

Introduction to *The age of systems* in *Illich's later thinking**

by Jean Robert

When Ivan Illich was in his teens, a fortune teller once told him that he was going to invent a 'science that does not exist'. As a grown man, he undertook a number of research endeavours that focused on 'the axioms underlying our social theorems', 'the typology of the late modern mind', 'historical somatics' (a history of the self-perceived body in past eras), a history of the gaze, and the social history of alphabetic culture. He kept himself abreast of all the trends emerging in the 'industrial society', of which he had been one of the most coherent critics.

In the 1970s the whole world became his audience. At the time he seemed to personify the medieval *magister*, at whose feet students sat. The latter included for instance Majid Rahnema, who was four years his senior and who had served as Iran's minister of higher education: Illich taught him how to use computers, and also used to assign him training exercises as homework. 'Majid, Majid, what have you done this time?', Ivan was wont to say whenever Majid made a mess of things. Furthermore, he appeared to be able to speak all languages, and to have read everything there was to read. His charm was particularly effective on people such as Jean-Pierre Dupuy, a professor at Paris' École Polytechnique. The philosopher Martin Fortier seems to believe

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to this day that Illich had perfected an infallible method of argumentation capable of unmasking *modernity's irrationality*. Fortier called this method *peirastic*, and blamed Illich for not having subsequently kept his criticism within the framework of that kind of rationality (which, all things considered, is unsurprisingly French). In his view, Illich did not remain faithful to French rationality for long. In fact, he believed Illich had opened himself to far too many “irrational” influences, which allegedly later drove his friends and colleagues within the École Polytechnique to distance themselves from him. There are even some who claim that what he wrote after 1980 is not worth reading.

In truth, the 1980s was the period in which Illich came to understand the importance of the *lumen sub quo*, of the light which the eye projects on things, or, more literally, of *the light under which* one chooses to see. This light or *lumen* allegedly represented the complement of *lux*, the impersonal light that emanated from techno-science as if from the sun, and which exclusively illuminated concepts. Illich perceived something apocalyptic in the modern mentality and in the light (*lux*) of its totalitarian concepts. In the 1990s, he became painfully aware of that mentality's drift towards a systemic thought which had no place, among all of its symbolic devastations, for any revelatory intuition: everything was normal, and awfully so.

The present book has the ambition of introducing some of the ideas which Illich developed, either orally or in writing, over the last twenty years of his life. They concerned examining and understanding the present with the eyes of a historian, and “historicising” the guiding principles and the certainties that shaped the typology of the late modern mind. There were however two new intuitions that began to inspire Illich after the early 1980s:

1. Those certainties, which were seldom questioned, were not purely conceptual and were far from being “scientific”, but relied in fact on tangles of conceptions and perceptions, and of concepts and precepts. ‘The social body determines the way in which the physical body is perceived’, which in turn supports a specific view of society. The historian Barbara Duden, a member of the ‘West German Women’s Movement’ whom Illich met in Berlin around 1980, may have pointed out to him that aphorism by Mary Douglas, which was devised in the context of her ‘theory of the two bodies.’ After 1980, Illich undertook with Barbara Duden a wide-ranging programme for the exploration of physical perceptions and of their contribution to the crystallisation of what contemporary man held to be true.

2. Illich’s second intuition did not spring up ready-made in his mind, but actually took shape in stages: after the 1970s, mankind was faced with the most dramatic upheaval (an epistemological landslide, in Illich’s own words) in the history of the second Christian millennium, which he believed to have been caused by the weakening of a certainty that was initially theological, and later technological: namely the one according to which some objects were made to obey a certain kind of intentions, be they divine or, at a later stage, human. They were what we nowadays know as tools, and what medieval Latin designated with the word *instrumenta* (*instrumentum* in the singular).

The still nameless epistemological upheavals that followed hard upon one another after the end of the 20th century were allegedly a kind of ‘farewell to the tools’ which we are still unable to express properly. We still call tools (or ‘technologies’) artifacts which in fact do not serve (or do so less and less) human intentions.

The scholastic philosophers who after the 12th century developed a more precise definition of *instrumentum* did so by adding a fifth cause (*causa instrumentalis*) to Aristotle's four causes (*materialis, formalis, finalis, efficiens*). Thereafter the tools became an instrumental cause, and the "technological" age that was about to begin was more adequately defined as the *instrumental* age. Illich later hypothesised that the instrumental age entered its decline in the years between 1970 and 1980.

Many of Illich's readers and friends sink into an embarrassed silence when questioned about these two daring hypotheses. In the present book I intend to clearly distinguish what might be true (and what I consider to be as such) and what may be refuted 'for the lack of empirical evidence', a prediction held to be feasible by the philosopher Martin Fortier, who was a staunch opponent of Illich's concept of *distality* (the modern term with which Illich designated the principle formulated in the 12th century of the degree of separation that is a constitutive element of the relationship between the tools and their users' body).

Illich was one of those thinkers who pushed themselves to the limit. He did not try to identify the solid stepping stones in a ford, but rather the shaky one right in the middle that enabled them to think the unthinkable. That could also be the top of the witches' wall, the double ghetto, the time gap between the celebration of the instrumental certainties' demise and systemic thought's looming threat. It was also the moment when new possibilities could arise, as for instance gratuitousness.

Was Illich a pioneer of degrowth? Indeed, he was not. Did he perhaps address it with different words? The reply to that question ought to be carefully worded. What Illich proposed was *concerted negative growth*. It did not concern the kind of degrowth that sets in without planning, but rather a

political decision in favour of negative economic growth as a response to the industrial age's intrusive sexism.

Illich believed that sexism inevitably followed economic growth and that growth was always associated with the scarcity that was perceived right amid abundance. Illich was convinced that the voluntary reduction of the *economic nexus* (i.e., the degree of one's personal involvement in market economy) was the precondition for gender equality in modern society. Industrial societies always had 'a high economic nexus' (or, in other words, a high level of perceived scarcity), and were concomitantly sexist. Illich carefully avoided mixing up modern-day sexism with the relics of the patriarchal order inherited from the past. He claimed they were not the same in nature, as *sex* was fundamentally different from *gender*, in the same way that societies organised in accordance with economic laws based on the axiom of scarcity could not be compared to subsistence societies, which could experience indigence, but not what has been known to economists as scarcity since the end of the 18th century. The patriarchal order is undeniably open to criticism but remains a relic of a society that is no longer ours.

Both gender and sex clearly prove that men and women exist, but gender is not the historical antecedent of sex. Claiming that it was such is a perversion of the truth which Illich ascribed to most university courses on 'gender studies.' Since sex was the perceived contraposition between *human beings* differentiated by bulges under blouses or in trousers, it was a novelty without any historical antecedents, a present without a past, which was a source of profound anxiety.

Illich's idea seemed to be that certain modern circumstances and notions constituted a complete break with the past. An example of this idea is that of a hyper-alphabetised society, ideally bereft of any link whatsoever to orality. That idea was compounded by the fact that modernity refused to

take stock of such a break: for instance, reference is usually made to ‘oral literatures’ or subsistence *economies*. What Illich claimed about the alphabet in the last years of his life can also be said of the idea of sex in the economic society: it is a reality that was inconceivable before its birth, and whose absence was unimaginable after its emergence. Alphabetised people have become incapable of understanding the oral world’s specificity, and whenever they attempt to do so, they colonise it with hopelessly alphabetic concepts, in the belief they may discover, for instance, islands of ‘oral literature’ within the archipelago of orality. By the same token, ‘gender studies’ often reconstructs the concept of gender, which has historically vanished and which can be perceived in the present only with great difficulty, on the basis of the evidence provided by a sexed society, i.e., by a society dominated by what Illich called *economic sex*, in which sex mingles with the scarcity perceived in the midst of an abundance of goods and services.

In the words which Barbara Duden delivered at a seminary organised in Paris in 2010:

The second half of Ivan Illich’s life was (...) a sort of terra incognita – especially as far as the French “maps” were concerned – from which two islands suddenly emerged: *Gender* and *In the Vineyard of the Text* (Duden, 2010, p. 137).

This introduction is devised as a map, a compass, and an instruction manual of sorts. It consists of paragraphs that focus on clearly-defined issues linked to the second half of Illich’s journey as a thinker engaged in deciphering modern concepts in the mirror of the past. Whenever I have occasion to evoke the years before 1980, I shall endeavour to do so with both feet firmly planted in that bygone past while keeping my gaze fixed on the present.

The convivial tool and Cuernavaca's 'kitchens of the future'

The documentarists Marie-Claude Deffarge and Gordian Troeller, who shot a film about CIDOC in 1975, used to informally refer to that place as 'kitchens of the future'. At the time Illich believed in the feasibility (and perhaps also in the imminence) of a *revolution of the tool* that could put on trial the *industrial tool*, whose size and power had become disproportionately vast, and which could eventually be replaced by the *convivial tool*, one which would not exceed the appropriate measure, would require the contribution of its user's physical force, and would reduce the consumption of exogenous energy. From a conceptual point of view, the industrial tool and the convivial tool are in opposition as are *heteronomy* (the submission to someone else's law) and *autonomy*.

An industrial product that expands its users' scope of action... and its opposite

The industrial tool encourages heteronomy: its users are controlled by a (professional or administrative) power that is different from their own. Conversely, the convivial tool is strengthened by the autonomy of its users and allows for a *positive synergy* between autonomy and heteronomy. The industrial tool gets stuck in the *negative synergy* between what one can do on his own and what one has to ask others to do for him. For example, the end of the 19th century saw the emergence of two technical devices, two tools that relied on the same mechanical innovations: the bicycle and the motorcar. The former was an instance of a convivial tool, while the latter was the prototype of all industrial tools.

Bicycles are an industrial product that I would not be able to assemble in my backyard: almost all of the pieces of which they are made (their metal frame, their wheel spokes that work under tension, and their wheel hubs fitted with ball bearings) are products of the late 19th century's mechanical industry.

Bicycles are an instance of positive synergy. Motorcars, on the other hand, are an instance of the negative synergy between autonomy and heteronomy. The first motorcars, which were equipped with four wheels and a combustion engine, relied in all other respects on the same feats of mechanical engineering that were also to be found in bicycles.

In large cities with an underground rail system such as New York, London, Paris, or Mexico City the average speed developed by motor vehicles throughout the day (about 9 mph) is lower than the speed that may easily be reached on a bicycle, and it is even lower in those cities that do not possess an underground transport system. Once the positive synergy between what one can do on one's own and what one has to ask others to do in one's stead has been broken, it triggers a spiral cycle in which every instance of increased heteronomy leads to a demand for greater heteronomy. The outcome is a type of urban traffic with high energetic costs, which favours the already growing heteronomy, and is, on average, less fast-flowing than a kind of urban traffic with low energetic costs and based on the positive synergy between autonomy and heteronomy. The industrial *ethos* could be summarised as follows: nothing is to be done on one's own, there must be no productive muscular work, and everything must run on engines: a world of conveyor belts and escalators, of self-opening doors, and of lifts that reach the second floor.

An unsettling hypothesis: the end of the age of the tools

The historian Illich (who still counts as the only historian who has ever been alert to it) expressed his conviction that the last years of the 20th century represented a radical break, one of the greatest rifts in the whole history of the world that had been born out the faith in the Incarnation of the Word: the Western world. In his view, it was the end of the age of the tools. One of the warning signs in that sense was

allegedly the intrusion in common speech of the terminology associated with a new “pop science”, which had been generated by the concepts of cybernetics and systems analysis after their escape from their scientific domains of origin. This invasion of “plastic” words, which deprive speakers of the power to shape the meaning they intend to give to their words, coincided with the instability that marked the end of the Glorious Thirty, the three decades of economic growth that occurred after the end of the Second World War.

The first symptoms of the end of the age of the tools

Around 1970, before the massive impact of cybernetic and systemic concepts on people's mentality, it was already possible to detect some signs of the twilight of the industrial *ethos*. Is it not about time, Illich wondered, to write an epilogue for the industrial age? In order to find an answer to that question it became necessary to place at the centre of the debate the concept of one object, the *instrumentum*, which was defined at the time of its appearance in the Middle Ages as mechanic, a word whose etymology Hugh of Saint Victor ascribed to Greek *moichos* (the adulterer).¹ Once cautiously accepted in the 12th century, the *instrumentum* became, in the following century, one of those objects that exemplify an era, which Paul Veyne defined as *objets biscornus* (weird and unpredictable objects). Since the 14th century at the very earliest, underneath every discussion on “technology” and its

1 In his imagined dialogues with Dindimus (an Indian wise man), Hugh of Saint Victor (cf. Illich, 1991) introduced him to the concept of tool, which was beginning to spread especially thanks to *De variis artibus* (1128) penned by Theophilus Presbyter, which for the first time presented craftsmen's tools as if they could be separated from their users' hands. That approach seemed to somehow suggest giving one's body to the first comer. The English expression 'sowing wild oats' (which in Italian would translate as *correre la cavallina*) aptly depicts the vague feeling of impropriety caused by the new tool. It is perhaps what Hugh had in mind when he hypothesised that the word *mechanics* derived from Greek *moichos*, the adulterer (cf. Illich, 2005, Italian translation, p. 60).

advances, the “tool” object, which is polymorphous and, in the industrial age, constantly evolving (and perhaps also on the brink of extinction), has summarised the essence of an age in which ‘the tool was the answer to all questions’. Illich came to understand that industrial society and its fate could be interpreted through the tool’s metamorphosis.

What differentiated the 1970s from the 1980s in *Ivan Illich’s thought* was the fact that during the first decade he still saw the tool as one of history’s unchanging elements. It was necessary to wait until the 1980s for Magritte’s ‘this is not a pipe’ to be applied to the tool, when Illich understood its deep *historicity*. Just try to imagine a computer bearing the caption: ‘This is not a tool’.

The 1980s: concepts and perceptions

Was Illich a sociologist, an economist, a historian, a philosopher, or a theologian? To the eyes of those who believe that those categories structure thoughts and also designate professions capable of imparting the one true knowledge in a given field, Illich might have seemed to be a Jack-of-all-trades and an amateur. Though those who knew him and saw him at work considered him to be a passionate researcher who rebelled against all restrictions, also (and especially) in a specialised field characterised by hypertrophic scientific aspirations. After lifting a stone under which he had seen something move (such as for instance the possibility of a history of the *sensory perception* of the body that went beyond the notions with which anatomy and physiology described it), he was able to examine that something from different angles, including those of official science, without ever becoming compliant with their dogmas. Since he could not accept the certainties of the topology of the modern mind, and he was at the same time incapable of conceiving himself as living in the past (which was no more), he lived,

as he stated himself, in a *double ghetto*.

If I were asked to describe in one sentence the cooperation lasting more than two decades between the historians Ivan Illich and Barbara Duden, I would quote the following one: 'The spindles on which the sensory perceptions of an age were spun were buried in the soils of history far more deeply than the looms on which its conceptual certainties were woven.' Those are the words of archaeologists of perceptions and historians of ideas. Since the general object of their studies was the topology of the modern mind, its exploration required them to walk on both legs. Indeed, around 1980, Illich regretted having until then carried out his analysis of modern ideas in an exclusively conceptual fashion, thereby walking with only one eye open or on just one leg.

Thereafter he focused his attention on the aggregates of sensory evidence and of the generally inherited ideas that constitute the foundations of the topology of the modern mind. Together with his friends and colleagues, he undertook a sort of archaeological exploration of those certainties. He embarked with them on research on the five physical senses and (especially with Barbara Duden's help) on the history of the inner perception of the body, as well as on Antique optics and the transformation of the gaze into a tool after the 11th century.

Illich defined the age of the tools as the period that ranged conceptually from the 12th to the 20th century, and "technologically" from the 14th to the years 1970-1980. The rise and fall of the tool as 'the key that opened all doors' delimit an age of the tools in which those aged fifty or more still have one foot. The instrumental age was that of the instrumental means, a metaphorically luminescent object which, not unlike Borges' Aleph, enabled the whole world to be seen under its light. It is in that sense that I shall consider Ivan Illich as a historian of the tools, and the present book as a tribute to a histo-

rian of the tools who is still little known in that capacity.

Previously: the years of Illich's media fame

The 1970s were conversely the years in which Illich was a famous personality. At the time his criticism of industrial society made explicit an intuition that was shared by many critical spirits the world over: the institutions that provided services (education, transport, medical health) were *counter-productive*, and delivered the opposite of what they promised. Illich proceeded to *prove* his point sequentially in relation to the institutions that provided services in the fields of education, transport, and health, and he was widely read. Schools brought about absentmindedness, transports led to a paralysis, while medicine made bodies ill, and above all impaired their ability to self-protect. At that time, his books were translated into dozens of languages, and their circulation was in the range of five or six digits.

CIDOC and Cuernavaca

In those years Illich's name was associated with an institute known as CIDOC (the Centre for Intercultural Documentation), which had its seat in one of Mexico's provincial cities, Cuernavaca, and which was to become a pilgrimage destination for many intellectuals from all over the world who were beginning to understand that 'things cannot go on like this'. In that period Illich himself believed it was important to start preparing the great debates that were to mark the end of the 20th century without further ado.

Those debates, however, never took place. In order to do so they would have required what Jacques Ellul called a burst of freedom. The late 1970s were characterised by a backwash of fatalism and conformism, which I believe was due to the spread of the systems theory's notions, their acceptance as metaphors of society, and the intrusion into our language of

neologisms that helped to modify the self-perception of those who employed them: *input-output*, flight data recorder, population curve, the human body as immune system.

What else was CIDOC, if not a place of freedom whose visitors did not wish to become integrated into the system? It may seem a paradox that Ivan Illich's personal friends and CIDOC's visitors included a thinker such as Heinz von Förster, who acted as secretary for the Macy Conferences (during which concepts that constituted a sharp break with conventional notions on causality were developed in the 1950s), and who introduced the term *cybernetics* (derived from a Greek word that means helmsman, pilot). At a conceptual level, questioning the concept of causality and replacing it with that of program already represented bidding a farewell of sorts to the concept of instrumental cause, the backbone of the age of the tools.

CIDOC was a 'free university' with no exams or diplomas, a *think tank* where industrial society's concepts and guiding principles of the 1970s could be discussed contrastively, and where everybody became in turn teacher and student. Valentine Borremans, who directed it, encouraged all auditors-students-professors to shed the yoke of what she called *industrial ethos*, according to which the rich were the vanguard of a way of life that was fated to be adopted by everybody, a grotesque delusion that has nowadays been so thoroughly belied by facts that only the most cynical can still support it.

The industrial ethos

Ethos is a Greek word whose etymology is related to the English word *gait*, which designates one's *own* posture and way of walking. The industrial *ethos* is a gait in which each new step requires renouncing one's autonomy. The corridors of the Montparnasse-Bienvenue station of Paris' underground sys-

tem force me to walk a great deal, but my muscular efforts are a kind of ghost work that only serves the purpose of supplying the local transport agency with new passengers. If *autonomy* is the ability to act with one's own means within the context of accepted restrictions, its opposite, namely *heteronomy*, is a Hobbesian surrender of the right to exercise one's freedom in favour of the progressive elimination of all limitations. It follows that one of the topics debated in the conversations that took place at CIDOC concerned *limitations*, which were defined at a political level and accepted in a convivial fashion.

One of the seminars convened by Valentine Borremans revolved around the topic of *the technological imperative*: whichever technological advance turned out to be achievable in whichever part of the world, it had to be made available to the ruling *elites* regardless of the price that the majority of the world's population was forced to pay.

A society based on heteronomy, which in order to exist needs to tolerate the destruction of autonomy

Since there can be no ethics without autonomy, one has the ethical duty of containing the renunciation of one's autonomy. In the 1970s Illich believed that industrial society was a society in which the conditions of existence were progressively being eroded, thereby freeing the horizon for the pluralistic invention of post-industrial societies. Ten years later there was the finalisation of the constitutive elements of a form of social cybernetics that threatened to consign to the oblivion of history the tool placed at the service of *human intentions*.

A countermove: research on sensory perceptions

I do not perceive myself as you see me. The eye is not the most ideal organ to perceive the 'darkness under my skin' that is my flesh. Together with the historian Barbara Duden,

Illich opened new paths and explored new lands, which he named as if they could really become new intellectual disciplines. For instance, with their decision to designate the body by its Greek name, *sōma* (the felt body), rather than by a derivation of the Latin word *corpus*, which always evokes a whole seen from the outside, Illich and Duden undertook a long study, which they called *historical somatics*, on the self-perception of the body in some of the past ages. It was a study on perception, or rather on the *self-ception* of what is the most concrete element in existence, the *concretissimus*, namely flesh. Their intuition brought to light unforeseen objects of study, which did not entail immediate subservience to pre-established scientific disciplines. Would it not be sometimes possible to weave new disciplines out of the weeds that grow among the rocks on the beaten path? It was not a case of invention for its own sake. Ivan Illich and Barbara Duden aspired to shed new light on the topology of the modern mind. It was therefore a search for the *lumen sub quo*, for the light under which that topology was to reveal its true nature.

Illich, a theologian who became a historian and a philosopher of tools

The present book strives to provide an answer to one question. The most recent writings (be they books or articles) on Ivan Illich avoid (or at any rate avoid tackling directly) an issue which I see as central in his work, namely that of the tools. Illich was a theologian, a philosopher and a historian, and especially a *historian of the tools*. He placed great emphasis on the historian's ability to make accessible topics that were generally seen as theological, such as 'the corruption of what is best that generates the worst' which a French editor chose as the title for his edition of the last conversations between Illich and David Cayley (Illich and Cayley, 2007 [2005]). One of the mysteries of evil is that the culture which was born from

faith in the Incarnation of the Word has become the most disincarnated of all documented cultures, as if the heights of love which the Incarnation afforded was matched by the depth of a symmetrical abyss of disincarnation and indifference towards the others.

Although the reflection was inspired by theology, the historian soon replaced the theologian, and stated: after the 12th century it is possible to document some of the steps taken towards the disincarnation of the word (with no capital letters, and understood as a mere word). It was for instance on those very steps that the four or five books and articles which Illich devoted to the social history of the alphabet intended to shed light, with no recourse to theology, and in a way that was accessible to both believers and agnostics. In those writings, Illich drew his readers' attention to a few moments in history when significant steps were taken on the path of progressive disincarnation represented by the 'march towards modernity'. One of those moments was the generalisation of silent reading after the 13th century.

Taking a step back: 1976, the closing down of CIDOC

The closing down of CIDOC, which took place in 1976 during a memorable celebration, forced Illich to reconsider his way of living. The proceeds from the sale of his books dropped significantly, especially after a misunderstanding that was shrewdly exacerbated by a handful of feminist professors from Berkeley, who strove to shift the debate onto an ideological ground where he flatly refused to follow them.

Illich then decided to earn his living by becoming a wandering philosopher or a beggar, as he stated himself on several occasions. Neither one nor the other produced any useful values, nor did they have the pretension to *justify* the right to suckle milk from their *alma mater*. Since he had

nothing to lose, Illich defined rigorously the conditions of his engagement with university education:

- no more than a three-month term per year at each university;
- complete freedom to choose topics, that is to say, the rejection of any imposed curriculum and of any incorporation under the aegis of specific disciplines or programs;
- a refusal to give marks or diplomas to his students;
- his teaching commitments were to be limited to one afternoon per week.

What was not stipulated by contract and cannot be seen as anything other than a disinterested gesture on his part was the fact that Illich made his own home, his small library and his cellar available to those who attended his lectures and their friends. The weekly *living room conversations* (which sometimes lasted many days) at his place in Foster Avenue caused a sensation at the Pennsylvania State University (*Penn State*). After a decade of similar initiatives in Bremen, Germany, its local authorities awarded him a prize and symbolically presented him with the keys of the city, just as they had done a few years before in tribute to the poet Paul Celan.

By means of his “underlying attitude” and “predisposition” (the Ancient Greeks’ *hexis*) to voluntary self-restrictions that afforded *eutrapelia* (the spirit of joyful sharing within self-defined boundaries), Illich implemented a project aimed at the subversion of university education, with the ultimate goal of shifting it from its usual seat, the classrooms, and setting its centre of gravity in friendly houses equipped with a living room, a kitchen where to cook spaghetti, a good supply of decent wine, and located close to a well-stocked library. The house in Forster Avenue, which owed a lot to the kind of hospitality that Barbara Duden was capable of offering, embodied the very idea of a friendly house.

Faith in the power of conversation

Illich envisaged conversation as the original repository of the birth of the thought. As a distinguished representative of the most refined alphabetic tradition, who was able to read more than ten languages, that utterly alphabetised man was convinced that thought – or philosophy – arose from conversations, i.e., from oral improvisations among friends. As a believer who praised Semitic prophets for their intuition of a conversing God, Illich saw an illustration of the ‘perversion of what is best which the worst represents’ in the progressive disincarnation of the act of reading (the spacing of words on the page after the end of the 12th century, and the page’s growing dematerialisation from parchment to paper, and later to immaterial screens).

A change in the lumen sub quo

During the 1980s, the light under which the topology of the late modern mind could be examined changed. In the 1970s that light had been, or had seemed to be, the light of Reason itself. At that time, the certainties on which our social theorems relied were axiomatic. For instance, the postulate according to which *scarcity* defined certain objects as ‘economic goods’ was the foundation of the laws of economics, and made the adjectives *economic* and *scarce* essentially synonymous. If the law of supply and demand is to preserve at least a modicum of ties to common sense, it must necessarily imply a sense of satiety: supply should thus reduce demand by satisfying it. What is generally observed, however, is in fact the opposite: far from satisfying demand, supply often makes it only worse. Suffice it to consider motorised transport: each new transformation of the urban soil into a road track will in future cause further demand for an even greater number of roads, bypasses, suburban ring roads and elevated highways. Faced with the evidence that supply does not reduce demand,

but actually makes it grow, Illich began to raise questions that were quite different from the ones he was pondering at the time of CIDOC. He began for instance to ask: why do economic goods progressively lose their ability to satisfy the senses? Because economic goods are quantifiable and disincarnated *values*. The senses conversely aspired to wellness, or rather to a kind of “well-being” that was utterly carnal.

One man, two projects

While it is undeniable that there was only one Illich as Thierry Paquot has claimed, it is that same man who was responsible for more than one project! One could for instance mention the two projects listed below:

1. In the 1970s, at the time of CIDOC and Cuernavaca, he developed a project to study the services institutions under the light of reason, a “reason” that was supported by scientific principles. His accurate study of the available data on educational, transport and health institutions demonstrated that they (sometimes) accomplished the opposite of what they promised, and were consequently often *counterproductive*. To take up the metaphor of spindles and weaving looms, criticism (which was often substantiated by studies carried out by the same professionals who sponsored those very institutions) was the criticism of the way certain important concepts were “woven” without taking into account the thread’s nature and the *stuff* of which it was made.
2. In the 1980s Illich began to examine the stuff, the *hylè* (as the Ancient Greeks were wont to say) of which the thread of the conceptual weaving was made. In the same way that each specific region has its own kind of *mud*, each era had its own perception of the primaeval stuff of which its things were made: the soil, the elements of its

material culture, and especially the body and its flesh.

Now that almost seventeen years have elapsed since Ivan Illich's death, what is no longer an instrument but is still called technology is able to generate "non-things" which are made of the stuff's shadow, and which threaten to swallow up in a boundless virtuality all that Illich defined as 'residues of reality'.

To distinguish them from tools, Illich reinterpreted what was conventionally called 'systems.' He argued for understanding systems as those artifacts that provide access to a virtual mode of being. The nature of a virtual mode is as a 'black hole' not only because only a few people understood it at the time but also because of its ability to absorb everything that fell into it, thereby detaching it from every kind of reality and making it *mutterlos* (as he used to say in German), motherless; without a generating matrix. 'Systems' have the pretension to tell us who we are, they shape our perceptions of the world and of ourselves, and in so doing turn us (as well as our flesh and its history) into a functional sub-system. If we accept to be defined as an immune system, then we, and our bodies, will eventually become a sub-system of a worldwide biomedical system.

I cannot conclude this introduction without at least trying to dispel a misunderstanding that is quite commonplace among my French readers and friends. The light under which Illich intended to examine the topology of the modern mind in the 1980s was not the same as the one which he had publicly projected on the counterproductivity of services institutions ten years before. The change in his perspective, nonetheless, had nothing to do with a slip into irrationality. In short: this book endeavours to present Ivan Illich's ideas on those objects that in common parlance are sometimes still known as 'tools', but for which scholars have devised more prestigious categories: Tech-

tics and (under the influence of US terminology) Technology.
Seduced by Technology

We are trapped in the net with which every era tries to snatch pieces of reality and organise them in a coherent image of 'what is real'. Foucault spoke of the episteme of a historical era. After 1980, Illich wanted to study the certainties (made up of concepts and perceptions) that shape the topology of the late modern mind. Since he was a *philosopher of the tools*, he wanted to radically distance himself from the extant consensus on 'what is real in relation to the field of technology', which was of fundamental importance for the episteme of our age. He believed that the combination of the two Greek words *technē* and *logos* (techno-logy) could only be understood in their literal meaning: a discourse (*logos*) on what the Greeks called *technē*, the skills, the art, the stratagem, the contrivance.

A synoptic exposition of the concept of tool

The present book's fourth chapter shall tackle the most complex, hypothetical, and possibly debatable of the reflections Illich made after 1980, which I am going to summarise in 8 points:

1. Under the name of *instrumentum*, a few Scholastic texts of the 12th century introduced a radically new approach to what we now call a utensil, a "tool".
2. Those texts presented the *instrumentum* as a means to implement divine, and later human, intentions.
3. A new type of causality, the *instrumental cause*, was attributed to that new kind of tool; there was a *line of continuity* between the instrumental cause of the 12th, 13th and 14th centuries, and the notion of *productive forces* that emerged in the 19th century.
4. The new tool was no longer either one of the body's organs or an extension of one of the body's organs or limbs. Instead, it found itself placed at a distance from its users'

body, a condition which Illich called *distality*.

5. Distality was *a constitutive element of the relationship* between the tool and its user's hand.

6. The concept of tool afforded a detailed analysis of the nature of the relationship between the tool and its user's hand and body. Conversely, the concept of technology is a veil that concealed this relationship.

7. At the end of the 20th century, that relationship changed to such an extent that the artifacts subsumed under the category of 'Technology' lost the characteristic features of what were once called 'the tools'.

8. The main characteristic feature tools lost when subsumed by technology concerned the fact that the instrumental relationships had *human* intentions.

Illich the historian meant to observe the rise of the tools in the 12th century with his feet well planted in that time, but with his gaze fixed on the present.

Illich did not intend to speak of the change which the civilisation that filled the world with tools is currently undergoing in the same way as did the historians of technology. The latter always tended to do so retroactively, and only took into consideration those elements of the past that had repercussions on modernity. They were solidly rooted in the present, and it was from the present that they turned their gaze to the past, in an attempt to detect what looked like the present and possibly even anticipated it. Illich wanted to do the exact opposite. He wanted to soak himself in the concepts and perceptions of a past age until he could feel he had actually put down roots in it – as far as it was possible, of course. From there, he wanted to turn his gaze to the present. He strove to see the present in light of the past. And he consequently chose the age in which the concept of *instrumentum* was developed.

What did he find in his sources? He found tools, he

found the concept of instrumentality (the adverb *instrumentaliter* in Thomas Aquinas), and he found the concept of instrumental cause. However, he never found the word 'technology', and seldom the word *technē*. All of the above emanated a light that he intended to project on the present. He therefore wished to observe the present time in light of the actual concepts of tool, body, hand, as well as of their potential relationships. The grandiose word 'Technology' did, in fact, the opposite of what Illich intended to accomplish. It was a modern concept which, when projected on the past, made the latter illegible.

The gaze and the alphabet become tools.

This book ends with a chapter on the 'instrumentation' of the gaze (which leads to a vision explained on the basis of the model offered by video cameras), and the 'instrumentation' of the alphabet.

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Untitled (after drawing by Ernesto Bonato), photography, 2023

21,6 x 14,2 cm