The Production of *Les Immatériaux*

Jean-Louis Boissier

in conversation with Andreas Broeckmann

Andreas Broeckmann: Jean-Louis Boissier, you were involved in *Les Immatériaux* both as an artist who was responsible for one of the installations, *Le Bus*, and as a scientific advisor on electronic and digital images. While the three main people involved in the project – Thierry Chaput, Philippe Délis, and of course Jean-François Lyotard – are no longer alive, several people who worked on *Les Immatériaux*, like yourself, still keep their memories and personal archives. *The* published documentation of *Les Immatériaux* has remained, up until today, quite incomplete, and there seems to have been no systematic documentation of this important show. This facts stands in a strange contrast to the unquestioned historical significance of the project – perhaps even more so today, than 30 years ago? Do you think there was an awareness of the importance of the show at the time?

Jean-Louis Boissier: Yes, absolutely. There was a clear sense of the cultural and the philosophical importance of the exhibition, symbolised most clearly in the presence of Jean-François Lyotard. Even then he was one of the internationally most well-known philosophers, and *Les Immatériaux* was identified as "Lyotard's exhibition".

Lyotard framed the exhibition with his texts and ideas, he reorganised and renamed much of what was already there and integrated the elements of the exhibition. In fact he provided the overall narrative for the exhibition in his texts for the catalogue and the exhibition walls. He himself said that his only, but very decisive scenographic, or dramaturgic idea, was the use of the soundtrack played via headphones, so that people would walk through the exhibition listenening to spoken texts,

different in the various zones of the exhibition space on the 5th floor of the Centre Pompidou – so to speak, "listening to Lyotard".

But it is important to recognise that the preparations for this exhibition had already been underway since 1981, so more than two years before Lyotard came onto the scene. For instance, the idea for arranging the materials in different sites, organised not in a linear sequence but in different parallel tracks, these conceptual ideas were already there when Lyotard arrived.

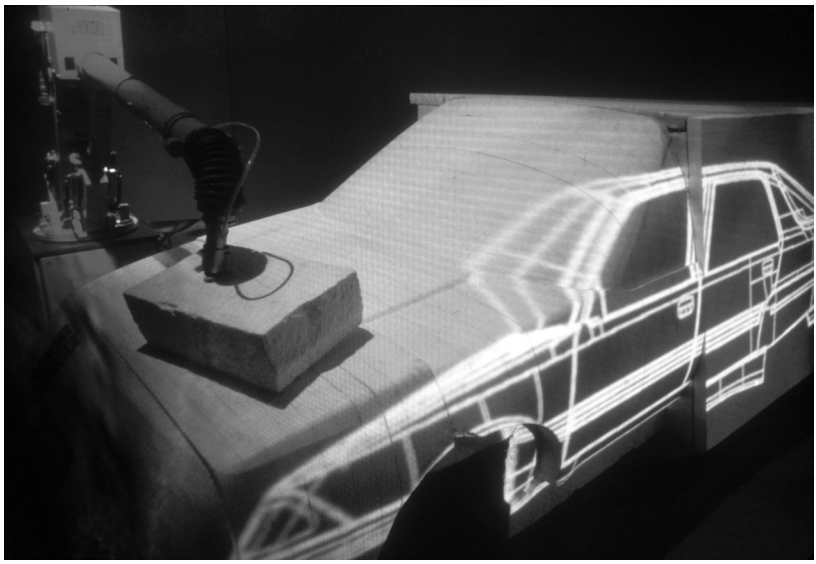
An exhibition with the working title "Nouveaux materiaux et création" had first been conceived at the initiative of Jacques Mullender, director of the Centre de Création Industrielle, CCI, in the early 1980s. Mullender was the CCI's director from 1976 to 1982, followed by Paul Blanquart from 1982 to 1984. The exhibition project was then decisively pushed forward under the direction of François Burckhardt between 1984 and 1990.

The CCI and the Musée National d'Art Moderne (MNAM), were separate departments of the Centre Pompidou at the time – they were fused only in 1992 – and the CCI played a very interesting and important role before the opening and during the first years of the Centre Pompidou. The CCI had been founded by François Mathey and François Barré in 1969, and it was integrated into the structure of the Centre Pompidou in 1972. Barré later became the director of the Centre Pompidou, from 1993 to 1996. The CCI was much closer to societal developments at the time than were the other departments, the MNAM, the library, Bibliothèque Publique d'Information, BPI, and the centre for sound and music research, IRCAM. After Les Immatériaux, this changed, there were fewer exhibitions dedicated to design and technology, and the quarterly review of the CCI, *Traverses*, edited since 1975 by Jean Baudrillard and Michel de Certeau, Marc Le Bot, Paul Virilio, etc., was discontinued in 1994.

In order to understand the origin of *Les Immatériaux*, it would be interesting to look more closely at the politics and opinions in France in general during those years, and those of the Centre Pompidou in particular, because for instance the changes in the direction of the departments also meant changes in the thematic emphasis that these people placed.

AB: How were these processes related to *Les Immatériaux*?

JLB: *Les Immatériaux* was an initiative of the CCI, a project in which all other departments of the Pompidou Center also had to participate, not least for political reasons. In a sense, it was a bit of an alibi project, claiming that, look, we can all work together. In retrospect, this exercise in interdisciplinarity may, ironically, have been a factor for the consequent reversal



[Figure 4] Exhibition view, site *Auto-engendrement* (Source: Centre Pompidou, MNAM, Bibliotèque Kandinsky).

to a greater separation of the departments, and the integration of the CCI into the Museum in the mid-1990s. *Les Immatériaux* was probably the last big exhibition of the CCI.

I don't think that this reorientation happened because of Les Immatériaux, but the project was the occasion on which the separation happened. This was part of a broader development in cultural institutions during those years, the tail end of changes that happened during the Mitterand years in the 1980s.

AB: What was the situation with regard to the project when Lyotard arrived in the winter of 1983/84?

JLB: The project had been initiated in 1981 and was lead by Thierry Chaput, a curator and theoretician of design. Chaput and a team of several people were researching and collecting materials for an exhibition on the way in which new materials and new technologies were changing the conditions of industrial and cultural production. The CCI had done various exhibitions on new technologies, for instance on computers, together with Atari in 1983. But here they wanted to combine everything: architecture, biology, design, literature [Figure 4]. In 1982, they were yet lacking a global idea, a guiding thought or concept, but the thematic field that the exhibition was supposed to cover was more or less clear.

However, around the spring of 1983, the project was supposed to be abandoned, because the directors of the Centre Pompidou and of the CCI did not believe that it could be successfully realised. That's when they had the idea to call on an external curator. There were different names in the discussion. One was that of the curator Frank Popper, who opened the major exhibition "Electra" dealing with the relation of art and electricity in the twentieth century, at the end of 1983. I don't know who then had the idea of asking Lyotard, but the CCI was known at the time to be close to contemporary philosophy, for example with *Traverses*.

AB: Lyotard was commissioned to write a treatment that would suggest a thematic framework already in May 1983, which he delivered to the CCI in a sketch ("*Esquisse*") dated 10 August 1983. This is a document in which he contested the three terms used in the original working title for the exhibition, new ("*nouveau*"), materials ("*matériaux*"), and creation ("*création*"), and instead proposed the title *Les Immatériaux*.

JLB: This is true. However, I believe that this text by Lyotard was largely based on the visual and factual material that Thierry Chaput and the team of the CCI had collected, hence also their reflections on the new conditions of "materiality". I know for a fact that Lyotard's thoughts were directly influenced by Chaput, who was concerned for Lyotard to know about the contemporary technosciences. Lyotard reflected this, for instance, in remarks made in his book *The Postmodern Explained to Children* (1986), which contains a "Letter to Thomas Chaput", the young child of Thierry Chaput, in which Lyotard points out the technoscientific development and its relationship with humanity. These were themes which were also part of our discussions with Chaput at the time.

If you look at Chaput's notes and sketches from 1982 and 1983, you can see how many aspects of the exhibition project that then became *Les Immatériaux* were already in place: the spatial structure, the sites, even some of the themes and titles of the sites. Also, Philippe Délis had been selected as the exhibition architect and scenographer before Lyotard joined the project. As far as I know, nobody has really analysed in detail how much of the exhibition was preconceived when Lyotard arrived, but I think that one will find that many things were already there.

AB: How did you get involved in *Les Immatériaux*?

JLB: I had been in Paris since 1969/70, based at the Centre Universitaire Expérimental de Vincennes, a place that deliberately operated outside of the norms of the French university system, with an art faculty that included not only fine arts, music, etc., but also film and theatre.

I had worked with Frank Popper, who was the director of the art department in Vincennes, on the kinetic art exhibition, *Lumière et Mouvement* (Paris, 1967), and participated in the exhibition *Cinétisme Spectacle Environnement*, which we organised together in Grenoble in 1968. I did not really keep working in this field of kinetic and cinematic art throughout the 1970s, in the environment of Vincennes, which was seen as both experimental and as home to leftist political groups. But it was sort of an "agitprop" context in which I developed, at the time – ideas for what one would today call cinematic and non-linear installations which implied interactive aspects and the participation of the viewer – and to give another ideological meaning to the notion of interactivity, which originally referred to "human-machine relations".

In 1980, the school, which was also named "Université Paris-8", moved from Vincennes to Saint-Denis. We returned from the dogmatism of leftist theory and Popper got interested again in the themes that had occupied him in the 1960s. There was an invitation to Popper and us, his group at Saint-Denis, by the Musée d'Art Moderne de la Ville de Paris, together with the national electricity company EDF, to create an exhibition. The budget was one million Francs – a lot of money at the time. This project became the exhibition *Electra* in 1983–1984, which I worked on as Popper's assistant, and as catalogue editor. It became a magnificent exhibition which also the museum curators and many other collegues were involved in – Edmond Couchot especially for the digital section, a first.

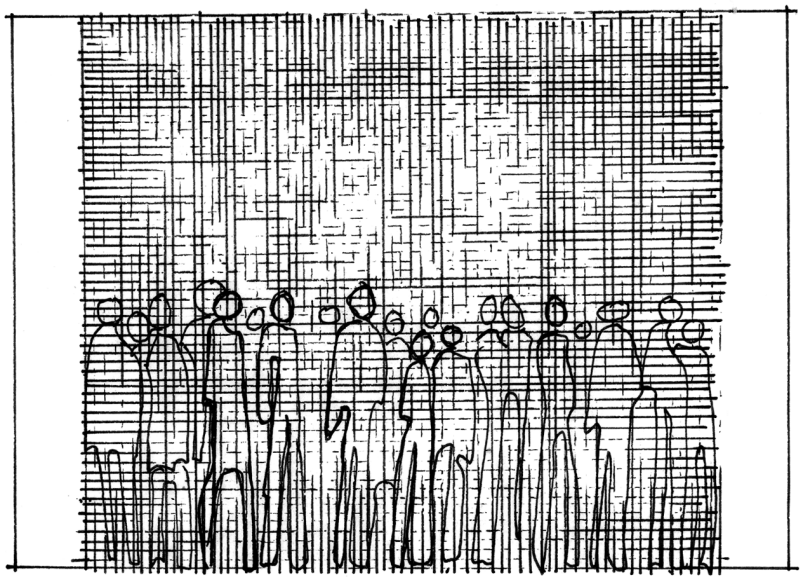
At one point in 1982, in a conversation at the museum with members of the team, we discussed critically that *Electra* looked only at the effect of electricity and electronics on art, not on the applied arts, design, architecture, etc. We wanted to see whether this lack could be alleviated, and in order to get advice, it seemed an obvious choice at this point to turn to the CCI at the Centre Pompidou. I knew the people there and went to speak with them about *Electra*. So I had a conversation with Thierry Chaput, one of the CCI's project leaders with a focus on design, and during that conversation Chaput said that they were already preparing a project on "new materials of creation" ("nouveaux materiaux et création"). During that conversation I found out about the project which was already underway – perhaps Chaput had come to the CCI in order to work on this project, I don't know. Chaput was interested in my research background and we immediately agreed that I would cooperate on the CCI's exhibition project. Chaput was looking for constitutive elements for his project which, at that time, he already conceived as individual sites that would make up the exhibition as a whole.

Amongst other things, I talked to Chaput about the medium of the videodisc, which I had discovered through Michael Naimark's interactive

video installation *Aspen Moviemap*. It had been shown in the influential exhibition, *Cartes et figures de la terre* (1980) at the Centre Pompidou, a large exhibition with a very good catalogue, about the important theme of cartography, with historical, contemporary and also artistic items. This exhibition was realised, by the CCI together with the BPI and the MNAM. For me, this exhibition was important because it made the link between art and informatics, which was also the theme of a working group that we had had before in Vincennes, the Groupe Art et Informatique de Vincennes (GAIV) and that included people like Hervé Huitric, Monique Nass, Michel Bret and others; Margit Rosen has studied their activities in the context of her research on the New Tendencies movement. I was not part of this group, but I agreed to try to introduce digital technologies in our art department, with regard to the concept of interactivity, a word which did not really exist at the time.

I had the idea that I wanted to develop something that would be interactive, combining the technical possibilities of the videodisc with the new ideas about production and distribution of film, the participation of the viewer, etc. I told Chaput that I had projects with interactive videodiscs which I had developed, for instance, for a competition for videodisc scenarios organised by the Chilean film curator Raul Ruiz for INA, the Institut National de l'Audiovisuel, in 1982/83. Chaput liked my suggestions and agreed to include such a cooperation with the course on visual arts of Paris 8 and its specialisation, led by Edmont Couchot, on new image technologies, in the CCI's exhibition project on new materials. This cooperation was formalised in a contract between our university and the Centre Pompidou in April 1984, and eventually led to several projects of digital images, interactive installations, and copy art, as well as the project *Le Bus*, which was produced and financed for *Les Immatériaux* by the Centre Pompidou. It was an expensive and laborious production that I worked on with several of my students, and that I would not have been able to do at the university alone.

After this initial encounter with Chaput, I went back to Frank Popper and said that the Centre Pompidou was already working on an exhibition about the new developments in design, so the plans for *Electra* remained unchanged with their focus on art. But from that time on I worked in parallel with Popper on *Electra*, and with Chaput on what would become *Les Immatériaux*. I spent more time on *Electra*, but stayed in close contact with Chaput and his team throughout the following years. For instance, as part of our research for the exhibition I went with Chaput to the national audio-visual festival Imagina at Monte Carlo in 1983, and to the Siggraph computer graphics fair in the United States.



[Figure 5] Philippe Délis: *Drawing of audience behind gauze fabric*, [no date] (Source: Centre Pompidou, MNAM, Bibliothèque Kandinsky)

AB: How did you experience the cooperation with Lyotard?

JLB: I already knew Lyotard because we were in the same faculty at Paris 8, though of course he was a generation older and an international star, so we were not close.

Unlike at the university, I found him extremely open in the context of the exhibition preparation at the CCI – very generous – he accepted almost everything that was proposed. He was not there as a curator who would select things, but rather as the intellectual who would connect and line up the things that were already there. He did bring in the architect Peter Eisenman, and some artworks by Moholy-Nagy, Monory – those were his choices. But the more technical things – the robots, the smells – these had been discovered by the CCI team. Lyotard would often intervene in the discussion very affirmatively, for instance on clothing, saying, "ah, yes" ("ah, oui"), or on the skin, "ah, yes".

The core group were Jean-Francois Lyotard, Thierry Chaput and Philippe Délis, and most things were decided between the three of them [Figure 5]. Lyotard, importantly, gave a theoretical and a literary dimension to the project. He worked a lot on his own texts for the Inventaire and other aspects of the project, as well as on the selection of texts used for the soundtrack. In fact, texts were the most visible item presented on electronic screens: telematic novels, text and image cooperations through the

Minitel, generative poetry and literature. The major interactive writing project, *Épreuves d'écriture,* was inspired by the British cybernetic artist Roy Ascott, and in its final realisation strongly influenced by Lyotard. But again, the idea for this project was already there, and Chaput had already made the contact with the Olivetti company – the sponsor of the computers – before Lyotard arrived. The idea to suspend the whole exhibition from the ceiling no doubt came from Délis, and it was confirmed by Lyotard who liked the concept. Chaput, in contrast, brought in the enormous knowledge of possible objects and things to do and show, and all the contacts with researchers and cooperation partners.

There were many people working on the different projects for the exhibition. We had students involved, and there were lots of other research institutions involved with the CCI in similar ways. At that point I was only the intermediary between my university's research sector and Chaput and his team. The cooperation process was organised at the CCI by Chaput's team of maybe 20 people. Lyotard regularly organised seminars or working groups ("groupes de reflexion"), for instance with Jean-Pierre Balpe from ALAMO (Atelier de Littérature Assistée par la Mathématique et les Ordinateurs), the informatics branch of OULIPO, with Paul Braffort and Jacques Roubaud, who spoke about generative text. Lyotard organised these seminars not only to learn things, but also to get an idea of what issues people were arguing and fighting about.

I was a member of one of these working groups, where I was considered as someone who could speak about the new, digital modalities of the image, but also about teletext and telematics, computer graphics and copy art. There were several projects at Paris 8 which were of interest in this context, and of course it then played a role that Lyotard was also on the faculty of Paris 8 – the same faculty which also included philosophers like Deleuze, Chatelet, Badiou, Rancière, and artists like Orlan. Another colleague at Paris-8 was Jean-Paul Fargier, an artist and theoretician of video and friend of Nam June Paik, who cooperated in *Les Immatériaux* on aspects of video art and surveillance.

Lyotard was a "leader" – some saw him as a "guru" – who gave an image and a face to a practice that was present, and that was drawn together for the exhibition from different fields. The Centre Pompidou had decided to make an exhibition with a philosopher as "commissaire" – not really a curator, but rather an "author". He was able, in that situation, to pose the problem that the exhibition wanted to address. And although Lyotard mostly only confirmed the ideas for the planned exposition, in a political sense he probably saved the exhibition. Lyotard was brought in as an external expert – external not only to the Centre, but also external to the profession of exhibition curators and organisers. One could speculate

[Figure 6] Exhibition view, site *Labyrinthe du langage* (Source: Centre Pompidou, MNAM, Bibliothèque Kandinsky, photograph by Jean-Claude Planchet).

that, when the first phase of research and conceptualisation of the exhibition didn't really lead to concrete results, Lyotard was perhaps installed in order to demonstrate that the CCI was not able itself to realise such a complicated project.

Lyotard pushed the team of the CCI, which was used to produce a solid, pedagogical, efficacious exhibition, so that they would make a "manifestation" which in itself would be "a work of art". He really put it like that – "une œuvre d'art" – and used terms like "opera", "dramaturgy", "scenography", "constellation of poetic and literary image-objects". Lyotard's philosophical approach meant a departure from established models, towards a work of a radically new type in which texts played an exceptionally big role, in titles, the signage, the printed materials, the soundtrack. *Les Immatériaux* was considered an intellectual success, but it was also seen as an exhibition that was difficult for the public. The sensitivity of the visitors was tested in different ways – they were not only addressed as viewers, but also as listeners and readers, who had to find their own way through the maze of the exhibition.

AB: I would like to speak a bit more about the artistic program of *Les Immatériaux*, which not only included "canonical avant-garde artists", but also some of the contemporary video installation artists like Dan Graham, Thierry Kunzel, Catherine Ikam, and Maria Klonaris and Katerina Thomadaki. At the time, holography was one of the exciting and enigmatic new media technology, which was represented in *Les Immatériaux* through

works by Alexander, Stephen Benton, Doug Tyler, and Claudine Eizyckman and Guy Fihman. And your own interactive installation, *Le Bus*, and your collaboration with Liliane Terrier, *Toutes les copies*, as well as the interactive sound installation by Rolf Gehlhaar, were all by artists closely connected to Paris, and with IRCAM, La Villette, and Paris 8 [Figure 17]. The semiotic aspects of *Les Immatériaux* were closely related to the discussions on signs and language which played an important role in the 1960s, connected with linguistics and the semiotic analysis of culture. These discussions were reflected in the conceptual art of the 1960s and '70s, which were prominently represented in the exhibition with works by Marcel Duchamp, Joseph Kosuth, Piero Manzoni, Yves Klein, Robert Barry and Ian Wilson. My point here would be that the choice of works by these artists was probably appropriate, but not very original: Their works had been collected by the Paris museums and was readily available for presentation; they were here as place-holders for a specific reflection on signification, not so much as original works.

In general, I have the impression that the artistic program of the exhibition avoided strongly speculative positions, and that the use of artworks was not as independent works, but rather as objects tied up into a theoretical argument. Similarly, it was not intended that one would experience, for instance, the soundtrack as an independent and self-contained piece, but always as part of an overall confrontation with the sites in the exhibition. The artworks were woven into the texture of the exhibition as part of the overall argument, even if they were there to make the argument in a form that was explicitly not textual, but visceral, whether visual, auditory, haptic or olfactory.

JLB: I think it is necessary that we are careful when we speak about the status of these different elements of the exhibition. Some of the things that you mention, *Le Bus*, or *Toutes les copies*, were not really considered as artworks ("*oeuvres*") at the time. The things that were considered as artworks were mostly those which came from the MNAM, through its curator Bernard Blistène. And some of the exhibition visitors would perceive these works as artworks when they walked through the exhibition. But in terms of the overall scenography, there are not really "works" in the exhibition, but "sites", constellations, each of which had been realised not by one author, but by several people.

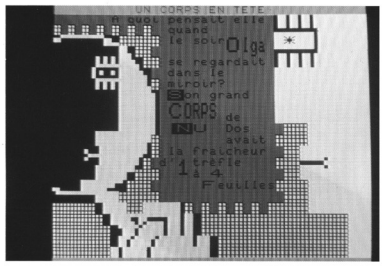
It would probably be interesting to reconsider the list of exhibition items and see which of the things that were in the show would today be considered as artworks – this will definitely have changed for some of them. At the time, this was not an issue; in fact the idea that some things were different from others because they were artworks was rejected as ideological [Figure 6].

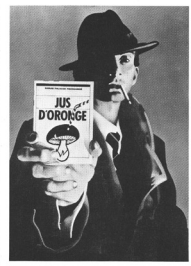
romans à faire

Vivez en vitesse le roman de faire un roman. A partir de bribes ou d'indices, reconstruisez «votre» histoire, et apprenez d'elle «la réalité» imaginaire que vous désirez.

l'objet perdu

Fiction télématique, interprétation du mythe d'Osiris. La structure informatique est un corps analogue à celui d'Osiris. Le spectateur dans son travail de reconstruction a le rôle d'Isis, qui rassemble et réunifie. Ce corps imaginaire s'organise en ensembles «anatomiques», suggérés par les titres des écrans principaux. L'histoire, bien que soumise aux caprices du lecteur, comporte tous les éléments qui président à la facture d'un roman : action, événements, arrêts sur l'image, personnages, considérations générales, etc. L'œuvre est composée selon trois temps :
• la première phase sert à faire connaître au spectateur un des nombreux parcours possibles du récit ;
• la seconde l'informe d'une «destruction» partielle de ce qu'il vient de lire ;
• la troisième lui propose de réécrire une histoire sur la base des «restes» de sa consultation.
Chaque spectateur a un parcours dans le récit qui lui est propre.





1. Page-écran vidéotex du roman, *l'Objet perdu*.
2. Montage à partir d'une affiche de S. et J. Jupin.

jus d'oronge

Fiction policière télématique. C'est à la fois un roman policier à énigme classique et un «romanciel» permettant des lectures diverses, au gré du lecteur-enquêteur qui peut suivre à sa guise les divers interrogatoires, jusqu'à la proposition de deux solutions différentes. Le roman se compose de 476 écrans de moins de quinze lignes : chaque écran contient un ou deux indices (vrais ou faux). Le «lecteur» a le rôle de l'enquêteur, et ses choix doivent porter :
• sur la prise de connoissance ou la vérification des indices;
• sur l'ordre d'interrogatoire des témoins;
• sur la consultation de documents ou de leurs commentaires;
• sur les solutions de l'énigme;
• sur la résolution des «défis au lecteur».

[Figure 7] *Inventaire*, site *Romans à faire*, recto (Source: Centre Pompidou, MNAM, Bibliothèque Kandinsky).

In fact, I believe that *Les Immatériaux* was such a success because it was not an art exhibition. It would be a bit excessive to call it a "philosophical exhibition", but it was its quality to make a more general proposal about the current relationship between culture, science and technology. And it provided not only a philosophical commentary, but a story, a scenario. It helped many people to pass on to a different state, a different way of thinking and working. For me personally, another exhibition that I curated was also very important in this line – *Machines à communiquer* (1990), a technoscientific exhibition about virtual reality and networks, which also had an important artistic component. Networks had already been present in *Electra* – for instance with works by Roy Ascott and Fred Forest – and they definitely played an important role in the conceptualisation of *Les Immatériaux*.

Another thing to remember is that there were a number of young artists who are not easily recognisable as authors, yet who contributed to *Les Immatériaux* various Minitel projects, online novels, etc. Their work, I believe, played a very important role for the aesthetics of the exhibition, especially because of their treatment of texts.

Let me give you some examples – and for the historical re-evaluation, we must keep in mind that there is a difference between what is in the catalogue and what was actually on show. For instance, in the site *Mémoirs artificielles*, there was a variety of screens which presented texts. The site was organised by Frederic Develay for the BPI library and dealt with

the notion of telematics and telecommunication. I believe that when we put together a list of the contemporary artists who were involved in *Les Immatériaux*, we must include Frederic Develay, who was exploring new forms of text, of reading and writing. He was also involved in the site *Champ et mouvement de la voix*, in which several well-known French artists participated, including Bernard Noël, Bernard Heidsieck, writers of concrete poetry, and Alain Longuet, who experimented with video and how to couple it with the digital. The people who organised the site *Romans à faire* – Jacques-Elie Chabert, Jean-Paul Martin, Camille Philibert and Dominique Horvilleur – worked on the writing of novels using the Minitel system; they produced silkscreen prints and were part of fanzine culture [Figure 7]. Or think of Marc Denjean, who did, amongst other things, a Minitel project for the site *Séquences à moduler*, realised in cooperation with ENSCI (École Normal Supérieure de Création Industrielle) – at the time a new, industry-oriented design school in Paris with which Chaput had forged a cooperation. You will see that Denjean's name crops up several times in the *Inventaire*.

These are only some of the artists who are somewhat hidden from view when you first look at *Les Immatériaux*, but who played an important role for the connection of art and technology, both in the exhibition itself, and in the time afterwards. *Les Immatériaux* brought together projects and people, mainly but not only from Paris, who were already working in this field, but it also catalysed the work that everybody was doing. And many of these contacts existed before Lyotard joined the project – this whole dimension of *Les Immatériaux* was somewhat beyond Lyotard's involvement.

AB: If we look at the relationship between *Les Immatériaux* and the 1983 exhibition *Electra*, we notice that at least 14 of the twentieth-century artists in *Les Immatériaux* had also appeared in *Electra,* two years before. It seems that the choice of artists for *Les Immatériaux* was largely based on work that was known and available in and around Paris in 1984/85. The selection for the exhibition was partly based on a rather conservative understanding of established positions in contemporary art, partly also on the presence of artists in Paris, in order to be able to develop with them new works, or adaptations of existing work.

An interesting case is that of the installation you and Liliane Terrier put together for the site *Toutes les copies*, where the visitors were invited to make such photocopies of objects or body parts themselves, assisted by somebody from the exhibition team. Two years earlier, in *Electra*, you had curated a section on *Electro-photography* which had presented works of "copy art" made with photocopying machines, and which was introduced, in the catalogue, with an essay in which you also made reference to the

[Figure 8] Exhibition visitor, site *Labyrinthe du langage* (Source: Centre Pompidou, MNAM, Bibliothèque Kandinsky, photograph by Jean-Claude Planchet).

seminal work of the educator Sonia Sheridan, based at the Art Institute of Chicago.

JLB: You are right, several artists in *Les Immateriaux* were also part of *Electra*. In retrospect, we can say that *Electra* was sort of an exploration for some of the things which were then presented in *Les Immateriaux*. Because of this connection, *Les Immateriaux* has also become a significant moment for the history of electronic art, and part of the history of the digital – a staging of its mythology of emergence. But at the time one did not speak of "electronic art", even though electronic and digital technologies were having a significant impact in the arts – think especially of music where this technical development had already been going on for two decades at least, and did not pose a problem any more. Equally in literature – through the work of, for instance, the ALAMO group, which was important for Balpe and others – there was an awareness of the impact that the new digital production and distribution media had on literature. And people like Hervé Huitric, Monique Nass and Michel Bret were working on computer graphics which, in their view, would *save* painting; and at the same time they were working with the Renault factory on car designs.

These people were involved in the exhibition, yet at the time *Les Immatériaux* was not considered an exhibition of electronic and digital art. In *Electra* there was a clear division, marked by the influence of Edmont Couchot, where there was something that can be called digital art, even if the word did not exist then. But it took several years before this trend was

confirmed – for instance in the *Artifices* biennial, which I organised from 1990 to 1996.

Take, for instance, the exhibition *Image calculé*, which I organised together with Chaput and Délis in 1988, at the Cité des Sciences et de l'Industrie. This was not an art exhibition, but it contained many artworks, and things made by artists. In the same year, 1988, we also organised the "art show" of Siggraph France. We can probably say that the notion of digital art really appeared in that year. Only retrospectively one can say that *Les Immatériaux* was one of the stations in this development – and a special one, because here the respective works were not presented as digital art.

AB: You spoke about the development of the exhibition project before it became *Les Immatériaux.* How did this trajectory continue after the exhibition closed?

JLB: One aspect to mention in this context is that there were projects that had been planned for *Les Immatériaux* but were not realised – Edmont Couchot's *La Plume,* for instance, required powerful computers that were only available when the project was premiered in 1988 in the exhibition at la Grand Halle de La Villette, which I organised together with Chaput. Another very significant follow-up was *Passages de l'image*, curated by Cathérine David, Raymond Bellour and Christine van Assche at the Centre Pompidou in 1990. The installation that I realised for this exhibition, of a high artistic level, was not strictly an artwork, but contained a selection of scientific images and was intended to reveal the way in which contemporary art was affected by digital images.

From this contact arose the commission by the Centre Pompidou for the experimental exhibition format of the *Revue virtuelle*, which I curated from 1991 until 1997, the year when the Centre Pompidou closed for renovations for several years. *Revue virtuelle* was a permanent exhibition which sought to show to the broader public how the digital was intervening in all domains of contemporary society. This was a project initiated by the MNAM – not an "art project" in the narrow sense, but one about contemporary aesthetics.

For me, *Les Immatériaux* was an exception to this trajectory, because it did not have a narrow agenda – it wasn't there to defend a particular domain. The presence of Lyotard made this possible. Many of the other exhibitions, until today, have a particular thematic or technical focus, serving certain cliques. *Les Immatériaux* didn't do that at all. That's one of the reasons why the exhibition has attained a somewhat mythical reputation. It was diverse and departed in all sorts of different directions, yet maintained a high level of quality.

AB: Also for the audience?

JLB: I think it did, not least because there were so many screens in the exhibition [Figure 8]. The Minitel, introduced in 1982, was already quite present and artists and writers were working with it, but I believe that what the general audience remembered from *Les Immatériaux* was the appearance of digital communication through networks and screens. This impression was strengthened, I believe, by the fact that they had the headphones, for even if this was technically something different than networked communication, the fact that everybody was wearing the headphones on their heads, gave a very particular image. This is why Lyotard insisted so much on this aspect – it was not only about the texts that were transmitted, but it was also part of the whole scenography, the performance of *Les Immatériaux*. The experience of the exhibition was strongly determined by this interactive distribution of the texts through the infrared emission in the different zones. People understood that this was a metaphor for what would later happen with the web.

This conversation took place on 20 November 2014, at ENSAD, Paris.