide importance of the particularity of Slovak Research (Slovenskej Vedy) in planning and conceiving the technologies of the future. I am just a simple executor of the mission he charged me with in June 1982. The technology I have invented would never come out without the several years of the particular initiation Vojtech Filkorn elaborated to prepare me to this mission, as well as to handling the difficulty to put forward a technology "revolutionary" by its need of the Truth considered an obsolete term in the world where reigns the relativity supported by opinions and points of view.