Transliteration

of the documentary film

WEIZENBAUM. REBEL AT WORK.

GER / USA / AUT @2006-2008

By Peter Haas and Silvia Holzinger, Il Mare Film
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Transliteration by Christopher Kai Miner, 2007

Prolog:

I will say it like this: It is entirely possible that in a rational world we'd still have huge computer centers housing bulky computers and perhaps they would even be much slower than they are today.

I swear to tell the truth the whole truth and nothing but the truth – and if you dare use this at the beginning of the film, I will sue you both!
Because I have lied so much!

WEIZENBAUM. REBEL AT WORK.

I am still hoping for – what I would call a Great Love – I don't expect that I will find a great love like when I was in my 20s, – funny – it just occurred to me: A lot of people – I think – walk around and are on the lookout to find lost change, well, it's very unlikely, but perhaps, well, I guess, my eyes are always open to find the great love!

A FILM BY PETER HAAS AND SILVIA HOLZINGER.

Seppel1:

We lived on the corner of Charlotten Street and Jäger Street and I forget if it was the second or third floor, but we had the whole floor. At least half of the floor was an office and workshop.

Well, I was the "little Seppel", and they really thought I was a cute kid, so I hung around a lot and watched what they did and also listened carefully: The people working there were simple people and most of the time you heard Berlin slang and yiddish!

My father had as was the case for people in this social class, I guess upper middle class perhaps - well we were not exactly at the lower bound of the upper middle class but perhaps we were close.

Well, there is this concept in mathematics, least upper bound or greatest lower bound, that was our's, approximately. In any case, in this social class, back then, men had lifetime friends. And the friend of my father was a Mr. Halbreich, a master tailor, one could say, he was in the same business as my father except that he made men's wear, coats and suits.All custom tailored.

First of all – my father was a very, very proud man. He was convinced that he was one of the best furriers to be found anywhere. That was that. I was there once, as far as I can remember, as a lady was being fitted for a fur coat and she made a casual remark, that perhaps the sleeves should be a little bit longer in her view. And as I recall – we were already in America – he took a couple steps back, completely appalled, and replied: If you don't like my workmanship, I would strongly recommend that you go elsewhere, (laughs), and women in general were afraid of him and his - hrrrh, if he had been blond haired and blue-eyed, I would say a real Prussian, yes, that was one of his characteristics, he was very, very proud.

The second characteristic, perhaps even more important, was, that he considered his wife - my mother - his personal property, just like the furniture in the house. I'm trying to be cautious with this analogy, but my experience was that my father was absolutely – I emphasize – absolutely convinced that I was a worthless moron, a complete fool, that I would never become anything. And later, when in spite of this I accomplished anything, he would simply dismiss it:

Somebody else did it, or I had help, or it doesn't matter anyway. Somehow, it never counted. And that had a real impact on me, to this day.

In the train:

Yes, normally, I don‘t introduce myself at all, because most often somebody else does it. For example, I’m holding a guest lecture somewhere and somebody says: Well, we have Professor Joseph Weizenbaum with us today and there’s no need to introduce him because everybody knows him well already, and so on, but then, well at least, he was for many years Professor of Computer Science at MIT, that is the Massachusetts Institute of Technology and then they follow that with row of half truths and lies:
For example, that I built the world‘s first computer ever, and this is not true, absolutely not.
And things like that and then someone says: Although I worked so much on computers and the development of computers, I have turned into a critic and am now a computer critic, but as he himself would say it, Weizenbaum himself would say: No, I’m not a computer critic, I’m a social critic! Thus, it is for us, both a pleasure and a privilege: PROFESSOR WEIZENBAUM!!!!

I have to say, sometimes, I don’t know why I’m doing all this. My sense of duty is a nice excuse, I think that traveling in general, traveling around by train and in jets, it all used to be fun, but it is not fun anymore.

Well, in the dining car, they are happily expecting us! I guess, that means, they don’t want us to actually go there!

They are happily **expecting** us, but once we arrive there…Well….
Well, that’s something completely different.

Jena1:

Ra, ra, ra, ra…. (applause)
I remember my good friend Noam Chomsky who often begins his guest lectures with: Any Questions? And that works excellently! And I am very much tempted to start like this but not this time. Back then in America, around 1949, 1950 or so, it was common that a university that wanted a computer, simply built a computer. That was generally the case. There was a computer one could buy, a UNIVAC, but it was extremely, extremely expensive and had a delivery time of two years. Therefore one would build a computer oneself. And I have to say, I remember the time with great joy, it was a lot of fun and a wonderful, wonderful time, among other things we didn't care about patents and such things; the idea to "protect" a program, simply hadn't occurred to anyone. We exchanged everything with everybody when visiting another university that was building their own computer as well, they proudly and enthusiastically gave us the programs, they had developed and in turn we gave them ours, it was simply a wonderful time. Besides, you really learn what a computer is when you actually build one.

We wrote programs - and many of you will be amazed - on paper and often gigantic programs or at least what we considered gigantic programs back then; so these big programs written on paper were delivered to an office where mainly women operators typed and produced punched cards. These punched cards were then fed into the computer and "read by the computer" and finally the program executed. It is also interesting that back then "computer time", meaning the time you were given to use the computer and actually calculate something, was very, very expensive in comparison to "man time", excuse me, which was very cheap. Therefore, we were very keen on writing correct programs and took a long time to ensure that everything was all right and so on. Then, at night, we brought all these cards over to the computer center and since it operated over night, the next day you could get back the output results and your cards. By the way, we learned relatively fast that it turned out to be a good idea to number all cards consecutively; sometimes they were dropped and then, well. (drinks beer) Pretty good! (beer)

Seppl2

Peter: I took the liberty to turn on the camera again.

(Laughs) I took the liberty, (laughs) so what! But I didn't permit you the liberty; You have to submit an application first!

The first real memory I have, I guess, I think I had the measles and laid in bed in a dark room and Stresemann died and his funeral procession past by on the street and I went to the window and looked out of the window.

It might sound quite implausible but I have this firm and vivid memory that a nanny, mh, aah, I don't know how I know it, but its the way I remember it, that she took pity on me, for some reason, and she took me away, she kidnapped me, and took me to the countryside, to a farm, and to this day, whenever I smell the odor of a farm, of livestock and whatnot; the sense of smell is possibly the strongest stimulus of memories that we have. And then everything comes back and I enjoy, these memories and these smells. The people there had a film projector and in the evening we went to watch a film. It was already almost dark and there was this white thing hung and then the film started. And the film; I can still hear the projector, and the film was a loop, a very short, (high pitched voice), a very short loop, I'd say, the whole thing was no more than a meter!
And it was something like Mickey Mouse, not exactly Mickey Mouse, but something like that, a cartoon where a cute little animal jumped over a barrel, again and again and that was the film.

American Engineer 1

The research engineer – is an explorer who advances civilization, an adventurer in ingenuity seeking the impartial answer, learning the laws of the universe and then putting them to work.

Science and Individual Responsibility:

I think that half or even more than half of all scientists and engineers in America are working directly or indirectly for the military, one way or another. And we all know that, we don't need any additional research in Ethics or anything like that; we are working on better and even better methods of committing mass murder. There is a big demand for this in our world. One of the magic concepts or words is, the word: "value-free", in particular with regard to pure science, thus, pure science is value-free! But this is NOT the case!!!

It is not true! For a very simple reason: The task of science, pure science, is to raise questions and inquire about nature. Francis Bacon said, we have to torture nature in order to force her to reveal her secrets. And that's what we're doing, well.
But at any given time in history, let's say today, there is always a limited number of scientists and the scientists that we have today, have a limited time to do their work, perhaps 40 years or whatever, yes, but there is an unlimited universe of questions that we might raise and might ask scientists to answer. That means, one has to select their questions and this selection has everything to do with the underlying values of the society in which the work is done and therefore any work and any instrument resulting from the work inherits its values from the society in which it is embedded.

American Engineer 2

Forward looking men and women, eager in outlook, with vision, perspective, honest point of view to see the challenge of our times. Men and women boldly imaginative, of character, of penetrating curiosity and a barrier breaking courage to engineer the freedoms of American future.

But what makes an engineer?

Mathematical mind, college degree, flare for tinkering, curiosity, state license to practice the profession, scientific aptitude to solve practical problems?

Yes, all this and the one certain spirited characteristic of the human heart: courage, to accept constant challenge, the challenge to solve problems which perplex, challenge to change the world into a better place. Challenge makes an engineer!

And then the actual work, what I mean is, the calculating on paper, designing, the constructing of models, trial and error, and everything else including experiments is all actually done by individuals who perform certain tasks and thus it all goes back to being conscience of the personal consequences of the work. Yes, there are people who would object and say we cannot possibly foresee all the consequences. That's true, OK, but that does not mean that because we don't know everything that we are allowed to do everything!

Seppl3

Does that answer your question? Oh yes, really, I forgot - are we speaking English or German? Last night when we were watching the film we were speaking English and what not…

I have to mention that at some point I went to the Luisenstädtische Gymnasium (high school) and I don‘t know how long I went there, maybe for a year or perhaps a half year but then I had to leave the school – because I was jewish – and the jewish community opened schools in Berlin, it was near Kaiser’s street, which doesn’t exist anymore, near Alexanderplatz, and from time to time we went swimming at a public pool which was reserved – maybe between 10 and 12 in the morning, for our school. Of course we all ran about naked, we were all circumcised, and so on, well, we were amongst ourselves, but there were also the employees working at the pool, and they made a bit of an impression on us, so to speak, frightened us, in any case, it was made clear to us … that we…
It was like, as it occurs to me now, it was like later with the yellow stars, we were identified, we were marked.

There, for the first time in my life – I had contact with the real Jewish underclass. The jews from the East, speaking yiddish and terribly poor, from Grenadier’s street, near Alexanderplatz, many of these kids went to the same jewish boys school and they came dressed in rags and drew immediately, I would say, above all my compassion. And I believe that was where I experienced a sensitivity for oppression, I didn’t feel oppressed myself but I experienced it, I saw it and I became close friends with one of the boys, I guess I kind of loved him, a child of my age but much smaller and malnourished, and I brought him home with me and my father was furious:
How can you bring such a person home and so on, and generally speaking, that was truly my very first experience with real anti-semitism, it was not the Nazis, it was that.

Jena2:

Sorry, it took so long to tell this. Anyway, the main point is that computers were gigantic and they have become considerably smaller and they have become much faster, and along the way they have also become cheaper and lighter. Well, I don't know whether you can drop a modern laptop and it would still work?
Perhaps, but in any case, we can build a computer into a missile and once the missile is launched there is a significant shock and the computer can withstand it.

And now the question is: Yes, how does this come about? Why did this development happen? And I guess that people who do not really think about it might have the implicit idea that, well, that's called progress. That's the way it is. Of course we wanted computers smaller and faster and lighter and so on. BUT, that was not the case, and is not the case!

Einstein once said that where it doesn't itch, we don't scratch. And well, there were a lot of problems that didn't itch as much as other problems that were - or at least seemed to be - much more serious. In particular, in the US after WWII - today one has to say which of the wars – World War II was over and in the US there was a great fear of the Soviet Union.

On Guard 1

The question was: How could the electronic computer be made airborne? And the consequences when designing a computer for ground installation became overwhelming when it was proposed to redesign to fit into jet bombers.
First, the problem of space and weight: The interior of a modern bomber is cramped with space as is. How can a bulky computer be fitted into it?

For every extra pound of dead weight carried a bomber must add many more gallons of fuel. Second, the problem of reliability: Could a computer be designed to withstand all the stresses of flight? Weather, climate, turbulence?
Third, maintenance: Could a computer be designed for easy ground and air maintenance?

These and other problems where all finally solved by unique design and by employing the basic principle of modular construction. The same multiple arrangement principle which is applied in the design of this doll furniture enabled the Air Force to procure an airborne computer.

In order to defend ourselves, we needed early warning. So we built huge radar systems in the far North, in Canada and the radar systems provided signals, of course, the signals had to be received and then interpreted: Are they coming or are they not coming?

And that was tough work which without a doubt, we needed computers to solve. But then propeller-driven bombers were replaced with jet bombers, which meant that the remaining time we had to respond after we learned they were coming was shrinking and therefore, of course, we needed again faster computers. And that drove enormous progress in the development of the computer involving inconceivably large amounts of money.

On Guard 2

Protection comes high – sky high. Today, we must be on guard in the sky when it comes to protecting our resources.
The national resources that are so precious to us.
What is the most precious commodity that electronics defense wins us?
Time!

Long before the bomber reaches our defense perimeter, the computer's memory will identify if it is friendly. But – if a flight of a planes were identified as hostile, then in a matter of minutes.

Time is everything! This is electronic defense in depth and as long as we're on guard, as long as we're ready to look ahead, and move ahead, the future of America is secure!

In a certain sense – it was really wonderful! I owe my entire career to Joseph Stalin. It's not that I kneel down every evening to thank him, but in any case the fear was so tremendous. That was the problem. And then came missiles and then came missiles with multiple warheads and I guess, you know the story. Always faster and faster, the time to respond was always shrinking, then we had our own jet bombers that then became more complex and we had to have computers in them too and so on and so on and you can easily see where the demand was, where it really itched and where we had to scratch and how this was fueling this development and I believe I would put it like this:

It is entirely possible that in a reasonable world that we would still have huge computer centers with huge computers and perhaps they would even be slower than they are today.

On Guard 2

Protection comes high – sky high. Today, we must be on guard in the sky when it comes to protecting our resources.
The national resources that are so precious to us.
What is the most precious commodity that electronic defense wins us?
Time!

Long before the bomber reaches our defense perimeter, the computer's memory will identify if it is friendly. But – if a flight of a plane is identified as hostile, then in a matter of minutes.

Time is everything! This is electronic defense in depth and as long as we're on guard, as long as we're ready to look ahead, and move ahead, the future of America is secure!

Duck and Cover

Now, we must be ready for a new danger! The atomic bomb.

That signal means to stop whatever you're doing and get to nearest safe place fast!

Always remember: The flash of an atomic bomb can come at any time! No matter where you may be. You might be out playing at home when the warning comes. Then be sure to get into the house fast where your parents have fixed a safe place for you to go.

Sundays, holidays, vacation time: We must be ready everyday, all the time to do the right thing if the atomic bomb explodes.

Duck and cover!

This family knows what to do. Just as your own family should. They know that even a thin cloth helps protect them, even a newspaper can save you from a bad burn. But the most important thing of all is to duck and cover yourself!

Dum, dum, di-di-dum, dum, there was a turtle by the name of Bert, and Bert, the turtle was very alert, a danger threatened him, he never got hurt, he knew just what to do:
He duck and cover, duck and cover, he did what we all must learn to do, you and you and you and you.

The Escape

How big is the biggest disk drive that you have?

….

Huh, (laughs)

….So to speak mini hard drives!

Well, I remember nothing, absolutely nothing! I don‘t remember any suitcases; I don‘t remember that anyone came to get the suitcases, the entire preparation, and relocation, gone. I assume, that shortly before all these activities, I’d almost say, ceremonies, that my brother Henry and I were sent away somewhere. I don’t know whether it was my mother or mother and father, but I can’t believe that my father was with us, in any case we went to the Jewish boys school, near Alexanderplatz on Kaiser’s street, for the last time to say good bye to them.

The gentlemen, I don’t think that there were any women there, were delighted that we were getting out, I guess that they knew very well how lucky we were. I don‘t at all believe that, say in December 1935, they had any idea about what would happen in the end, but that things were going to be getting worse rather than better for german Jews, they were certainly aware of this. So I think, they congratulated us from the bottom of their hearts I remember also – that it was a wonderful visit! Yes.
I also remember – in particular – and I believe the entire memory depends on this, that we promised them that once we arrived and after we got settled in that we would send them a crate of oranges, oranges you know come from America.

The day was the 8th of January 1936, my birthday, I turned 13. On that day we were picked up with a huge, open air car, the kind that doesn’t exist anymore, a real sedan, four doors, but open, without a roof.
I really believe – as far as I can remember – and I guess it is a high-fidelity-memory (laughs) the whole event was a big adventure and it included the joy one feels during such trips, as a kid, I mean, and the excitement that’s what really dominated. So we finally arrived at the ship and to this day words can‘t describe – what a gigantic ship! And then we boarded, and once you get on board you forget that you are on a ship at all. Back then, the SS Bremen was one of the biggest Ocean-liners

anywhere in the world, I don‘t remember that we had any problems. We had the proper documents and visas and then we had to travel to Detroit by train, we arrived at the train station but we had naturally no idea how to find the right train and everything.

Well, my parents were completely speechless, (laughs), my father had tailored – the very best(!), absolutely top notch quality persian fur coat for my mother. Since we were not allowed to take any money out of Germany, the fur coat was our capital. And then once we arrived in Detroit, my father had a sister who let us stay with her initially, later he sold the fur coat and that was the foundation of his business. From then on it went upwards so to speak…

Ruth in Detroit:

The first computer he worked with was the Bush Differential Analyzer and one time I took my class for a school visit to see this machine. So, Joe was explaining everything to them and he asked if there were any questions, then one of the little boys raised his hand and he says: Mrs. Weizenbaum, Miss Maines, is this the man you gonna marry?
So that was his question!

I was born in Detroit Michigan. I grew up mostly in suburbs around Detroit which was a wonderful city at that time, very safe, and very attractive.

I guess, I was still doing classes at night and in the summer and I think we met at the meeting of a philosophy club. The people that I had dated were never deeply interesting to me. There wasn't any sense of academic interest. So when I met Joe, I found him very interesting, but I still – I really wasn't very interested in getting married. I was interested in broader educational issues and did some reading of Douie, you know, I tried to get a handle on philosophy of education. I also – probably with some influence of Joe, read some of Freud.

Indian Summer2:

I had already decided that I was going to study mathematics, there was one professor and I had talked to him, yes, I also wanted to do something for the world or for society and to study plain mathematics as if the world was doing just fine or even didn't exist at all, that's not what I wanted and the question was how could I combine all of this. And he said, if you have interests like the ones you've mentioned you will definitely find a way to make it happen.

The truly fascinating thing about a computer is its universality . The programmer has a kind of power over a stage that incomparably larger than that of a theatre director, bigger than that of Shakespeare, you can construct a system in which the natural and physical laws are turned upside down. One is a director with a stage of unlimited possibilities and that is enormously fascinating and naturally leads to the dream I sometimes refer to as Artificial Intelligentsia, the dream, that we can do everything and that includes that we can also create an artificial human being and so on…

MIT 1:

One day I got a call from someone who asked if I might be interested in coming over there. And well, that‘s like offering a young boy the chance to work in a toy factory that makes toy trains. A place that has everything, everything that you could wish for. And MIT, of course had everything, MIT had a distinguished rep, that would not be a waste of time. And that‘s how I ended up at MIT. I never applied. All of a sudden I was there. (laughs)

Kitchen Future:

Firebird two to control tower. We're about to take off on the highway of tomorrow. Stand by.

Tomorrow, tomorrow, our dreams will come true. Together, together, we'll make the world new.

Strange shapes rise out of the night, but our love will not change dear, it will be like the sun burning bright, riding away, when tomorrow meets today!

MIT 2:

You become what you pretend to be! Well, and gradually over time I became a professor. I was very, very much impressed as everybody was very, very smart and the students were simply fabulous! And I knew back then – and to this day I haven‘t changed my mind about this – I would never have been accepted there as a student. I was simply not good enough. Well, but as a professor it was a bit easier. (laughs) yes. It‘s really like this and I still believe it, even today. (laughs)

Once I asked the dean of the department if there was a well-defined criterion that could summarize all the requirements, and he replied, yes, it‘s like this; if a challenging question in your area of expertise pops up anywhere in the world and you‘re the first one to be asked, In that case, well, you probably are a proper candidate to become full professor! And that‘s something, isn’t it? (laughs)

Flight58:

Near sonic speed but inside one of the most stunning discoveries. There is no feeling of movement at all, no vibration, hardly any sound, a new concept in air transportation. The travail has been taken out of travel!

Ladies and gentlemen, this is your captain speaking: We are now at cruising altitude 35.000 feet, our flying speed is 575 miles per hour, in addition we're benefiting from a substantial tail wind like courtesy of the jet stream. Hence our ground speed is now approximately 658 miles per hour. Indications are that our arrival at London airport may be ahead of schedule. I'll be speaking with you from time to time, thank you.

MIT3

I thought about how to make the computer useful for the social sciences, sociology and stuff like that. Instead of writing a program – as we had been doing before – first on paper and then to transfer it to punched cards, you could write a tiny piece of the program, send it to the machine for trial. And if it worked you could put it aside and then prepare another one and following this path you could actually built huge programs – in – and that is the core idea - in -:

I will say it in English first: in conversation with the machine and we coined the name Conversational Programming! In conversation with a computer and therefore it became crystal clear, and I am still astonished that everyone didn‘t think of it, someone had the idea, well, when we have a conversation then we can have a conversation in natural language, such as in English, and then you could have a conversation in English with the machine and then I thought about that for quite a while and I developed a set of small tools, kind of a small toolbox for analyzing texts and decomposing sentences and so on….

MIT4:

Yes, but what on earth should I talk about with a computer? (laughs)

Yes, that is a quite difficult question to put knowledge into a computer and this question has not been fully answered yet and it will never be fully answered. First, what kind of knowledge and so on. But, one can define a very narrow context in which one can give the computer certain knowledge but only in this very narrow context and then all of a sudden it came to me: The psychiatrist!
And that the psychiatrist asks questions in response to what the patient says. it might be partially or totally irrelevant but the patient will interpret his words with the frame of mind that HE understands something, knows something, there‘s some sense to his words, I don’t know what it is, yet, But it is not nonsense! And that is how it started and then came ELIZA, you know.

Well, says the psychiatrist, perhaps: What does this remind you of?

Hmm, very clever, this is a psychiatrist who really understands what I feel, I'll work further with him!
I oversimplified much of the time. But there is a certain depth to the idea, I mean of the whole question of what does it really mean to understand at all? And the insight that to understand what was just stated means that first it has to be interpreted. And the role of interpretation quickly leads to a certain depth and that also interested me a great deal.

But I also knew that as long as I continued to work in this field I would probably never do anything else, I would – how can I say it – I would write more and more clever programs but it would never have any depth. Besides, I would naturally end up in a community with lots of people working in the same area and I would become a guru of nonsense like that and naturally that's not what I wanted.

MIT5:

But I have always had my doubts. And I mean this seriously and I am talking about a period of many years. And then it occurred to me that this was potentially the greatest arrogance possible. That I thought that I could fool all these people, also those in other universities, that I could fool all of them over all these years, When I thought they themselves were so smart.

That was really the most arrogant attitude possible and that kind of touched. They are not that dumb. (laughs)
And therefore, perhaps, I am also not that dumb.

Ruth in New England

Joe had a sabbatical coming and he was invited out to the Center for the advanced Studies for the Behavioral Sciences in California. Anyway, it was a great year for me and it was a fantastic year for Joe. We met a lot of really interesting people and had a pretty full social life and we were able to do some traveling we were going up to Lake Tahoe, I think, Joe was in heaven and it was a good time for me and I was very busy with the family and school and social, but it was OK, I stay busy. I remember once, Joe likes to tell the story that Miriam went up to his office, she was about 13, she said, Dad, what do you have to study to get a job like this?

There is this beautiful setting, this office, and he talks to people, had really nothing to do. But I think he was kind of contemplating writing his book and doing a lot of reading and talking to people.
I think that it's unfortunate that we did not have more discussion, the two of us, on some of the issues that he were thinking about. I mean, I was always pretty busy with the family, and then I had my own area, but I – my awareness of his thinking and his work was to considerable extent incidental. If he was having conflicts with anyone then he would talk about it.

Naomi 1

Joseph: Yes, and we will speak German.

Peter: If it is normal for both of you, speak German.

Noami: OK.

Joseph: Normally, it is mixed.

Noami: Completely mixed!

Joseph: Yes, mixed. And often we don't notice that we are switching from one to the other language. Well, is this a good picture?

Peter: It is a very good picture, I am still trying. Sorry, that we will begin immediately.

Noami: Well, no problem.

Joseph: Perhaps you should say a word on…

AOL: You have e-mail!

Joseph: Oh shit, well, OK. I am getting e-mail and this is…

Noami: … he was working all the time and spent most of the time in his office in the cellar of our house, a room that on the one hand was not very nice because it was in the cellar but on the other hand it offered this kind of coziness, it was his style and it had a totally different atmosphere than the rest of the house, many books, good music, and lots of illustrated books with photographs and I was often there, I knew I had to be very quiet and must not disturb him, but I was allowed to read books and the room created a unique mood, well, this was the place to think about things!

And – to ponder… I don't know.

Joseph: Well, yes, to think deeply.

Naomi: Yes, exactly, and everything there had some deep meaning for me, I guess, if I had looked at the same book anywhere else in the house it would have been just another book, well pictures, nothing in particular, but in his office: Ha, well, yes, that does mean something! You have to think about it thoroughly, what could it be, somehow, it was a totally different sentiment.
And, what?

Joseph: Yes, and there was also a wonderful armchair, a deep armchair.

Naomi: Yes, that was your armchair.

Joseph: I spent most of the time at the desk.

Naomi: Yes, that's right, but the armchair was way too big for me. I was always sitting on the stool.

Joseph: Yes, right. And there was also a blackboard.

Naomi: Yes that was wonderful as well. That is where I learned addition and subtraction – from one of my sisters, she was a fantastic mathematics teacher…

Joseph: I didn't know that.

Naomi: Yes, she was a super teacher: x! She explained the whole concept of X and Y to me, that you can have a number that represented anything and since I was very young I asked myself: How can that be? And she explained it with a lot of philosophy: Imagine it is a number but it is not a number! And, huh, what a great idea, she was a fabulous teacher, definitely.

Joseph: Gosh! I didn't know about lots of things!

Naomi: Yes, lots of things!

Fountain pens:

Here, for example, is a small collection and all of them are MontBlanc, here‘s and old one, a very simple MontBlanc and with a pencil like this I wrote the book COMPUTER POWER AND HUMAN REASON and I really don’t know how many lead refills it took.

Sometimes, I visit my daughter’s place near Potsdam and she has an old cat that is very curious but when I write in Sütterlin she can’t read it.
This one here - is a Schaeffer fountain pen and I think that I used exactly the same model throughout my entire service in the army during World War II, and I keep this pen for sentimental reasons. Oh! That is the one I used when I was writing letters back then.

Often, I write with this one and then collectors, when they see that I am actually writing with the pen are appalled with me, that’s not for writing that’s only for collecting!
Hold this in your hand. It‘s gold. Not gold plated, just gold. It‘s really gold. Isn’t it beautiful? Good god, how I searched for this one, how long I searched.

PotsdamChaos:

I expected to give a lecture! That's why I've stopped there but I'm pleased to see that it's going to be a dialog. But since it is going to be a dialog I have to start with the following small anecdote: Miriam, she was perhaps 8 years old then, came to me and asked: Daddy, what time is it? – and I don't want to know how a clock works!

I'm saying this because we will certainly have short questions asked and perhaps I will be tempted to explain how a clock works.

…It is not a question of whether you should do this or not. But whether the danger is exactly what you described or whether that might be a solution at all and so on....

Woman in the audience: But one doesn't always know!

Ahh Yes,, one doesn't always know!

Woman in the audience: It is the context that decides!

But, but, but oh my god, no, no, please let me reply to this; one doesn't always know!
Not only does one not always know, one doesn't know at all! Not in the strict meaning of knowing – of course we don't know! But this attitude, one doesn't always know leads one to: Since I don't know, everything is allowed!

But this is nonsense! And if we're talking about MIT in the United States of America and the so-called Department of Defense and so on, the instruments that are created there inherit these values. This excuse, one doesn't always know! That self-deception. One DOES know, precisely!

Student: Well, but taking the atomic bomb as an example, it was not quite intended to be used as it was finally used then. I mean, it's like that, my question might be provocative and naïve: Do you believe that it's feasible to strongly tie scientific achievements with specific values so that the achievements cannot be misused anymore? And that they can only be used for a single purpose?

Yes, yes …

I really don't know if my question is yet comprehensible, my question is, isn't it always possible that if I don't do it, somebody else will do it anyway?
I'm willing to take such a risk.

Joseph: Oh, bloody hell, excuse my language, well I am absolutely certain that in this month, November, – in Berlin or even in Potsdam – that a woman or women will be raped, I am absolutely certain about that.
And if I don't do it somebody else does it anyway!
So, what kind of an argument is that?

That's the first thing, the second…well, please let me speak, that is the third time you have interrupted, OK.

Patriotism

In a certain sense, I really don't know, it might be some sort of patriotism, well, I want a good world and a good society and a reasonable world and all this and OK, that's what I'm fighting for.
It's a kind of patriotism, the same kind as for example resisting and opposing the Vietnam war, as an American I mean, yes, this is simply a kind of patriotism.
It could also be the case that it is pure ambition! I do believe that ambition plays an important role here. I don't know if it is my education or training but I really can't help it, I have a hard time listening to stupidness without reacting.

I hope that it is the case that my inner child remains and that the imagination of a child is also alive in me, that I can wonder about things, that I can be amazed, and also that I can doubt. And taken together this creates a certain naivety that I see as something completely and absolutely positive. At least as a source of inspiration.

Naomi 2

Naomi: Hm, yes, oh, I guess, we both are Americans who left!

Joseph: I expected that you would say something like that you don't think in those categories for us and our family.

Naomi: Yes, yes, that's perhaps why I...

Joseph: hesitated?

Naomi: Yes, exactly.

Naomi: The teacher was familiar with my fathers' book and I asked him, can I read that and write a paper about it? And then I read his book.

Peter: Computer Power and Human Reason?

Naomi: Yes, and I was really impressed, not so much because of the computer thing but more or less because of what he had said about science.

I had the feeling that someone else had written the book and as I was reading it I often thought, that's absolutely a book for my father, it is so full of good advice that he should follow. I then wrote a letter to him.
I don't know, we were in two different worlds.Then as I wrote this letter to him I finally arrived in his world.

The painting:

Not long ago, I had a thought, I could almost say a fantasy, a fantasy that so captivated me for a while, that I started to spin it even further and it went like this:

I imagined a painter who painted a gigantic fresco, a mural, a really big painting. And well, he has to start somewhere – there is also an analogy that I think every programmer who ever created a really big program would understand,: One begins somewhere and it grows and subroutines, small pieces are written, I almost said painted, and they are then introduced and slowly, slowly it takes shape and it becomes visible as a whole, ok.

And then – in this fantasy – it reaches a point when I, the painter, almost can see the whole thing. it is not yet completed but now it shows a distinct shape.

There are stains on the painting, there are some things that I painted that are not pretty. Perhaps, they have to be there, that might be. But as I was painting them, my experience of them wasn‘t any better. And there are things I‘ve done in my life that I was ashamed of, and am still ashamed of. And they can remain private. I don‘t need to say what they were. But ... and this has to do with the idea of „in peace“ ... or peacefully .. which is a little different ... seeing the whole or to bringing it to completion ... to die, for example ... Now in that context of the whole painting it become clear to me that I can allow myself to forgive myself.

Captain Speaking:

Ladies and gentlemen, this is your captain speaking. I have some good news and I have some bad news: The good news is that we have a very strong tail wind. And we're doing 1.400 miles per hour over land, the bad news is that all of our navigation instruments are out and we don't know where we are and we don't know where we're going. And that's our situation, our science and technology is a tail wind the like of which we've never had before. We're going so god damn fast –