Portraits II

FINANCE/RELIGION

Made in ETH Eidgenössische Technische Hochschule Zürich

Gastdozentur **Made in**
François Charbonnet . Patrick Heiz
Philipp Oehy . Leonor Macedo . Pedro Guedes

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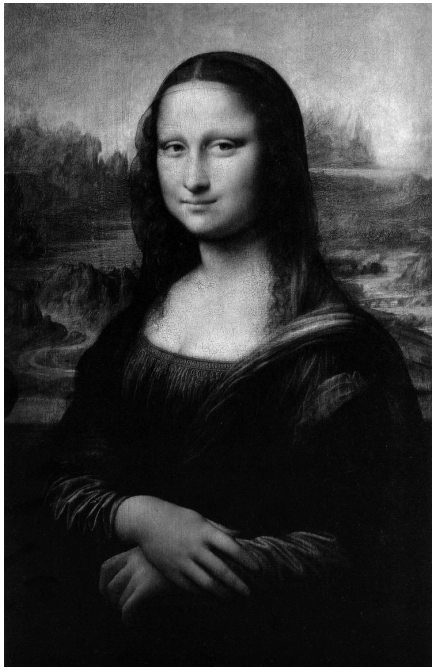
Prologue



Leonardo da Vinci, *Mona Lisa* (1503)

[...] le portrait d'une femme par un grand artiste ne cherchera aucunement à donner satisfaction à quelques unes des exigences de la femme [...] et mettra au contraire en relief les désavantages qu'elle cherche à cacher et qui, comme un teint fièvreux, voire verdâtre, le tentent d'autant plus parce qu'ils ont du "caractère" [...]. Maintenat déchue, située hors de son propre type où ell trônait invulnérable, elle n'est plus qu'une femme quelconque en la supériorité de qui nous avons perdu toute foi. Ce type, nous faisions tellement consister en lui, non seulement la beauté d'une Odette, mais sa personnalité, son identité, que devant le portrait qui l'a dépouillée de lui, nous sommes tentés de nous écrier non seulement: "Comme c'est enlaidi!", mais: "Comme c'est peu ressemblant!". Nous avons peine à croire que ce soit elle. Nous ne la reconnaissons pas. Et pourtant il y a là un être que nous sentons bien que nous avons déjà vu. Mais cet être-là, ce n'est pas Odette; le visage de cet être, son corps, son aspect, nous sont bien connus. Ils nous rappellent, non pas la femme, qui ne se tenait jamais ainsi, dont la pose habituelle ne dessine nullement une telle étrange et provocante arabesque, mais d'autres femmes, toutes celles qu'a peintes Elstir et que toujours, si différentes qu'elles puissent être, il a aimé à camper ainsi de face, [...] le large chapeau rond tenu à la main, répondant symétriquement à la hauteur du genou qu'il couvre, à cet autre disque vu de face, le visage.

Marcel Proust, À l'ombre des jeunes filles en fleurs, sous la dir. de Pierre-Louis Rey, Collection Folio Classique, Gallimard, 1988.

[...] not only will the portrait of a woman by a great artist not seek in the least to give satisfaction to various demands on the woman's part [...]. It will on the contrary emphasise those very blemishes which she seeks to hide, and which (as for instance a sickly, almost greenish complexion) are all the more tempting to him since they show "character" [...] Fallen now, situated outside her own type in which she sat unassailably enthroned, she is now just an ordinary woman, in the legend of whose superiority we have lost all faith. We are so accustomed to incorporating in this type not only the beauty of an Odette, but her personality, her identity, that standing before the portrait that has thus stripped her of it we are inclined to protest not simply "How plain he has mde her!" but "Why, it isn't the least bit like her". We find it hard to believe that it can be she. We do not recognize her. And yet there is a person there on the canvas whom we are quite conscious of having seen before. But that person is not Odette; the face of the person, her body, her general appearance seems familiar. They recall to us not this particular woman who never held herself like that, whose natural pose never formed any such strange and teasing arabesque, but other women, all the women whom Estir has ever painted, women, whom invariably, however they may differ from one another, he has chosen to plant thus, in full face, [...] a large round hat in one hand, symmetrically corresponding, at the level of the knee that it covers, to that other disc, higher up in the picture, the face.

Marcel Proust, Remembrance of Things Past, within a Budding Grove translated by C.K. Scott Moncrieff and Terence Kilmartin, Copyright Chatto & Windus and Random House Inc., 1981.

Egyptian hieroglyphics (3000 BC)

[...] The IS OF IDENTITY. You are an animal. You are a body. Now whatever you may be you are not an "animal", you are not a "body", because these are verbal labels. The IS of identity always carries the assignment of permanent condition. To stay that way. All name calling presupposes the IS of identity. This concept is unnecessary in a hieroglyphic language like ancient Egyptian and in fact frequently omitted. No need to say that the sun IS in the sky, sun in sky suffices. The verb TO BE can easily be omitted from any languages and the followers of Count Korgybski have done this, eliminating the verb TO BE in English. However, it is difficult to tidy up the English language by arbitrary exclusion of concepts which remain in force so long as the unchanged language is spoken.

THE DEFINITE ARTICLE THE. THE contains the implication of one and only: THE God, THE univere, THE way, THE right, THE wrong, if there is another, then THAT universe, THAT way is no longer THE universe, The way. The definite article THE will be deleted and the indefinite article A will take its place.

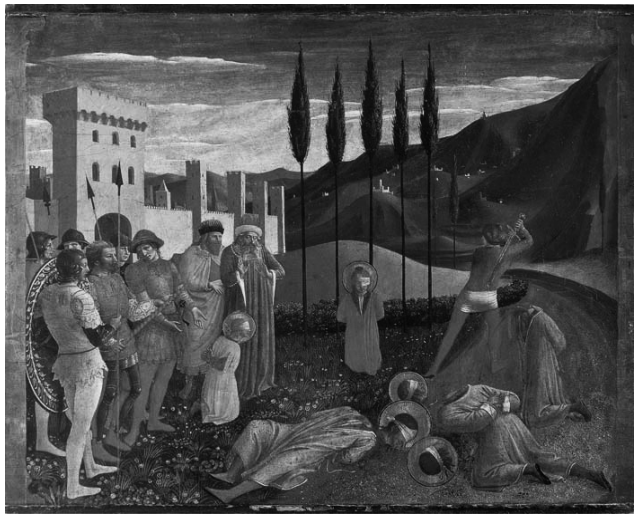
THE WHOLE CONCEPT OF EITHER/OR. Right or wrong, physical or mental, true or false, the whole concept of OR will be deleted from the language and replaced by juxtaposition, by AND. This is done to some extent in any pictorial language where two concepts literally stand side by side. These falsifications inherent in the English and other western alphabetical languages give the reactive mind command their overwhelming force in these languages. Consider the IS of identity. When I say to be me , to be you, to be myself, to be others - whatever I may be called upon to be or to say that I am - I am not the verbal label "myself". The word BE in the English language contains, as a virus contains, its precoded message of damage, the categorical imperative of permanent condition. To be a body, to be an animal. If you see the relation of a pilot to his ship, you see crippling force of the reactive mind command to be a body. Telling the pilot to be the plane, then who will pilot the plane?

The IS of identity, assigning a rigid and permanent status, was greatly reinforced by the customs and passport control that came in after World War I. Whatever you may be, you are not the verbal label in your passport, anymore than you are the word "self". So you must be prepared to prove at all times that you are what you are not. Much of the falsification inherent in the categorical definite THE. THE now, THE past, THE time, THE space, THE energy, THE matter, THE universe. Definite article THE contains the implications of no other. THE universe locks you in THE, and denies the possibility of any other. If other universes are possible, then the universe is no longer THE it becomes A. The definite article THE is deleted and replaced by A. Many of the RM commands are in point of fact contradictory commands and a contradictory command gains its force from the Aristotelian concept of either/or. To do everything, to do nothing, to have everything, to have nothing, to do it all, to do not any, to stay up, to stay down, to stay in, to stay out, to stay present, to stay absent. These are in point of fact either/or propositions. To do nothing OR everything, to have it all, OR not any, to stay present OR to stay absent. Either/or is more difficult to formulate in a written language where both alternatives are pictorially represented and can be deleted entirely from the spoken language. The whole reactive mind can be in fact reduced to three little words - to be "THE". That is to be what you are not, verbal formulations.

I have frequently spoken of word and image as viruses or as acting viruses, and this is not an allegorical comparison. It will be seen that the falsifications of syllabic western languages are in point of fact actual virus mechanisms. The IS of identity, the purpose of a virus is to SURVIVE. To survive at any expense to the host invaded. To be an animal, to be a body. To be an animal body that the virus can invade. To be animals, to be bodies. To be more animal bodies, so that the virus can move from one body to another. To stay present as an animal body, to stay absent as antibody or resistance to the body invasion.

The categorical THE is also a virus mechanism, locking you in THE virus universe. EITHER/OR is another virus formula. It is always you OR the virus. EITHER/OR. This is in point of fact the conflict formula which is seen to be archetypical virus mechanism. The proposed language will delete these virus mechanisms and make them impossible of formulation in the language. This language will be a tonal language like Chinese, it will also have a hieroglyphic script as pictorial as possible without being to cumbersome or difficult to write. This language will give one option of silence. When not talking, the user of this language can take in the silent images of written, pictorial and symbol languages. [...]

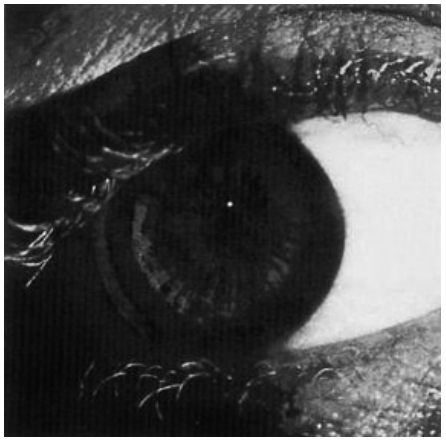
William S. Burroughs, T*he Electronic Revolution* (1970)



Fra Angelico, *The Decapitation of Saints Cosmas and Damian* (1442)

(...) Si les personnages d'Angelico n'ont d'yeux pour rien ni personne, c'est évidemment pour mieux solliciter les nôtres.
Parce que la psychologie n'a pas encore été inventée, le seul sens de l'image est celui de sa structure. rien n'est caché, l'idée préside, indifférente aux contingences réalistes. La signification n'est pas dans les regards (ni ceux des yeux ni ceux de l'âme) mais dans les territoires qu'ils délimitent.

Eric Loret, *Un art théorique et idéal,* Libération (November 26th, 2011)



O. M. Ungers
Morphologie
City Metaphors

Verlag der Buchhandlung Walter König

Entwerfen und Denken in Vorstellungen, Metaphern und Analogien

Offensichtlich vollziehen sich alle Denkprozesse in zwei verschiedenen Richtungen. Jede beansprucht für sich, der einzig richtige Weg zu sein, durch welchen Denkanstöße hervorgerufen werden, sowohl in der Wissenschaft, der Kunst und auch in der Philosophie. Die erste ist gemeinhin bekannt als empirische Denkweise. Sie beschränkt sich auf das Studium physischer Erscheinungen. Sie bezieht sich auf Tatsachen, die gemessen und beurteilt werden können. Die intellektuelle Sicht konzentriert sich auf getrennte Elemente und isolierte Tatsachen, die von direkten praktischen Erfahrungen abgeleitet werden. Das Denken ist strikt limitiert auf technische und praktische Prozesse, wie sie sehr deutlich formuliert sind in den Theorien und Methoden des Pragmatismus und der Verhaltenslehre.

Die andere Richtung des Denkens sucht Erscheinungen und Erfahrungen, welche mehr beschreiben als nur eine Summe von Teilen und so gut wie keine Aufmerksamkeit auf die einzelnen Elemente verwendet, die ohnedies beeinflußt und verändert werden durch subjektive Anschauungen und umfassende Vorstellungen. Der Hauptbezug oder die wesentliche Bedeutung ist nicht die Betrachtung der Wirklichkeit wie sie ist, sondern die Suche nach einer übergeordneten Idee, einem allgemeinen Inhalt, einem zusammenhängenden Gedanken oder einem Gesamtkonzept, das alle Teile zusammenbindet. Es ist bekannt unter dem Begriff der "Gestalttheorie" und wurde sehr deutlich entwickelt während der Zeit des Humanismus in den philosophischen Abhandlungen des morphologischen Idealismus.

Kant postuliert, daß Wissen seinen Ursprung in zwei fundamentalen Komponenten hat, der Intuition und dem Denken. Nach Kant ist all unser Denken auf Imagination bezogen. Das bedeutet, es beruht auf unseren Sinnen, denn der einzige Weg, Objekte zu begreifen, ist der durch die Vorstellung. Der Intellekt ist unfähig, sich irgend etwas vorzustellen, und die Sinne können nicht denken. Nur durch die Kombination beider kann Wissen entstehen. Die Vorstellung muß allen Denkprozessen vorangehen, denn sie ist nichts anderes als die Synopse, das übergeordnete Prinzip, das Ordnung in die Vielfalt bringt. Wenn wir akzeptieren, daß Denken ein Vorstellungsprozeß höherer Ordnung ist, dann - so argumentiert Kant - beruht alles Wissen auf der Imagination.

In neueren philosophischen Betrachtungen ersetzt Hermann Friedmann Kants Konzept der Imagination und des Denkens als die fundamen talen Komponenten von Wissen mit dem Argument, daß der visuelle Sinn, die Vision, und der Tastsinn, die Haptik, zwei

Designing and Thinking in Images, Metaphors and Analogies

Apparently all thinking processes happen in two different ways. Each is claimed to be the only way in which thought processes occur in science, arts and philosophy.

The first is commonly known as the empirical way ofthinking. It is limited to the study of physical phenomena. The actual concern is with facts that can be measured and justified. This intellectual concern concentrates on separate elements and isolated facts, deriving from direct practical experience. Thinking is strictly limited to technical and practical processes as they are most strongly formulated in the theories and methodologies of pragmatism and behaviourism.

The other way of thinking seeks out phenomena and experiences which describe more than just a sum of parts, paying almost no attention to separate elements which would be affected and changed through subjective vision and comprehensive images anyway. The major concern is not the reality as it is but the search for an allround idea, for a general content, a coherent thought, or an overall concept that ties everything together. It is known as holism or Gestalt theory and has been most forcefully developed during the age of humanism in the philosophical treatises of the morphological idealism.

Kant postulates that knowledge has its origin in two basic components: intuition and tbought. According to Kant all our thinking is related to imagination, which means it is related to our senses, because the only way to describe an object is through imagination. The intellect is incapable of perceiving anything, and the senses cannot think. Only through a combination of both can knowledge arise. Imagination has to precede all thinking processes since it is nothing less than a synopsis, an overall ordering principle bringing order into diversity. If we accept that thinking is an imaginative process of a higher order, then, argues Kant, it means all sciences are based on imagination.

In more recent philosophical debates, Herman Friedman replaces Kant's concept of imagination and thought as the basic components of knowledge with the argument that the sense of sight-the vision-and the sense of touch-the haptic-are the two competing polarities, and that all intellectual activity happens either in an optical or haptic way. Friedman argues that he sense of touch is non-productive; it measures, is geometrical, and acts in congruity. The sense of sight, however, is productive; it interpolates, is integral, and acts in similarities. The sense of sight stimulates spontaneous reactions of mind; it is more vivid and more far-reaching than the sense of touch.

miteinander streitende Polaritäten sind und daß alle intellektuellen Aktivitäten sich im optischen oder im haptischen Bereich abspielen. Friedmann argumentiert, daß der Tastsinn nicht produktiv ist. Er mißt, ist geometrisch und handelt in Kongruenzen. Das Sehen jedoch ist produktiv. Es interpoliert, integriert und handelt in Gleichnissen. Der visuelle Sinn stimuliert spontan das Erinnerungsvermögen. Er ist lebendiger und weitreichender als der Tastsinn. Die Haptik geht vom Spezifischen zum Allgemeinen, die Vision vom Allgemeinen zum Spezifischen. Der visionäre Prozeß, dessen Gegebenheiten auf der Vorstellung beruhen, beginnt mit einer Idee, betrachtet ein Objekt in allgemeinster Weise, um eine Vorstellung oder ein Bild zu finden, aus dem sich mehr spezifische Eigenheiten ableiten lassen.

In jedem menschlichen Wesen steckt ein starkes metaphysisches Bedürfnis eine Realität zu schaffen, die durch Vorstellungen strukturiert ist und in welcher Objekte ihre Bedeutung durch Visionen erhalten, eine Realität, die nicht - wie Max Planck glaubt - existiert, weil sie meßbar ist. Vor allem hat die Frage der Imagination und der Ideen als ein Instrument des Denkens und der Analyse Künstler und Philosophen beschäftigt. In jüngster Zeit ist dieser Prozeß des Denkens unterbewertet worden durch die Überschätzung quantitativer und materialistischer Kriterien. Es liegt jedoch auf der Hand, daß das, was wir im allgemeinen Denken nennen, nichts anderes ist als die Anwendung von Vorstellungen und Ideen auf eine gegebene Zahl von Fakten. Es ist nicht nur ein abstrakter Prozeß, sondern ein visuelles und sinnenhaftes Ereignis. Die Art, wie wir die Welt um uns begreifen, hängt davon ab, wie wir sie wahrnehmen und empfinden. Ohne eine übergeordnete Vision erscheint uns die Realität als eine Menge unabhängiger Phänomene und bedeutungsloser Tatsachen, mit anderen Worten: total chaotisch. In solch einer Welt würde man wie in einem Vakuum leben. Alles würde von gleicher Bedeutung sein; nichts könnte unsere Aufmerksamkeit anziehen; es würde keine Möglichkeit geben, unseren Verstand zu gebrauchen.

So wie die Bedeutung eines ganzen Satzes anders ist als die Bedeutung einer Summe einzelner Worte, so ist die schöpferische Vision die Fähigkeit, eine charakteristische Einheit einer Reihe von Tatsachen zu erfassen und nicht nur sie zu analysieren als etwas, das zusammengesetzt ist aus einzelnen Teilen. Das Bewußtsein, daß die Realität durch sinnliche Wahrnehmung und Imagination erfaßt wird, ist der wahre schöpferische Prozeß, denn er erreicht einen höheren Grad von Ordnung als die einfache Methode des Testens, Messens, Prüfens und Kontrollierens. Das ist der Grund, warum die traditionelle Philosophie der permanente Versuch ist, ein gut strukturiertes System von Ideen zu schaffen, um die Welt zu

The sense of touch proceeds from the specific condition to the general, the sense of vision from the general to the specific. The visionary process, whose data are based on imagination, starts out with an idea, looking at an object in the most general way, to find an image from which to descend to more specific properties. In every human being there is a strong metaphysical desire to create a reality structured through images in which objects become meaningful through vision and which does not, as Max Planck believed, exist because it is measureable. Most of all, the question of imagination and ideas as an instrument of thinking and analyzing has occupied artists and philosophers. Only in more recent history this process of thinking has been undervalued because of the predominance of quantitative and materialistic criteria. It is obvious, however, that what we generally call thinking is nothing else than the application of imagination and ideas to a given set of facts and not just an abstract process but a visual and sensuous event. The way we experience the world around us depends on how we perceive it. Without a comprehensive vision the reality will appear as a mass of unrelated phenomena and meaningless facts, in other words, totally chaotic. In such a world it would be like living in a vacuum: everything would be of equal importance; nothing could attract our attention; and there would be no possibility to utilize the mind.

As the meaning of a whole sentence is different from the meaning of the sum of single words, so is the creative vision and ability to grasp the characteristic unity of a set of facts, and not just to analyse them as something which is put together by single parts. The consciousness that catches the reality through sensuous perception and imagination is the real creative process because it achieves a higher degree of order than the simplistic method of testing, recording, proving and controlling. This is why all traditional philosophy is a permanent attempt to create a wellstructured system of ideas in order to interpret, to perceive, to understand the world, as other sciences have done. There are three basic levels of comprehending physical phenomena: first, the exploration of pure physical facts; second, the psychological impact on our inner-self; and third, the imaginative discovery and reconstruction of phenomena in order to conceptualize them. If, for instance, designing is understood purely technically, then it results in pragmatic functionalism or in mathematical formulas. If designing is exclusively an expression of psychological experiences, then only emotional values matter, and it turns into a religious substitute. If, however, the physical reality is understood and conceptualized as an analogy to our imagination of that reality, then we pursue a morphological design concept, turning it into

interpretieren, wahrzunehmen und zu verstehen, wie es auch andere Wissenschaften getan haben. Es gibt drei Grundebenen, physikalische Phänomene zu begreifen:
1. die Entdeckung der reinen physikalischen Fakten,
2. der psychologische Eindruck oder die psychologische Aufnahme in unserem Inneren, und
3. die imaginative Entdeckung und visuelle Rekonstruktion der Phänomene, um sie zu konzeptualisieren.

Wenn z. B. das Entwerfen, der Entwurfsvorgang, als reine Technik verstanden wird, dann sind die Ergebisse ein pragmatischer Funktionalismus oder mathematische Formeln. Ist Entwerfen ausschließlich der Ausdruck psychologischer Erfahrungen und Versuche, dann zählen nur emotionale Werte, und Entwerfen wird zu einer religiösen Ersatzhandlung. Wenn jedoch die physische Realität verstanden und begriffen wird als eine Analogie unserer Vorstellung von dieser Realität, dann verfolgen wir ein morphologisches Entwurfskonzept und verwandeln Tatsachen in Phänomene, die wie alle realen Konzepte ausgedehnt oder verdichtet werden konnen. Sie können als Polaritäten gesehen werden, die sich widersprechen oder sich auch gegenseitig ergänzen, die als reine Konzepte auf sich selbst beruhen wie ein Kunstwerk. Deshalb kann man sagen, wenn man physikalische Phänomene im morphologischen Sinne betrachtet wie Gestalten in ihrer Metamorphose, dann können wir es einrichten, unser Wissen auch ohne Maschinen und Apparate zu entwickeln. Dieser imaginative Prozeß des Denkens findet Anwendung auf alle intellektuellen und geistigen Bereiche menschlicher Aktivitäten, wenn auch die Vorgehensweise in den verschiedenen Disziplinen unterschiedlich sein mag. Es ist immer ein fundamen taler Prozeß der Konzeptualisierung einer unabhängigen diversen und daher unterschiedlichen Realität durch den Gebrauch von Vorstellungen, Imaginationen, Metaphern, Analogien, Modellen, Zeichen, Symbolen und Allegorien.

Imgination und Vorstellung

Wahrscheinlich erinnern wir uns alle noch an die Geschichte von dem Mann im Mond, der die Phantasiewelt unserer Kindheit beherrschte und in uns phantasievolle Vorstellungen von einem alten Mann hervorrief, der ein Bündel auf dem Rücken trug, und dessen Gesicht sich je nach der Klarheit der Nacht änderte. Er hat so manchen geheimen Wunsch erfüllt, und er war der freundliche Begleiter vieler romantisch Verliebter. Bevor menschliche Intelligenz es fertigbrachte, sein Geheimnis zu lüften, war er das Ziel so vieler Sehnsüchte, daß er ein Teil unseres Lebens wurde,

phenomena which, like all real concepts, can be expanded or condensed; they can be seen as polarities contradicting or complementing each other, existing as pure concepts in themselves like a piece of art. Therefore we might say, if we look at physical phenomena in a morphological sense, like Gestalten in their metamorphosis, we can manage to develop our knowledge without machine or apparatus. This imaginative process of thinking

applies to all intellectual and spiritual areas of human activites though the approaches might be different in various fields. But it is always a fundamental process of conceptualizing an unrelated, diverse reality through the use of images, metaphors, analogies, models, signs, symbols and allegories.

Image and perception

Probably all of us remember the story of the man in the moon which occupied our childhood fantasies, producing all sorts of images of an old man, carrying a bundle on his back, and whose face used to change depending on the clarity of the night. He helped to fulfill secret wishes, and he became the friendly companion of romantic couples. Before human intelligence managed to uncover his secret, he was the subject of so many desires and wishes that he became part of our life while existing only in our imagination.

Not only about the moon, but also about the

das nur in unserer Vorstellung existierte. Nicht nur mit dem berühmten Mann im Mond, sondern mit dem gesamten nächtlichen Firmament hat der menschliche Geist ein lebhaftes Phantasiebild geschaffen. Es hat wahrscheinlich eine sehr lange Zeit gebraucht, um den weiten nächtlichen Himmel zu strukturieren und seine chaotische Realität in ein zusammenhängendes System von Bildern zu verwandeln. Lange bevor die Wissenschaft in der Lage war, das Weltall zu kalkulieren und zu messen, die Schwerkraft, die Intensität und die Schnelligkeit oder Geschwindigkeit des Lichtes, der Sterne und alle relevanten Einzelheiten zu registrieren, lange bevor dies geschah, beruhte das Verständnis ausschließlich auf bildhaften Übereinstimmungen. Anstelle einer Reihe von Fakten basierte das Wissen auf einer Reihe von Vorstellungen. Das Firmament wurde mit Figuren und Phantasieformen angefüllt, wie von Orion, Kastor und Pollux, der Große Bär u.a. Solche Sternbilder besitzen eine sinnenhafte Realität im menschlichen Bewußtsein. Daraus kann man schließen: Realität ist, was unsere Vorstellung als solche begreift. Im allgemeinen Sinne beschreibt die Vorstellung eine Reihe von Tatsachen in einer Weise, daß die gleiche visuelle Vorstellung mit den Voraussetzungen wie auch mit der Vorstellung selbst verbunden ist.

Metaphern

Wir benutzen im täglichen Sprachumgang ständig Metapherausdrücke, ohne diesem Umstand Bedeutung beizumessen. So sprechen wir z. B. vom Fuß des Berges, dem Bein des Stuhles, dem Herzen der Stadt, dem Arm des Gesetzes usw. Wir benutzen viele Worte, die lebendige Metaphern sind, obwohl sie als allgemeine Ausdrücke bestehen. Die Alltagssprache ist voll von spezifischen Ausdrücken und Redensarten, wie z. B. der Zahn der Zeit, der Wald von Masten oder der Dschungel der Großstadt. Metaphern sind Transformationen von aktuellen Ereignissen in eine figurative Ausdrucksform, die Anschaulichkeiten hervorrufen und einen mehr beschreibenden und illustrativen Charakter haben anstelle einer rein abstrakten Wahrnehmung von Vorgängen. Gewöhnlich handelt es sich um einen Vergleich zwischen zwei Ereignissen, welche nicht gleich sind, aber in einer anschaulichen Art miteinander verglichen werden können . Der Vergleich wird meist durch einen schöpferischen Gedanken gefunden, der unterschiedliche Objekte miteinander verbindet und ein neues Bild erfindet, in welches die Charakteristiken beider einfließen. Die Bedeutung von Metaphern beruht auf dem Vergleich und der Gleichartigkeit von meist anthropomorphem Charakter, wie dem menschlichen Körper als Metapher für die Form einer romanischen Kathedrale oder die Gestalt des Universums. Entwerfer benützen die Metapher als ein Instrument gedanklicher Art, das der Klarheit

whole firmament the human mind created a vivid fantasy. It probably took a long time to structure the wide starry sky, and to develop a coherent system within a chaotic reality long before science was capable of calculating and measuring the orbits, the gravity, the intensity and speed of light of the stars and to register all relevant data. Before that, understanding was based entirely on imaginative concepts. Instead of a set of facts, knowledge referred to a set of constellations derived from perception .. The firmament was filled with figures and images, such as the Orion, Castor and Pollux, the Great Bear, and others. Those star images represented a sensuous reality in the human consciousness. Therefore we might conclude: Reality is what our imagination perceives it to be. In a general sense, an image describes a set of facts in such a way that the same visual perception is connected with the conditions as with the image itself.

Metaphors

In everyday language we are constantly using metaphorical expressions without paying any attention to them. For instance, we talk about the foot of the mountain , the leg of a chair, the heart of the city, the mouth of the river, the long arm of the law, the head of the family and a body of knowledge. We use many words that are vivid metaphors although they exist as common expressions. In addition to the words, everyday language abounds in phrases and expressions of metaphorical character such as: straight from the horse's mouth, the tooth of time, or the tide of events, a forest of masts, the jungle of the city.

Metaphors are transformations of an actual event into a figurative expression, evoking images by substituting an abstract notion for something more descriptive and illustrative. It usually is an implicite comparison between two entities which are not alike but can be compared in an imaginative way. The comparison is mostly done through a creative leap that ties different objects together, producing a new entity in which the characteristics of both take part. The meaning of metaphors is based on comparison and similarities most often of anthropomorphical character, like the human body as a metaphor for the shape of a romanesque cathedral or the conformation of the universe. Designers use the metaphor as an instrument of thought that serves the function of clarity and vividness antedating or bypassing logical processes. "A metaphor is an intuitive

und Lebendigkeit dient, indem es logische Prozesse umgeht und ihnen entgegengesetzt ist. “Eine Metapher ist eine intuitive Begrifflichkeit von Gleichartigkeiten in Ungleichheiten”, wie Aristoteles es definiert.

Modelle

Unter einem Modell wird gemeinhin eine Person verstanden, die als Prototyp eine ideale Form verkörpert. Allgemeiner gesehen ist ein Modell eine Struktur, ein Muster, nach dem etwas geformt wird. Ein Künstler malt seine Gemälde nach den Formen oder Prinzipien seines Modells. Ein Wissenschaftler bildet seine Theorien natürlicher Ereignisse auf der Grundlage eines Konzeptes oder eines Plans, der als Modell dient. Dies ist um so mehr der Fall, wenn die Komplexität einer Sache zunimmt oder die wissenschaftliche Sphäre so schwierig wird, daß jede Art von Beobachtung versagt. In der Chemie oder der Physik z. B. werden Modelle benützt, um die Positionen von Atomen in Molekülen zu zeigen, oder es werden biologische Modelle verwandt, um organische Formationen zu demonstrieren, in denen jedes Organ seine Funktion in Beziehung zum System als Ganzem hat. Solche Modelle dienen als Instruktionen für die technisehe Auseinandersetzung mit der Realität. Allgemein gesprochen ist ein Modell eine theoretische Komplexität in sich selbst, welche entweder eine visuelle Form oder eine konzeptionelle Ordnung in die Bestandteile komplexer Situationen bringt. In solch einem Modell ist die äußere Form Ausdruck der inneren Struktur. Es zeigt die Art, wie etwas zusammengesetzt ist. Ein Modell zu machen, bedeutet Zusammenhänge in einer gegebenen Kombination und in festgelegten Dispositionen zu erkennen. Das geschieht gewöhnlich mit zwei Modelltypen: visuelle Modelle und Denkmodelle. Sie dienen als konzeptuelles Instrument, um unseren Erfahrungen Struktur zu verleihen und daraus Funktionen abzuleiten oder ihnen eine Absicht zu geben. Mit diesen beiden Modellen formulieren wir eine objektive Struktur, die Annahmen in etwas mehr Gewißheit und deshalb mehr Realität verwandeln. Es ist nichts anderes als ein formales Prinzip, das es ermöglicht, die Komplexität der Erscheinungen in besser geordneter Weise sichtbar zu machen, und die - anders gesehen - ein schöpferischer Ansatz ist zu einer strukturierten Realität, die sich an der Kenntnis des Modells ausrichtet. Nicht zuletzt ist das Modell eine intellektuelle Struktur, die Ziele setzt für unsere schöpferischen Aktivitäten. Gerade so wie der Entwurf von Modellgebäuden, von Modellstädten, von Modellgemeinschaften und anderen Modellbedingungen die Richtschnur sind für folgerichtige Aktionen.

perception of similarities in dissimilars,” as Aristotle defined it.

Models

A model is commonly understood as somebody who poses as a prototype representing an ideal form. In a more general sense a model is a structure, a pattern, along the line of which something is shaped. As an artist paints his painting after the lines of a model, a scientist builds his theory of natural events on the basis of a concept or a plan which acts as a model. This is all the more so when the complexity of something increases or the scientific sphere becomes so minute that any kind of observation would fail. In chemistry or physics, for instance, models are built to demonstrate the position of atoms in molecules, or biological models are used to represent the organic formation in which every organ has its function in relation to the whole system. Such models serve as instructions for technical intrusion with the reality. Generally a model is a theoretical complexity in itself which either brings a visual form or a conceptual order into the components of complex situations. In such a model the external form is the expression of an internal structure. It shows the way something is put together. To make a model means to find coherence in a given relationship of certain combinations and fixed dispositions. This is usually done with two types of models, visual models and thinking models. They serve as conceptual devices to structure our experience and turn them into functions or make them intentional.

By means of these two models we formulate an objective structure that turns facts into something more certain and therefore more real. It is nothing else than a formal principle which makes it possible to visualize the complexity of appearances in a more ordered way, and which in reverse is a creative approach to structured reality along the knowledge of a model. Not the least the model is an intellectual structure setting targets for our creative activities, just like the design of model-buildings, model-cities, model-communities, and other model conditions supposedly are setting directions for subsequent actions.

Analogien

Als Le Corbusier ein Gebäude mit einer Maschine verglich, sah er eine Analogie, die vorher niemand gesehen hatte. Als Alvar Aalto den Entwurf einer organisch geformten Vase mit der finnischen Landschaft verglich oder den Entwurf für ein Theater in Essen mit einem Baumstumpf, tat er dasselbe. Und als Hugo Häring mit anthropomorphen Vorbildern entwarf, tat auch er nichts anderes, als eine Analogie zu sehen, wo niemand vorher eine gesehen hatte. Im Laufe des 20. Jahrhunderts wurde es erkennbar, daß die Analogien in weitestem Sinne eine vieI größere Rolle spielten in der Architektur als die einfache Erfüllung funktioneller Bedürfnisse oder die Lösung rein technischer Probleme. Alle Entwürfe der Konstruktivisten z. B. müssen als eine Referenz an die dynamische Welt der Maschinen, die Fabriken und Industrieteile gesehen werden, denen sie analog sind. Melnikov hat einmal eine Serie von Entwürfen für Arbeiterclubs in Moskau geschaffen, die Analogien sind zu Kolben, Zylindern, Gängen und Zahnradern.

Es wird gesagt, daß wissenschaftliche Entdeckungen darin bestehen, Analogien zu sehen, wo der andere nur nackte Tatsachen sieht. Nimmt man z. B. den menschlichen Körper, so sieht ein Chirurg in ihm hauptsachlich ein System von Knochen, Muskeln, Organen und Zirkulationssystemen; ein Fußballtrainer sieht die Leistungsfähigkeit; ein Liebhaber hat eine romantische Vorstellung von dem Körper, und ein Geschäftsmann kalkuliert die Arbeitskraft, ein General die Kampfkraft usw. Architekten wie Cattaneo, Häring, Soleri u.a. empfinden den menschlichen Körper als eine Gestalt, die analog ist zu ihren Planen - sei es für Gebäude oder Städte. Sie konstruieren eine Abhängigkeit durch Analogien von einem zum anderen. Die Analogie errichtet eine Gleichartigkeit oder die Existenz von gleichartigen Prinzipien zwischen zwei Ereignissen, welche normalerweise völlig unterschiedlich sind. Kant betrachtet die Analogie als etwas, das unerläßlich ist, um das Wissen zu erweitern. Durch die Anwendung der Methode der Analogien sollte es möglich sein, neue Konzepte zu entwickeln und neue Zusammenhänge zu erkennen.

Analogies

When Le Corbusier compared the edifice with a machine he saw an analogy where nobody saw one before. When Aalto compared the design of his organically shaped vases with the Finnish landscape, or his.design for a theater in Germany with a tree stump, he did the same; and when Haring designed with anthropomorphic images in mind he again did just that-seeing an analogy where nobody has seen one before. In the course of the twentieth century it has become recognized that analogy taken in the most general sense plays a far more important role in architectural design than that of simply following functional requirements or solving pure technical problems. All the constructivist designs for instance, have to be seen as a reference to the dynamic world of machines, factories and industrial components to which they are analogous. Melnikov once produced a series of designs for workers' clubs in Moscow which are analogies to pistons, tubes, gears and bearings.

It has been said that scientific discovery consists in seeing analogies where everybody else sees just bare facts. Take, for instance, the human body: a surgeon perceives it mainly as a system of bones, muscles, organs and a circulatory system. A football coach appreciates the performance capacity of the body, the lover has a romantic notion about it, a businessman calculates the working power, a general the fighting strength, and so on. Architects, like Cattaneo, Haring, Soleri and others perceive the human body as a Gestalt which is analogous to their plans either for buildings or cities. They draw an inference by analogy from one to the other. The analogy establishes a similarity, or the existence of some similar principles, between two events which are otherwise completely different. Kant considered the analogy as something indispensable to extend knowledge. In employing the method of analogy it should be possible to develop new concepts and to discover new relationships.

Zeichen, Symbole und Allegorien

Fast unsere gesamte Kommunikation basiert auf Zeichen, Symbolen, Signalen und Allegorien, die nicht nur die meisten Aspekte unserer täglichen Routine ausmachen, sondern meistens oder sehr oft auch religiose und metaphysische Systeme tragen. Die Benutzung eines Autos z. B. ist nur möglich durch den regulierenden Effekt von Verkehrssignalen, -zeichen und -symbolen, und ohne sie würde Autofahren ein sehr verwegenes und wahrscheinlich katastrophales

Signs, symbols and allegories

Almost all our communication is based on signs, signals, symbols and allegories which structure not only most aspects of our daily routine but also are most often carriers of religious and metaphysical systems. Riding in a motorcar, for example, is only possible because of the regulating effect of traffic signals, signs and symbols, and it would be a most daring and deadly adventure without them. The modern scientific world is full of complicated symbolic

Abenteuer sein. Die moderne wissenschaftliche Welt ist voll von komplizierten symbolischen Codes und Systemen, von synthetischen Zeichen und Symbolen, welche vorteilhafter sind, weil sie objektiver und kürzer sind als die normale Sprache. Aber hinter der objektiven Welt repräsentieren Symbole auch eine metaphysische Welt als magische Erleuchtungen und kultische Symbole in verschiedensten Religionen, wie das Rad des Lebens im Buddhismus, der Fisch als Symbol der Christenheit und der Phönix als ein Zeichen der Regeneration in der alten Mythologie.

Während Zeichen auf etwas hinweisen, das sie darstellen - wie Worte künstliche Zeichen für Ideen und Gedanken sind -, sind Symbole die Durchdringung von Geist und Vorstellung, die durch Mysterien, Tiefe und unerschöpfliche Interpretation charakterisiert sind. Um etwas Abstraktes auszudrücken und zu visualisieren, benützt man transzendentale oder geistige Symbole oder Allegorien. Die Durchdringung zwischen Symbolen oder Allegorien ist f1ießend und kann nicht streng getrennt werden. Allegorien werden als eine Dimension der kontrollierten Indirektheit betrachtet und haben eine doppelte Bedeutung. Die ursprüngliche Bedeutung des Wortes gibt die Richtung seiner Entwicklung an. Es kommt vom griechischen Wort "alios" und "agorein", das bedeutet "anderes Sprechen" und suggeriert eine mehr doppeldeutige und hintergründige Sprache. Die Methode der Allegorie wird in der Kunst gebraucht, wenn sie mehr einen thematischen Inhalt und Ideen ausdrückt als Ereignisse und Tatsachen. Der bleibende Eindruck, der bei einem allegorischen Vergleich entsteht, ist etwas Indirektes, Ambivalentes und manchmal sogar Emblemhaftes, das zwangsläufig nach einer Interpretation verlangt. Die Allegorie hebt den Nachdenkenden auf eine Bedeutungsebene und versorgt den Entwerfer mit einem Mittel, das weit über die pragmatische Repräsentation hinausgeht. Insbesondere Kunst und Mythologie machen weiten Gebrauch von Allegorien, beide in subjektiven Vorgängen und in der Vorstellung. Oft werden Personifikationen benutzt, um abstrakte Ideen und Ereignisse sichtbar zu machen, so der Tod als Sensenmann, die Gerechtigkeit als Frau mit verbundenen Augen, die Glücksgöttin auf einem drehenden Rad sitzend, selbst in Allegorien wie John Bull als dem Repräsentanten für die britische Nation, dem Michel für die deutsche und der Marianne für die französische Nation sowie dem guten "Uncle Sam", der für Amerika steht. Dies allegorische Mittel jedoch war in der Vergangenheit nicht nur von größter Bedeutung für die Repräsentation des Kosmos in der antiken Welt oder für die Spekulation über die Natur des Universums im Mittelalter, es spielt auch eine bedeutende Rolle in der modernen Literatur, urn begreifliche Dimensionen zu erfassen, die

codes and systems of synthetic signs and symbols which are more advantageous because they are unambiguous, distinct, and shorter than regular language. But beyond the objective world, symbols also represent a metaphysical world as magical illuminations and cult symbols in various religions, such as the wheel of life in Buddhism, the fish as a symbol of Christianity, and the phoenix as a sign of regeneration in ancient mythology.

While signs point to something that they represent, as words are artificial signs for ideas and thoughts, symbols are a penetration of mind and image characterized by mystery, depth and inexhaustible interpretation. To express and visualize something abstract, transcendental or spiritual either symbols or allegories are used. The transition between symbols and allegories is flexible and cannot be strictly separated. Allegory is regarded as a dimension of controlled indirectness and double meaning. The original meaning of the term suggests the direction of its development, it comes from the Greek word "alios" and "agorein" which means an "other speaking" and suggests a more deceptive and oblique language. The method of allegory is represented in art whenever it emphasizes thematic content and ideas rather than events and facts. The abiding impression left by the allegorical mode is one of indirect, ambiguous and sometimes even emblematic symbolism which inevitably calls for interpretation. The allegory arouses in the contemplator a response to levels of meaning, and provides the designer with a tool that goes beyond pragmatic representation. Particularly art and mythology make wide use of allegories, both in subject matter and in its imagery. Quite often personifications are employed to visualize abstract ideas and events, such as death as reaper, justice as the blindfolded woman, the goddess of luck sitting on a flying wheel; even in allegories like "John Bull" as the representative of the British nation, "Michael" for the Germans, "Marianne" for the French, and good old "Uncle Sam" who stands for America.

The allegorical mode however has not only been of major importance in the past as representing the Cosmos in the ancient world or speculating on the nature of the Universe in the Middle Ages, it also plays a significant role in modern literature, exhibiting incomprehensible and unconceivable dimensions rooted in the depth of the unconscious as in Beckett's " Waiting for Godot" or in Kafka's novels.

What all that means-thinking and designing in images, metaphors, models, analogies, symbols and allegories- is nothing more than a transition from purely pragmatic approaches to a more creative mode of thinking. It means a process of thinking in qualitative values rather than quantitative data, a process that is based on

in der Tiefe des Unterbewußtseins wurzeln, wie in Becketts "Waiting for Godot" oder in den Novellen Kafkas.

Die Bedeutung des Denkens und Entwerfens in Bildern, Metaphern, Modellen, Analogien, Symbolen und Allegorien ist nichts anderes als der Übergang von rein pragmatischen Denkansätzen zu einer mehr kreativeren Methode des Denkens. Es bedeutet einen Prozeß des Denkens in qualitativen Werten statt in quantitativen Daten, einen Prozeß, der mehr auf der Synthese als auf der Analyse basiert - nicht so verstanden, daß analytische Methoden abgelehnt werden, sondern mehr in der Richtung, daß Analyse und Synthese alternieren, so natürlich wie das Einatmen und Ausatmen, wie Goethe es ausgedrückt hat. Es ist als ein Obergang der Denkprozesse vom metrischen Raum zum visionären Raum kohärenter Systeme zu verstehen, von Konzepten gleicher Beschaffenheit zu Konzepten der Gestaltfindung. All die unterschiedlichen Methoden, die hier beschrieben worden sind, sind Teil eines morphologischen Konzeptes, das als eine Studie der Formation und Transformation zu verstehen ist, seien es Gedanken, Tatsachen, Objekte oder Bedingungen, wie sie sich selbst in sensitiven Experimenten oder Erfahrungen ausdriicken.

Diese Vorgehensweise soll nicht als Ersatz für qualitative Wissenschaft stehen, die die Erscheinungsformen, die uns bekannt sind, in Funktionen zerlegt, um sie kontrollierbar zu machen, sondern es ist so zu verstehen, daß sie gegen den zunehmenden Einfluss der Verwissenschaftlichung gerichtet sind, die für sich ein Monopol der Erkenntnis beansprucht.

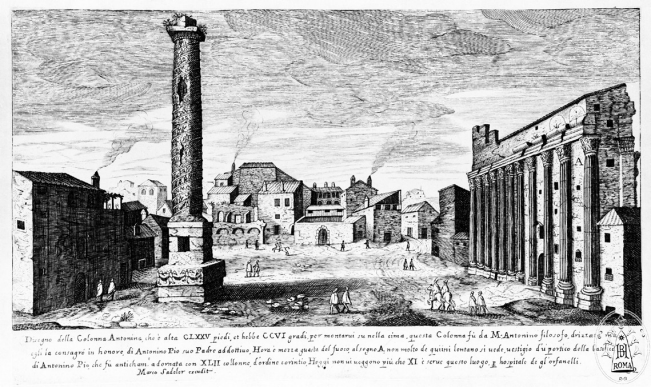
Deshalb sind die Städtebilder, die in dieser Anthologie gezeigt werden, nicht nach Funktionen und meßbaren Kriterien analysiert, Methoden, welche normalerweise angewandt werden, sondern sie sind auf einem konzeptuellen Niveau interpretiert, das Ideen, Vorstellungen, Metaphern und Analogien zeigen soll. Die Interpretationen sind im morphologischen Sinn begriffen, weit offen für subjektive Spekulationen und Transformationen. Das Büchlein zeigt einen mehr transzendentalen Aspekt, der dem tatsächlichen Entwurf zugrunde liegender Gedanken . Anders ausgedrückt zeigt es das allgemeine Prinzip, das gleich ist in ungleichen Situationen oder unter ungleichen Bedingungen. Drei unterschiedliche Ebenen der Realität werden herausgestellt: die faktische Realität - das Objekt; die konzeptuelle Realität - die Analogie; die begriffliche Realität - die Idee, gezeigt als Plan, als Bild und als Begriff.

synthesis rather than analysis. Not that analytical methods are opposed but more in the direction that analysis and synthesis alternate as naturally as breathing in and breathing out, as Goethe put it. It is meant to be a transition in the process of thinking from a metrical space to the visionary space of coherent systems, from the concepts of homology to the concepts of morphology. All of the different modes described are part of a morphological concept which is understood as a study of formations and transformations whether of thoughts, facts, objects or conditions as they present themselves to sentient experiences.

This approach is not meant to act as a substitute for the quantitative sciences which break down forms, as we know them, into functions to make them controllable, but it is meant to counteract the increasing influence of those sciences that claim a monopoly of understanding.

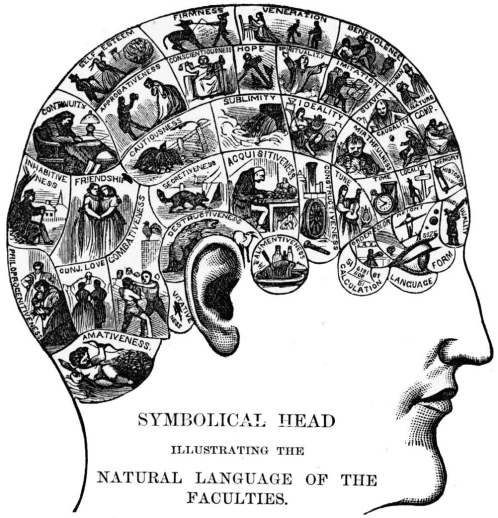
Therefore, the city-images as they are shown in this anthology are not analysed according to function and other measurable criteria-a method which is usually applied-but they are interpreted on a conceptual level demonstrating ideas, images, metaphors and analogies. The interpretations are conceived in a morphological sense, wide open to subjective speculation and transformation. The book shows the more transcendental aspect, the underlying perception that goes beyond the actual design. In other terms, it shows the common design principle which is similar in dissimilar conditions. There are three levels of reality exposed: the factual reality-the object; the perceptual reality-the analogy; and the conceptual reality-the idea, shown as the plan-the image-the word.

Oswald Mathias Ungers, *Morphologie City Metaphors* (2011)



Hadrian Temple later Rome Stock Exchange
Aegidius Sadeler, *Vestigi delle antichità di Roma Tivoli Pozzuolo* (1570-1629)

Introduction



Published by Fowler, How to Read Character, *Phrenology chart of the faculties* (1883)

L'ÉCONOMIE, SCIENCE DES INTÉRÊTS PASSIONNÉS: introduction à l'anthropologie économique de Gabriel Tarde

La tendance à mathématiser la science économique et la tendance à la psychologiser, loin d'être inconciliables, doivent donc plutôt se prêter à nos yeux un mutuel appui.

La doctrine du laissez-faire a donc les plus grandes affinités avec celle de la société-organisme, et les coups dirigés contre celle-ci atteignent l'autre par contrecoup.

Gabriel Tarde

Supposons que Karl Marx ait publié *Das Kapital* et que personne n'y ait prêté attention. Un siècle après on redécouvrirait ce livre et l'on resterait stupéfait devant l'ampleur et l'audace d'une oeuvre isolée, incomprise, sans effets scientifiques, politiques, sociaux ; une oeuvre que n'auraient développée ni disciple, ni exégèse, que ne serait venu transformer aucun essai plus ou moins malencontreux d'application. Comme l'histoire du 20° siècle aurait été différente si le bréviaire des hommes d'action eût été le livre de Tarde, *Psychologie Économique*, paru en 1902, au lieu de celui de Marx ! Mais il n'est peut-être pas trop tard pour réinventer, par un petit essai d'histoire-fiction, une théorie de l'économie politique dans laquelle Tarde aurait joué le rôle dévolu dans l'histoire, a vraie, aux arguments de Marx.

À première vue, il paraît vraiment difficile de prendre au sérieux les ropos échevelés de ce sociologue sans descendance, qui parle des conversations entre badauds comme d'un véritable « facteur de production » ; qui nie le rôle central donné au triste travail ; qui distingue dans la notion de capital le « germe » (le *software*), du « cotylédon » (le *hardware*), au bénéfice du premier ; qui suit avec le même sérieux les variations du prix du pain et celles du prestige des élus politiques sur des instruments qu'il appelle des « gloriomètres » ; qui prend pour exemple typique de production non pas, comme tout le monde, une bonne fabrique d'aiguilles, mais l'industrie du livre, en s'intéressant aussi bien à la diffusion des idées contenues dans les pages qu'à celle des ouvrages eux-mêmes ; qui traite la question du

THE SCIENCE OF PASSIONATE INTERESTS: an introduction to Gabriel Tarde's economic anthropology

The tendency to mathematize economic science and the tendency to psychologize it, far from being irreconcilable, should rather, in our view, lend each other mutual support.

The doctrine of laissez-faire therefore has the greatest affinity with that of society-as-organism, and the blows aimed at the former rebound on the latter.

Gabriel Tarde

Imagine how things might have turned out had no one ever paid attention to *Das Kapital.* A century later, the book would have been rediscovered and people would have been struck with amazement by its scope and audacity—an isolated, little understood work, without any scientific, political or social impact; a work that had generated neither disciples nor exegeses, and one that no attempts at application had come to transform.

How different the history of the 20th century would have been had the bible of men of action been Gabriel Tarde's *Psychologie Économique,* published in 1902, instead of Marx's work! But perhaps it is not too late to reinvent, through a little essay in historical fiction, a theory of political economy in which Tarde plays the role that, in the real course of history, was occupied by Marx.

At first glance, it seems difficult to take seriously the ramblings of this sociologist who had no disciples; who treats conversation among idlers as a "factor of production"; who denies the central role attributed to poor old labor; who distinguishes, in the notion of capital, the "seed" or "germ" (the *software*) from the "cotyledon" (the *hardware*), to the advantage of the former; who follows, with equal attentiveness, fluctuations in the price of bread and variations in the prestige of political figures, on instruments he names "glorimeters"; who uses as a typical example of production not, as everyone else does, a needle factory, but rather the book industry, paying attention not only to the dissemination of the books themselves, but also to the dissemination

biopouvoir comme si économie et écologie était déjà mêlées ; qui passe sans coup férir de Darwin à Marx et d'Adam Smith à Cournot, sans pour autant croire une seule seconde aux divisions usuelles de la science économique; qui s'intéresse au luxe, aux modes, à la consommation, à la qualité, aux labellisations, aux loisirs autant qu'à l'industrie militaire et à la colonisation ; qui ne cesse de prendre ses exemples dans le marché de l'art, dans la diffusion des idées philosophiques, dans la morale, dans le droit comme si toutes comptaient également dans la production des richesses ; qui fait de la science, de l'innovation, des innovateurs, de l'oisiveté même, le fond de l'activité économique ; qui passe un temps considérable à suivre les rails des chemins de fer, le fil des télégraphes, les réclames de la presse, la montée du tourisme; qui, surtout, ne croit pas en l'existence du capitalisme, ne voit pas dans le 19e siècle la montée terrifiante du froid calcul et du règne de la marchandise, mais qui définit au contraire l'extension des marchés comme celles des *passions*, qui félicite les socialistes pour avoir inventé de nouvelles fièvres d'association et d'organisation.

Et c'est ce vieux réactionnaire que nous voudrions rendre à nouveau intéressant ? Cette pièce d'archéologie économique que nous voudrions faire à nouveau reluire ?

Parfaitement. Ayons l'honnêteté de reconnaître que la lecture du *Das Kapital* nous paraîtrait bien troublante si nous n'avions pas profité de plus d'un siècle de commentaires. Tout va sembler étrange dans l'économie de Tarde, mais peut-être parce que tout y est neuf, c'est du moins ce que nous voulons tenter de montrer. Écrit au coeur même de la première grande globalisation, aux prises avec toutes les innovations techniques de l'époque, saisi par le problème moral et politique de la lutte des classes, profondément engagé dans la bio-sociologie, fondé sur des méthodes quantitatives dont il ne pouvait alors que rêver mais qui sont devenues aujourd'hui disponibles grâce à l'extension des techniques de numérisation, c'est parce qu'il semble fraîchement sorti de presse que nous le présentons, un siècle plus tard, au milieu d'une autre globalisation, en pleine crise morale, sociale, politique et écologique. Nous n'offrons pas cet apax comme une simple curiosité pour intéresser les historiens

of the ideas contained in their pages; who approaches the question of biopower as if economy and ecology were already intertwined; who moves seamlessly from Darwin to Marx and from Adam Smith to Antoine-Augustin Cournot, but without believing for a moment in the usual divisions of economic science; who is interested in luxury, fashions, consumption, quality, labels and recreation as much as he is interested in the military industry and in colonization; who continually uses examples found in the art market, in the dissemination of philosophical ideas, in ethics, and in the law, as if they all counted equally in the production of wealth; who makes science, innovation, innovators, and even idleness itself the basis of economic activity; who spends considerable time following railway tracks, telegraph wires, press publicity, the growth of tourism; who, above all, does not believe in the existence of Capitalism, does not see in the 19th century the terrifying rise of cold calculations and of the reign of the commodity, but on the contrary who defines the growth of markets as that of *passions*; who congratulates the socialists on having created a new fever for association and organization.

It is *this* old reactionary we would like to render once again relevant? It is this little bit of economic archeology that we would like to dust off and polish?

Precisely. Let us be honest enough to acknowledge that reading *Das Kapital* would seem quite troubling to us if we had not benefited from over a century of commentaries on it. Everything will initially seem foreign in the economics of Tarde, but perhaps only because it is all new—that, at least, is what we hope to show. Written amidst the first great era of globalization, grappling with all of the technological innovations of the times, taken with the moral and political problem of class struggles, profoundly involved in bio-sociology, founded on quantitative methods which at the time could only be dreamed of but which have today become available thanks to the extension of digitization techniques, it is because it seems freshly minted that we are presenting this work, a century later, in the middle of another period of globalization, at a time of moral, social, financial, political and ecological crisis. This apax is not offered as a simple oddity that might

de l'économie, mais comme un document essentiel pour récupérer autrement notre passé et, par conséquent, définir autrement notre avenir.

La question que se pose Tarde, est très simple : à quoi correspond la surprenante notion d'économie politique qui a surgi au 18e siècle et qui n'a cessé de prendre de l'ampleur au siècle suivant ? Pour lui les idées mènent le monde et plus particulièrement les idées que les économistes se font de la matière propre à leur discipline... À quelle étrange idée de la science et de la politique correspondelle ? Car ce sont bien des idées, des opinions, des arguments qu'il s'agit d'abord d'inverser, pour saisir la mutation que Tarde fait subir à la théorie de l'économie politique : oui ! pour lui la superstructure détermine « en première et en dernière instance » les infrastructures, lesquelles, d'ailleurs, n'existent pas, nous le verrons... Etrange révolutionnaire, dira-t-on, que ce matérialiste athée qui, cent ans avant l'anthropologie des marchés, détecte dans le matérialisme athée des économistes de son temps, de gauche comme de droite, une forme particulièrement perverse de Dieu caché. Tarde critique en effet tous ceux pour qui *seule une Providence miraculeuse* semble capable de produire automatiquement, par son invisible main, l'harmonie préétablie, celle du Marché ou de l'État peu lui importe car, aux yeux de Tarde, les inventeurs de l'économie politique sont d'accord sur presque tout, et d'abord sur l'existence de l'économie comme domaine propre. Or c'est justement ce que Tarde conteste.

Ce révolutionnaire sans organisation, sans parti, sans successeur et presque sans prédécesseur, se demande ce qui se passerait-il si nous étions vraiment incroyant, *agnostique* en matière économique ? «Et s'il n'y avait pas du tout de divinité maîtresse en économie?», se demande-t-il au fond. Si l'on acceptait pour de bon de déployer cette immanence sans transcendance aucune, ne pourrait-on pas faire à nouveau de la politique? Cette politique que les sectateurs de Mammon, Dieu de la Providence et de l'Harmonie automatique, comme ceux de l'État nous interdisent depuis si longtemps de pratiquer, —oui, cette politique de la *liberté*. Libéralisme alors? Pourquoi aurait-on peur de ce mot, à condition de se rappeler que son contraire

interest economic historians, but instead as a document that is essential in order to attain an alternative understanding of our past, and, thus, of our future.

We have therefore decided to publish this introduction separately, with relatively long quotations, to give readers the desire to turn to the digital versions of the French text to explore it further. In addition, to save those readers who dislike reading on the computer screen and who would rather not overwhelm their printer by printing out the two enormous volumes, we have added on a website a selection of the texts we feel best illustrate the work's importance.

The question Tarde asks himself is quite simple: to what does the surprising notion of political economy that arose in the 18th century correspond? For him, ideas guide the world, and more specifically the ideas economists arrive at concerning the subject of their discipline. To what strange idea of science and of politics does it correspond? For it is indeed a question first of reversing ideas, opinions, and arguments, in order to grasp the change that Tarde proposes to the theory of political economy: yes, for him, the superstructure determines "in the first and in the last instance" the infrastructures, which, in fact, as we shall later see, do not exist.

A strange revolutionary, one might say, this atheistic materialist who, a hundred years before the development of market anthropology, detects in the atheist materialism of the economists of his time, both left and right leaning, a particularly perverse form of a hidden God. Tarde in effect criticizes all those for whom *only a miraculous Providence* seems able to produce automatically, with its invisible or visible hand, the pre-established harmony—whether that of the Market or that of the State, this matters little, because for him, the inventors of political economy agree on nearly everything, and first and foremost on the existence of economics as a field in itself. Whereas this is precisely what he disputes.

This lone revolutionary, not linked to any organization or party, with no successors and practically no predecessors, wonders what would happen if we were truly unbelieving, truly *agnostic* when it comes to the subject of economics. "And what if there were in fact no divinity at all ruling

ne peut être que le terme de “providentialisme”. Et si le choix n’avait jamais été entre les organisations de marché et celle de l’Etat, entre libéraux et socialistes, mais entre ceux qui croient aux miracles d’une harmonisation préétablie et ceux qui refusent de croire aux miracles? Ne pourrait-on pas relire, rétrospectivement, tout ce qui nous est arrivé depuis deux siècles et qu’on a résumé beaucoup trop vite sous le nom de «capitalisme»?

SECTION I
C’est parce que l’économie est subjective, qu’elle est quantifiable

Pour comprendre l’anthropologie économique de Tarde, il faut accepter d’emblée une complète inversion de nos habitudes : rien dans l’économie n’est objectif, tout est subjectif, ou plutôt intersubjectif, et c’est *justement la raison pour laquelle on peut la rendre quantifiable et scientifique*... Mais à condition de modifier également ce qu’on doit attendre d’une science et ce qu’on appelle quantifier. Voilà qui va modifier quelque peu nos habitudes de pensée.

Revenir aux valeurs

De façon fort classique, Tarde commence par définir la valeur. Mais tout de suite, il nous oblige à changer de direction. Parce que la valeur est une dimension éminemment psychologique qui dépend de la croyance et du désir, elle est quantifiable puisqu’elle possède une certaine intensité :

Elle [La Valeur] est une qualité que nous attribuons aux choses, comme la couleur mais qui, en réalité comme la couleur, n’existe qu’en nous d’une vérité toute subjective. Elle consiste dans l’accord des jugements collectifs que nous portons sur l’aptitude des objets à être plus ou moins, et par un plus ou moins grand nombres de personnes, crus, désirés ou goûtés. Cette qualité est donc, de l’espèce singulière de celles qui, paraissant propres à présenter des degrés nombreux et à monter ou à descendre cette échelle sans changer essentiellement de nature, méritent le nom de quantité.

Le point est fondamental et Tarde le maintient depuis le premier article qu’il publia alors qu’il était juge dans la petite ville de Sarlat :

over economies?” is really the question he asks. If we agreed once and for all to apply this idea of immanence without any transcendence, could we not once again engage in politics? The politics that the sectarians of Mammon, God of Providence and of automatic Harmony, and that those of the State have been forbidding us from practicing for so long—yes, a politics of *liberty*. Liberalism then? Why should we be afraid to use this word, as long as we remember that its opposite can only be the term “Providentialism”? And what if the choice had never been between Market and State organizations, between liberals and socialists, but instead between those who believe in the miracles of a pre-established harmony and those who refuse to “believe in miracles”? Could we not re-read, retrospectively, everything that has happened to us in the past two hundred years and that we have far too hastily summarized under the name of “capitalism”?

PART I
It Is Because The Economy Is Subjective That It Is Quantifiable

In order to understand Tarde’s economic anthropology, we must first accept a complete reversal of our habits: nothing in the economy is objective, all is subjective—or, rather, inter-subjective, and that is *precisely why it can be rendered quantifiable and scientific*. But on condition that we modify what we expect from a science and what we mean by quantifying. These conditions will indeed modify our habits of thought in no small way.

A Return to Value(s)

In an altogether classical way, Tarde begins by defining value. But almost immediately he forces us to change direction. Because value is a highly psychological dimension and one that depends on belief and on desire, it is quantifiable because it possesses a certain intensity:

It [Value] is a quality, such as color, that we attribute to things, but that, like color, exists only within us by way of a perfectly subjective truth. It consists in the harmonization of the collective judgments we make concerning the aptitude of

si l'on veut faire des sciences sociales de véritables sciences, il faut accéder à ce qu'elles ont de quantifiables qui, paradoxalement, est intérieur aux subjectivités5. Mais si ce mot d'ordre peut rappeler la position des marginalistes dont le point de départ est solidement ancré dans des individus maximisateurs, il ne faut pas se tromper sur l'originalité de Tarde. Jamais, en effet, il n'oppose les adjectifs « social » et « psychologique ». Malgré les critiques bien connues de Durkheim contre lui, ce que Tarde désigne comme un phénomène psychologique ne renvoie jamais à quelque chose d'individuel ou d'intérieur au sujet —ce qu'il appelle alors « intrapsychologique » et dont il affirme souvent qu'on ne peut rien en dire—mais toujours à ce qui est le plus social en nous —et qu'il appelle, pour cette raison, « inter-psychologique ». Rien n'est par conséquent plus étranger à son anthropologie que l'idée d'agents économiques coupés du monde social et dont les calculs possèderaient des frontières bien tracées. Les mots d'intimité et de subjectivité ne doivent pas nous induire en erreur : au plus intime de nous-mêmes, c'est toujours « le grand nombre » qui règne. Ce qui rend Tarde si difficile à comprendre pour nous, après plus d'un siècle de sociologisme, c'est qu'il n'oppose jamais la société à l'individu, mais qu'il considère, au contraire, que l'un et l'autre ne sont que des agrégats provisoires, des stabilisations partielles, des noeuds dans des réseaux qui échappent entièrement aux concepts de la sociologie usuelle.

Ce qui fonde à ses yeux la science sociale, en effet, c'est un type de contamination qui va toujours, point à point, d'individu à individu mais sans jamais s'arrêter sur eux.

La subjectivité désigne toujours la nature contagieuse des désirs et des croyances qui sautent d'un individu à l'autre sans jamais passer, c'est là le point essentiel, par l'intermédiaire d'un contexte ou d'une structure sociale. Les mots « social », « psychologique », « subjectif » et « intersubjectif » sont donc, en gros, équivalents et tous désignent un mode de parcours, une trajectoire, qui exige, pour qu'on puisse les suivre de ne jamais supposer l'existence préalable d'une société ou d'une infrastructure économique, d'un plan d'ensemble distinct du pullulement de ses membres.

Le gros avantage de ces modes de cheminements, c'est qu'ils situent d'emblée en pleine lumière les moyens pratiques par lesquels

objects to be more or less—and by a greater or lesser number of people—believed, desired or enjoyed. Thus, this quality belongs among those peculiar ones which, appearing suited to show numerous degrees and to go up or down this ladder without changing their essential nature, merit the name "quantity."

This point is fundamental, and Tarde maintains it beginning in the very first article he published when he was a judge in the small town of Sarlat in the South West of France where he lived most of his life before moving to Paris. To turn the social sciences into true sciences, it is necessary to reach a property that is quantifiable, which, paradoxically, is contained *inside* subjectivities. But although this argument might call to mind the position of marginalists whose point of departure is solidly anchored in individuals, one must never underestimate Tarde's originality. Indeed, never does he put the adjectives "social" and "psychological" in opposition to each other. Despite Durkheim's well-known criticisms of him, what Tarde designates as a psychological phenomenon never refers to anything personal or interior to the subject—what he later calls "intrapsychological" and about which he often asserts that nothing can be said—but always to that which is the most social in us, and which he calls, for this reason, "inter-psychological." As a result, nothing is more foreign to his anthropology than the idea of economic agents cut off from the social world and whose calculations would present clearly-defined boundaries. The words "intimacy" and "subjectivity" must not mislead us: at our most intimate level, it is always the "many" that rules. What makes Tarde so difficult for us to understand, after more than a century of sociologism, is that he never places society and the individual in opposition, but, rather, he sees the two as nothing but temporary aggregates, partial stabilizations, nodes in networks that are completely free of the concepts contained in ordinary sociology.

What is at the basis of the social sciences, in his view, is a kind of *contamination* that moves constantly, from point to point, from individual to individual, but without ever coming to a halt at any specific stop.

Subjectivity always refers to the contagious nature of desires and beliefs, which jump from one individual to the next without ever—and here is

s'effectuent la contagion, la contamination d'un point à un autre —ce que Tarde appelle des « rayons imitatifs » dans son livre, *Les Lois de l'imitation*, qui va le rendre célèbre.

Cette première définition du « quantum » propre aux valeurs, va permettre à Tarde de déployer, en lieu et place de l'économie, un tissu de relations croisées dans lequel on ne doit surtout pas se précipiter pour reconnaître celles qui sont *littéralement* économiques et celles qui ne le seraient que *métaphoriquement*. Tarde ne va pas cesser de montrer, au contraire, que l'économie-discipline risque de perdre toute objectivité scientifique parce qu'elle se trompe à la fois sur ses limites —trop restrictives— et ses ambitions —trop vastes.

Deux erreurs à éviter

Procédons lentement pour bien saisir l'originalité de sa position. La notion de valeur s'étend d'abord à toutes les évaluations de *croyance et de désir* :

Cette quantité abstraite se divise en trois grandes catégories qui sont les notions originales et capitales de la vie en commun : la valeur-vérité, la valeur-utilité et la valeur-beauté.

La caractère quantitatif de tous les termes que je viens d'énumérer est aussi réel que peu apparent; il est impliqué dans tous les jugements humains. Il n'est pas d'homme, il n'est pas de peuple qui n'ait poursuivi, pour prix de ses efforts acharnés, un certain accroissement ou de richesse, ou de gloire, ou de vérité, ou de puissance, ou de perfection artistique, et qui ne lutte contre le danger d'une diminution de tous ces biens. Nous parlons tous et nous écrivons comme s'il existait une échelle de ces diverses grandeurs, sur laquelle nous plaçons plus haut ou plus bas les divers peuples et les divers individus et les faisons monter ou descendre continuellement. Tout le monde est donc implicitement et intimement persuadé que toutes ces choses, et non pas la première seule, sont de vraies quantités, au fond. Méconnaître ce caractère vraiment quantitatif, sinon mesurable en droit et en fait, du pouvoir, de la gloire, de la vérité, de la beauté, c'est donc aller contre le sentiment constant du genre humain et donner pour but à l'effort universel une chimère.

the crucial point— going through a social context or a structure. The words "social," "psychological," "subjective" and "inter-subjective" are, thus, essentially equivalent, and they all refer to a type of path, a trajectory that demands, for us to be able to follow them, that we never presume the prior existence of a society or of an economic infrastructure, of a general plan distinct from the coming together of its members.

The great advantage of these ways of proceeding is that they immediately bring into plain sight the practical means through which the contagion, the contamination from one point to another, takes place—what Tarde calls "rayons imitatifs" ("imitative rays") in the book that made him famous, *Les Lois de l'imitation (The Laws of Imitation)*.

This initial definition of the "quantum," whichis specific to values, will allow Tarde to unfurl, in lieu of the economy, a fabric made of intertwined relationships, where we must above all be careful not to rush to identify those which are *literally* economic and those that might only be *metaphorically* so. Tarde indeed will continuously show that, on the contrary, economics as a discipline risks losing all scientific objectivity because of a mistaken understanding both of its limits, which are too restrictive, and of its ambitions, which are too vast.

Two Mistakes to Be Avoided

Let us proceed slowly in order to fully grasp the originality of Tarde's position. The notion of value extends first of all to *all assessments of belief and desire*:

This abstract quantity is divided into three main categories which are the original and essential notions of shared living: truth as a value, utility as a value, and beauty as a value.

The quantitative nature of all of the terms I just listed is just as real as it is scarcely apparent; it is involved in all human judgments. No man, no people has ever failed to seek, as a prize for relentless efforts, a certain growth either of wealth, or glory, or truth, or power, or artistic perfection; nor has he failed to fight against the danger of a decrease of all of these assets. We all speak and write as though there existed a scale of these different orders of magnitude, on which we can place different peoples and different

Il y a donc bien un fond quantitatif essentiel à toutes nos évaluations, quels que soient nos objets, et la science sociale doit les considérer toutes. Mais, malheureusement, ajoute-t-il aussitôt, l'économie politique a confondu deux genres totalement différents de quantification : celle qui est « réelle et peu apparente » et celle qui est « commode et apparente » mais qui n'est due seulement qu'à l'extension d'un tout petit nombre d'instruments de calcul entrecroisés avec les passions.

Cependant, de toutes ces quantités, une seule, la richesse, a été saisie avec netteté comme telle, et a paru digne, par suite, d'être l'objet d'une science spéciale : l'Économie politique. Mais, quoique cet objet, en effet, à cause de son signe monétaire, se prête à des spéculations d'une précision plus mathématique, parfois même illusoire, les autres termes aussi méritent d'être étudiés chacun par une science à part.

Cette question du « signe monétaire » doit être considérée avec le plus grand soin. Tarde, en effet, évite ici deux erreurs symétriques que nous avons souvent l'habitude de commettre : prendre l'économie pour une sorte de réduction qui glacerait la subjectivité en objectivité ; ou, à l'inverse, étendre cette première « réduction » à toutes les activités, même les plus «élevées » en croyant faire preuve d'un vif esprit critique. Or, pas une fois dans ce livre Tarde ne se plaint de ce que les économistes, « ignorant la richesse de l'humaine subjectivité », s'efforceraient de « tout quantifier » au risque d'« amputer » ainsi l'humain de ses « dimensions morales, affectives, esthétiques et sociales ». Sa critique est exactement contraire : les économistes ne quantifient pas assez toutes les évaluations auxquelles ils ont accès. Ou plutôt, ils ne remontent pas assez loin, en continu, vers l'entrecroisement des tenseurs et des vecteurs de désir et de croyance qui caractérisent le fond, si l'on peut dire, de la *matière* sociale.

Mais l'économiste néglige de voir qu'il n'est pas de richesse non plus, agricole ou industrielle ou autre, qui ne puisse être considérée au point de vue des connaissances qu'elle implique, ou des pouvoirs qu'elle donne, ou des droits dont elle est le fruit, ou de son caractère plus ou moins esthétique ou inesthétique.

individuals higher or lower and make them rise or fall continuously. Everyone is thus implicitly and intimately convinced that all these things, and not only the first, are, in fact, real quantities. Not to recognize this truly quantitative—if not measurable de jure and de facto—aspect of power, of glory, of truth, of beauty, is thus to go against the constant of mankind and to set as the goal ofuniversal effort a chimera.

There is then a quantitative core which is essential to all of our assessments, no matter the object, and social science must take all of these assessments into account. But, unfortunately, Tarde is quick to add, political economy confused two completely different kinds of quantification: that which is "real and scarcely apparent," and that which is "convenient and apparent" but which reflects only the *extension* of a very small number of calculating instruments intertwined with our passions.

And yet, of all these quantities, only one, wealth, was grasped clearly as such and was considered worthy of being made the subject of a special science: Political Economy. But, even though this object, indeed, given its monetary sign, lends itself to a more mathematical sometimes even illusory—precision in its speculation, the other terms also each deserve to be studied through a separate science.

The question of the "monetary sign" must be considered extremely carefully. Indeed, Tarde here avoids two symmetrical errors that we too often commit: first, viewing economics as a sort of reduction, one that freezes subjectivity into objectivity; or, conversely, extending this first "reduction" to all activities, even the "highest," believing that one is thus displaying a sharp critical spirit. Yet, not even once in this book does Tarde complain that economists, "ignoring the wealth of human subjectivity," strive to "quantify all" at the risk of thus "amputating" what is human from its "moral, emotional, aesthetic and social dimensions." His criticism is just the opposite: economists *do not sufficiently quantify* all of the valuations to which they have access. Or, rather, they do not go back far enough, along a continuum, towards the intersection of the

Mais l'erreur symétrique serait de croire que Tarde étend les quantifications des richesses usuellement acceptées en économie, pour analyser *métaphoriquement* les vérités, les gloires, les pouvoirs, les moralités, les droits ou les arts, à la façon de Pierre Bourdieu, en multipliant les termes de capital, d'intérêt, de calcul ou de profit, affublés ou non du qualificatif « symbolique ». Encore une fois, c'est l'inverse : la racine quantifiable qui va permettre de fonder une science économique véritable, se trouve d'abord dans ces jeux complexes de confiance et de méfiance, et ensuite seulement par commodité et par simplification, transportée dans le cas relativement simplifié de « l'échange des biens ». On pourrait presque dire que, dans l'économie généralisée qu'il propose, c'est l'économie politique des richesses qui est son extension métaphorique, ou plutôt as restriction métonymique, la partie y étant prise pour le tout. Tarde propose donc au contraire d'étendre l'économie à toutes les évaluations, mais sans se limiter à suivre le très petit nombre des évaluations que nous avons appris, par commodité, à compter en monnaie.

Ne plus confondre le recto avec le verso

C'est seulement si l'on comprend à quel point il évite ces deux erreurs (la plainte contre la quantification, d'une part, l'extension métaphorique des calculs de richesses aux autres formes de crédit, d'autre part), que l'on mesure l'audace, l'originalité et la fécondité de cette déclaration :

Mon intention est de montrer au contraire, que, si l'on veut atteindre enéconomie politique à des lois véritables, et, par conséquent, vraiment scientifiques, il faut retourner pour ainsi parler, le vêtement toujours utile mais un peu usé des vieilles écoles, faire du verso le recto, mettre en relief ce qu'elles cachent et demander à la chose signifiée l'explication du signe, à l'esprit humain l'explication du matériel social.

Comment peut-on expliquer que les économistes se soient à ce point trompés sur le recto et le verso de leur science ? La raison que donne Tarde rejoint ce que les anthropologues des marchés n'ont cessé de démontrer depuis une dizaine d'années : aucune relation n'est

tensors and vectors of desire and belief that lie at the heart, we might say, of social *matter*.

But the economist neglects to recognize that there is no wealth either, whether agricultural, industrial or other, that cannot be considered from the point of view of either the knowledge it involves, the powers it grants, the rights of which it is a product, or its more or less aesthetic or unaesthetic character.

But the opposite mistake would be to think that Tarde extends the quantifications of wealth ordinarily accepted in economics to the *metaphorical* analysis of truths, glories, powers, ethics, rights and arts, in the manner of Pierre Bourdieu, by the increased use of the terms capital, interest, calculation and profit, whether qualifying them as "symbolic" or not. Once again, it is the reverse: the quantifiable root that will allow for the founding of a true economic science lies first of all in the complex interplay between trust and mistrust, and *only then*, out of convenience and simplification, transported into the relatively simplified case of the "exchange of assets." One could almost say that, generalized economics that he puts forward, it is the political economy of wealth that represents its metaphorical extension, or rather its metonymic narrowing—a tiny part being taken for the whole. Tarde proposes, instead, to extend economics to all valuations, without, however, being limited to following the very small number of valuations that people have learned, for the sake of convenience, to measure in terms of money.

Ceasing to Confuse Recto with Verso

It is only once we understand the extent to which he avoids making these two mistakes (the lament against quantification, on the one hand, and the metaphorical extension of calculations of wealth to other forms of "symbolic" value, on the other) that we can measure the audacity, originality and fertility of the following statement:

It is my intention to show, to the contrary, that, if we wish to come to true and, consequently, genuinely scientific laws in political economy, we must turn over, so to speak, the always useful but slightly worn garment of the old schools, turn it

économique sans l'extension des techniques de calcul des économistes —au sens le plus large de ce terme. La discipline économique, inventée au 18° siècle, ne découvre pas un continent, elle le fabrique de toutes pièces, ou plutôt elle l'organise, elle le conquiert, elle le colonise. Pour reprendre la forte expression de Michel Callon, c'est l'économie discipline qui performe et formate l'économie comme chose : « without economics, no economy ». Contrairement aux robinsonnades du 18° siècle, et comme l'avait bien montré Karl Polanyi11, l'homme ne naît pas économiste, il le devient. À condition, toutefois, de se trouver entouré de suffisamment d'instrumentations, de modes de calcul pour rendre visible et lisible des différences sans cela insaisissables. Économiser, ce n'est pas révéler le fond anthropologique de l'humanité, c'est toujours organiser d'une certaine façon une matière qui lui échappe. Ce n'est pas non plus, comme nous allons le voir bientôt, découvrir la véritable nature humaine.

Pour comprendre en quoi le travail des économistes formate des relations qui, sans eux, auraient une tout autre forme, il faut bien saisir le petit supplément qu'apporte l'invention de dispositifs de calcul et, en particulier, les étalons comme la monnaie.

La richesse est quelque chose de beaucoup plus simple et de beaucoup plus aisément mesurable ; car elle comporte des degrés infinis et fort peu de types différents, dont la différence va s'effaçant. En sorte que la substitution graduelle de la richesse à la noblesse, de la ploutocratie à l'aristocratie, tend à rendre l'état social plus sujet au nombre et à la mesure.

S'il faut toute la subtilité de Proust pour situer sur une échelle de valeur les différences de rang entre Swann et Madame Verdurin, cette attention aux détails n'est plus nécessaire pour classer les milliardaires du monde —le moindre journaliste de *Fortune* y parviendra sans peine— lorsque les mesures se feront sous formes de crédits et de capitaux. Attention, cela ne veut pas dire que nous sommes devenus ploutocratiques, que le règne de la marchandise s'est étendu, que les chiffres en quantité monétaire mordent sur l'infrastructure réelle et matérielle qui sous-tendrait l'économie-chose. Pas du tout : la mesure étant devenue « plus simple », « l'état social »

inside out, bring to light that which was hidden and ask the signified for an explanation of the signifier, and ask the human spirit for an explanation of social materials.

How can we explain the fact that economists made such a serious mistake concerning the recto and verso of their science? The reason given by Tarde goes along with what market anthropologists have shown again and again over the past decade or so: no relationship is economic without there being an extension of the calculation techniques of economists— in the broadest sense of the word. The field of *economics*, invented in the 18th century, did not discover a continent; instead, it built one from scratch, or, rather, organized one, conquered it, and it colonized it. To quote Michel Callon's powerful phrase, it is the economic discipline that frames and shapes the economy as an entity: *"without economics, no economy."* Contrary to the robinsonades of the 18th century, and just as Karl Polanyi and laterMarshal Sahlins had so skillfully shown, man is not born an economist, he becomes one. On condition, however, that he is surrounded by enough instruments and enough calculative devices to render otherwise imperceptible differences visible and readable. To practice economics is not to reveal the anthropological essence of humanity; it is to organize in a certain way something elusive. Neither is it, as we shall soon see, to uncover the true nature of humanity.

In order to understand how the work of economists *formats* relationships which, without them, would have entirely different forms, we must accurately grasp the small *supplement* contributed by the invention of calculation devices and, in particular, standards such as currency.

Wealth is something much simpler and more easily measured; for it comprises infinite degrees and very few different types, with ever decreasing differences. So that the gradual replacement of the nobility by wealth, of aristocracy by plutocracy, tends to render the social status increasingly subject to numbers and measures.

If all of Proust's subtlety is required to place the differences in social rank between Swann and Madame Verdurin on a value scale,

est devenu réflexivement plus facile à repérer. Il convient donc de bien distinguer deux types de mesure, celle qui saisirait l'état réel, qu'on pourrait appeler la mesure mesurée, pour la distinguer de celle qui formate le monde social et qu'on pourrait appeler la mesure mesurante. Cette distinction permet de voir qu'il existe bien d'autres instruments disponibles pour rendre l'économie véritablement quantifiable.

Or la gloire d'un homme, non moins que son crédit, non moins que sa fortune, est susceptible de grandir ou de diminuer sans changer de nature. Elle est donc une sorte de quantité sociale ». « Les prêtres et les religieux ont étudié les facteurs de la production (lisez reproduction) des croyances, des "vérités", avec non moins de soin que les économistes la reproduction des richesses. Ils pourraient nous donner des leçons sur les pratiques propres à ensemencer la foi (retraites, méditations forcées, prédication) et sur les lectures, les conversations, les genres de conduite qui l'affaiblissent.

Introduisons le mot de valorimètre pour qualifier tous les dispositifs permettant de rendre visibles et lisibles les jugements de valeur qui forment le fond de ce que Tarde va nommer économie. On imagine sans peine son intérêt pour l'époque actuelle qui voit se multiplier sous les formes de l'audimat, des sondages, des enquêtes marketing, des star academy, des concours, classements, enchères, espionnages, clicks de souris etc., des nouvelles « prises de données » fort précieuses pour « rendre l'état social plus sujet au nombre et à la mesure ». On pourrait presque dire que Tarde a manqué de chance en anticipant d'un bon siècle le type de données « quali-quantitatives » que les nouvelles techniques d'information et de communication multiplient aujourd'hui. On le dit « littéraire » et c'est vrai : il voulait que l'on quantifie des désirs et des croyances alors que les statistiques de son époque —qu'il connaissait bien puisqu'il dirigeait l'Institut de statistiques du Ministère de la justice— étaient beaucoup trop rudimentaire pour les capter. L'actuel vague de numérisation nous rend peut être beaucoup plus attentifs à l'argument de Tarde.

this attention to detail is no longer necessary in order to classify the world's billionaires—any run-of-the-mill *Fortune* journalist would have no trouble doing so—once measurements take the form of credit and capital. We must be careful, though: this does not mean that we have become plutocratic, that the dominance of commodity has been broadened, that numbers in monetary quantity are encroaching on the real and material infrastructure that seems to underlie the economy as an entity. Not at all: the measure having become "simpler," "social status" has, as a result, become easier to identify. So it is indeed appropriate to distinguish between two types of measurement, one that captures the real state, which we could *call measured* measurement, to distinguish it from the type that formats the social world and that we could call *measuring* measurement. This distinction allows us to see that there are indeed other instruments available to make the economy truly quantifiable.

Now, a man's glory, no less than his credit, no less than his fortune, is to increase or decrease without changing in its nature. It is, therefore, a sort of social quantity.... Priests and the religious have studied the factors involved in the production (meaning here reproduction) of beliefs, of "truths", with no less care than that with which economists study the reproduction of wealth. They could give us lessons on the practices best suited to sowing the faith (retreats, forced meditation, preaching), and on the readings, the conversations, and the types of conduct that weaken it.

Let us introduce the term *valuemeter* to describe all of the devices which make visible and readable the value judgments that form the foundation of what Tarde calls economics. It is easy to imagine how interested he would be in the current era, in which we see growing numbers of new ways of "obtaining data," in the form of audience ratings, polls, marketing surveys, shows like *American Idol*, competitions, rankings, auctions, spying, clicks of the mouse, etc.—new means of gathering data which are very precious for "rendering the social status increasingly subject to numbers and measures." One might almost say that it was Tarde's bad luck to have lived a full century before the "qualiquantitative" types of data that are today made more and

Comment préciser les quantités

Mais prenons garde à bien comprendre sa pensée : tout est nombre potentiellement parce que les valorimètres ne font que recueillir, concentrer, extraire et simplifier des pesées subtiles, des « duels logiques » innombrables qui se passent constamment en nous à l'occasion de nos rencontres avec les êtres auxquels nous sommes attachés et dont nous avons besoin pour exister. Autrement dit, Tarde ne prétend pas que les dispositifs de calcul mis en oeuvre par les économistes performent le social comme un moule à gaufre le ferait d'une pâte, en elle-même informe, qu'ils y couleraient à la louche. Il y a déjà, si l'on ose dire, dans la pâte un type de quantum particulier qui n'a qu'un rapport indirect avec ce que les économistes appelle le quantifiable. C'est justement ce caractère indirect qui explique pourquoi ils se sont souvent trompés en voulant rendre leur discipline plus scientifique et pourquoi ils ont pris le verso pour le recto. Il ne s'agit pas, encore une fois, de se plaindre des économistes et de leur manie quantificatrice qui appliquerait à tous les sujets le même standard de compréhension. Il faut au contraire regretter, affirme Tarde, qu'ils n'aient pas assez le goût de la quantification pour aller chercher dans chaque type de pratique les tenseurs qui leur sont particuliers. Tarde prétend que les ratés mêmes de la quantification par les économistes, révèlent une foule de choses intéressantes sur les autres types de quantification qui ne demandent qu'à apparaître au grand jour pourvu qu'on se donne un peu de mal pour aller les chercher.

La meilleure preuve qu'il existe une vaste réserve de quantification, ce sont tous les autres instruments disponibles pour rendre l'économie véritablement quantifiable.

Il y a bien d'autres mètres : chaque espèce de statistique en est un. La hausse ou la baisse de la popularité d'un homme public se mesure assez exactement par la statistique électorale.

Ce qui compte, au sens propre, c'est l'intercomparaison des jugements. Ce processus n'est en aucune façon lié à la monnaie comme telle, on le retrouve dans tous les valorimètres ou tous les gloriomètres. C'est pourquoi on peut facilement suivre l'intercomparaison croissante

more numerous through new information and communication systems. It is said of Tarde that he indulges in a mere "literary" sociology, and that is indeed true: he wanted desires and beliefs to be quantified, while the statistics of his day—which he knew well, having headed the Institute of Statistics of the Justice Ministry—were far too rudimentary to capture them. Today's wave of digitization should make us perhaps much more attentive to Tarde's argument.

How to Specify Quantities

Let us, however, take care to correctly understand his thought: everything is potentially a number, because valuemeters only gather, concentrate, extract and simplify subtle weighings, innumerable "logical duels" that constantly occur within us when we encounter those to whom we have strong attachments and whom we need in order to exist. In other words, Tarde does not claim that the calculation devices used by economists perform the social, in a way comparable to what a waffle-maker would do to batter, shapeless in itself, poured in by the ladle. For him, there already exists in the batter, dare we say, a particular type of quantum that has only an *indirect* link to what economists call the quantifiable. It is precisely this indirect aspect that explains why they were so often mistaken when trying to render their discipline more scientific and why they confused heads and tails. Once again, it is not a question of complaining about economists and their mania for quantifying, which would have applied the same standard of comprehension to all subjects. On the contrary, argues Tarde, one must lament the fact that they do not have enough of a taste for quantification to seek out, in each type of practice, the tensors that are specific to it. Tarde argues that the very places economists may have failed in their quantification reveal a number of interesting things regarding the other types of quantification which are just waiting to be brought to light, provided we make the effort to go and seek them out. All of the other instruments available to make economics truly quantifiable constitute the best proof that there is a vast reserve of quantification.

There are indeed other measures: each type of statistic is one. The rise or fall in popularity of a

dans deux domaines qu'un économiste séparerait probablement mais que Tarde peut sans peine lier ensemble, par exemple la presse et la monnaie :

[...] le développement de la presse a pour effet de donner aux valeurs morales un caractère de quantité de plus en plus marqué et propre à justifier de mieux en mieux leur comparaison avec la valeur d'échange. Cette dernière, qui devait être bien confuse aussi dans les siècles antérieurs à l'usage courant de la monnaie, s'est précisée à mesure que la monnaie s'est répandue et unifiée. Alors elle a pu donner naissance, pour la première fois, à l'économie politique. De même, avant la Presse quotidienne, les notions de valeur scientifique ou littéraire des écrits, de la célébrité et de la réputation des personnes, restaient assez vagues, car le sentiment de leurs accroissements et de leurs diminutions graduels pouvait naître à peine ; mais avec le développement de la presse, ces idées se précisent, s'accentuent, deviennent dignes de servir d'objets à des spéculations philosophiques d'un nouveau genre.

On voit l'originalité de ce parallèle : Tarde ne dit pas que la presse est soumise à « l'influence délétère des puissances d'argent » ; le lien des deux domaines ne passe pas par l'étape obligée de la recherche des forces cachées dans les infrastructures — comme nous allons le voir, il n'y a pas, pour Tarde, d'infrastructure du tout. Le lien des deux domaines est infiniment plus intime. Tarde compare deux modes de trajectoires et de contamination qui toutes deux, la première il y a plusieurs siècles, la seconde sous ses yeux, permet de repérer par quelle instrumentation, quels équipements l'on passe d'une quantification locale, individuelle et mal commode à une quantification généralisée, rapide et réflexive. Le crédit et la crédibilité ont besoin d'instruments de comptabilité ou, pour prendre un terme qui n'est pas de lui mais qui définit très exactement le mouvement de l'inter comparaison, ils ont besoin de métrologie. Les valorimètres composent peu à peu des chaînes métrologiques qui rendent l'intercomparaison des subjectivités de plus en plus « précises », « accentuées », « dignes de servir d'objets à des spéculations d'un nouveau genre ». Et, parmi ces spéculations, Tarde n'omet jamais de placer la sociologie des sciences, cas typique d'une métrologie de la littérature savante, rendue visible et lisible par l'extension même de cette quasi-

public figure is measured fairly accurately through voting statistics.

What counts — literally — is the comparison of judgments. This process is in no way connected to money as such; it is found in all valuemeters and all glorimeters. That is why it is easy to follow the growing comparison in two domains that an economist would likely separate but that Tarde has no trouble linking, such as the press and currency:

[...] The development of the press had the effect of giving moral values a quantitative character that was more and more marked and better and better suited to justify their comparison with the exchange value. The latter, which must also have been quite confused in the centuries before the common use of currency, became better defined as currency spread and became more unified. It was then able to give rise, for the first time, to political economy. Similarly, before the advent of the daily press, the notions of the scientific or literary value of writing, of people's fame and reputation, were still vague, as the awareness of their gradual waxings and wanings could barely be felt; but with the development of the press, these ideas became clearer, were accentuated, became worthy of being the objects of philosophical speculations of a new sort.

The originality of drawing such a parallel is clear: Tarde does not say that the press is subject to the "deleterious influence of the powers of money"; the connection between the two domains does not pass through the required step of searching for hidden forces in infrastructures—as we shall see, there is not, for Tarde, any infrastructure at all. The connection between the two domains is infinitely more intimate. Tarde compares two styles of trajectory and contamination, both of which—the first one several centuries ago and the second right before our eyes—allow us to identify the instrumentation through which we move from a local, individual and impractical system of quantification to one that is generalized, rapid, and reflexive. Credit and credibility require accounting instruments or, to use a term that is not Tarde's but that defines precisely the movement of inter-comparison, they need *metrology*. Valuemeters connected together, little by little, end up building metrological chains

monnaie qu'on appelle la crédibilité où se joue là, mieux que partout ailleurs, la production même des degrés finement différenciés de croyance.

Comment naît, comment grandit le crédit d'un homme sous toutes ses formes ou sa célébrité et sa gloire? Il vaut bien la peine de s'intéresser à ces diverses formes de production, aussi bien qu'à la production des richesses et de leur valeur vénale. (...) S'il a des "lois naturelles" qui règlent la fabrication de tels ou tels articles en plus ou moins grande quantité et la hausse ou la baisse de leur valeur vénale, pourquoi n'y en auraient-ils pas qui règleraient l'apparition, la croissance, la hausse ou la baisse de l'enthousiasme populaire pour tel ou tel homme, du loyalisme monarchique d'un peuple, de sa foi religieuse, de sa confiance en telles ou telles institutions?

Si vous voulez vraiment quantifier, ce qui est le fond de toute science, alors allez chercher tous les types disponibles de quantum, au lieu d'en utiliser un seul pour analyser tous les autres. La quantification de la gloire est un aussi bon analyseur de la richesse, que la richesse l'est de la foi, ou la foi de l'enthousiasme, et ainsi de suite.

Quantifier oui, mais à bon escient

Nous comprenons maintenant la confusion des économistes tels que les comprend Tarde : s'ils ont eu raison de vouloir quantifier ils ont mal situé la source qui aurait pu leur permettre de rendre leur discipline enfin assurée. Leur erreur a consisté en ceci qu'ils ont pris pour une « mesure mesurée » la « mesure mesurante » permise par l'extension des chaînes d'intercomparaison, extension elle-même due à un phénomène entièrement différent de celui qu'ils croyaient observer. Ils ont en effet cru que le progrès de l'économie devait être un progrès dans la froideur, dans la distance et dans l'objectivité...

Être aussi objectif et abstrait qu'on le pouvait: c'était là la méthode... L'idéal était de dissimuler si bien sous des abstractions, telles que crédit, service, travail, les sensations et les sentiments cachés là-dessous, que personne ne les y aperçût, et de traiter ces abstractions comme des objets, des objets réels et matériels, analogues aux objets traités par le chimiste et le physicien et, comme eux, tombant sous

which make the intercomparison of subjectivities increasingly "precise," "accentuated," and "worthy of being objects of speculations of a new sort." And, among these speculations, Tarde never fails to include the sociology of science, a typical case of a metrology of learned literature, made visible and readable by the very extension of the quasicurrency we call credibility where, better than anywhere else, the very production of the finely differentiated degrees of belief plays out.

How is a man's credit, his fame and his glory, born, and how does it grow in all of its forms? It is indeed worth looking at these different forms of production, as well as the production of wealth and of its venal value.... If there are any "natural laws" that regulate the manufacture of these or those items in greater or lesser quantities and the increase or decrease of their venal value, why would there not be one that would regulate the appearance, growth, increase or decrease of the popular enthusiasm for this or that man, of the royalist loyalty of a people, of its religious faith, of its trust in this or that institution?

If you really want to quantify—which is, after all, the foundation of all sciences—you should try to find all the available types of quantum, instead of using just one to analyze all the others. The quantification of glory is as good a measure of wealth as wealth is of faith, or as faith is of enthusiasm, and so forth. Users of Google will have no difficulty understanding what digitization has done to the calculation of authority, the mapping of credibility and the quantification of glory.

Quantifying, Yes, but Doing So Advisedly

We now understand the confusion of economists as Tarde sees them: while they may have been right to seek to quantify, they misidentified the source that could have allowed them to give certainty to their discipline at last. Their mistake consisted in the following: they took for a "measured measure" the "measuring measure" allowed by an extension of the chains of intercomparison. This extension itself was due to an entirely different phenomenon than the one they believed they were observing. They in fact thought that progress in economics had to be

la loi du nombre et de la mesure. Aussi le chapitre de la monnaie et des finances, où ce double idéal semble se réaliser, où tout semble nombrable et mesurable comme en physique et en chimie, a-t-il été de tout temps le carreau de prédilection du jardin des économistes.

Comme mesure mesurante, la monnaie est bien sûr excellente, mais ce qu'elle mesure, ou plutôt enregistre de façon simplifiée pour le rendre plus facile à saisir, n'a aucune espèce de rapport avec ce qui est indiqué dans les chiffres. Non pas, comme- le croient les sempiternelles critiques humanistes de l'économie, parce que « le coeur humain ne saurait être réduit au calcul » mais, à l'inverse, parce que le coeur humain calcule et compare tout le temps, mais sur un autre trébuchet et par de bien autres pesées moins lisibles et moins contrastées. C'est pourquoi Tarde continue la phrase précédente et propose de faire basculer notre attention vers la véritable source de toutes les mesures :

Il n'en est pas moins vrai que la valeur, dont la monnaie n'est que le signe, n'est rien, absolument rien, si ce n'est une combinaison de choses toutes subjectives, de croyances et de désirs, d'idées et de volontés, et que les hausses et les baisses des valeurs de la Bourse, à la différence des oscillations du baromètre, ne sauraient s'expliquer le moins du monde sans la considération de leurs causes psychologiques, accès d'espérance ou de découragement du public, propagation d'une bonne ou d'une mauvaise nouvelle à sensation dans l'esprit des spéculateurs.

Et voilà maintenant expliqué cette inversion du recto et du verso qui pouvait passer, quand nous l'avons présenté plus haut, pour un défi gratuit de la part de Tarde.

Ce n'est point que les économistes aient tout à fait méconnu cet aspect subjectif de leur sujet (...) toujours on l'a regardé comme le verso et non comme le recto de la science économique. Ses maîtres ont cru à tort, je le répète, que la préoccupation dominante, sinon exclusive, du côté extérieur pouvait seule ériger leurs observations à la dignité d'un corps de science. Même quand ils ont dû envisager directement le côté psychologique des phénomènes étudiés par eux, les mobiles du travailleur et les besoins du consommateur, par exemple, ils ont conçu un coeur

progress in detachment, distance and objectivity.

To be as objective and abstract as one could: that was the method... The ideal was to conceal under abstractions such as credit, service and work, the sensations and feelings underlying them, so that no one could notice them, and to treat these abstractions as objects: real and material objects analogous to the objects treated by the chemist or the physicist and, as with them, falling under the law of number and measurement. Thus, the rubric of money and finances, where this twofold ideal seems to be realized, where everything seems to be denumerable and measurable just as in physics and chemistry, has always been the economists' hobbyhorse.

As a measuring measure, money is, of course, excellent, but what it measures, or rather what it registers in a simplified manner to make it easier to capture, has no kind of link with what is indicated in the numbers. Not, as the perpetual humanist critics of economics believe, because "the human heart cannot be reduced to calculation," but, on the contrary, because the human heart calculates and compares constantly, but on a *different* scale and through very different, less readable and less contrasting weights. This is why Tarde continues the previous sentence and proposes that we shift our attention towards the true source of all other measures:

It remains true that value, of which money is but the sign, is nothing, absolutely nothing, if not a combination of entirely subjective things, of beliefs and desires, of ideas and volitions, and that the peaks and troughs of values in the stock market, unlike the oscillations of a barometer, could not even remotely be explained without considering their psychological causes: fits of hope or discouragement in the public, propagation of a good or bad sensational story in the minds of speculators.

So, here we find the explanation of the recto/verso inversion which might have seemed, when we introduced it earlier, a gratuitous defiance on the part of Tarde.

It is not that economists have entirely ignored this subjective aspect of their subject... this subjective aspect has always been regarded as the verso and not the recto of economic science. The

humain tellement simplifié, tellement schématique pour ainsi dire, une âme humaine si mutilée, que ce minimum de psychologie indispensable avait l'air d'un simple postulat destiné à soutenir le déroulement géométrique de leurs déductions.

Si nous l'avions cité au début, ce paragraphe eût passé pour la plainte habituelle contre la manie quantificatrice des économistes, alors que nous devons la comprendre, au contraire, comme un appel à chercher partout et surtout ailleurs les valorimètres capables de saisir les « âmes humaines » quand elles évaluent leurs biens et leurs maux, quand elles croient, quand elles désirent, quand elles prient, quand elles veulent, quand elles s'entremêlent. C'est sur cette base nouvelle et décalée que Tarde propose une sorte de new deal aux différentes sciences sociales :

[...] l'Économie politique, ainsi entourée, perdrait, il est vrai son mystérieux isolement de bloc erratique déposé dans le désert de la sociologie encore à naître par les métaphysiciens ou les logiciens, mais elle y gagnerait d'apparaître à sa vraie place en science sociale, et de voir ses notions usuelles, ses divisions, ses théories, contrôlées par les sciences-soeurs qui s'éclaireraient de sa lumière et l'éclaireraient de la leur.

L'histoire intellectuelle, inutile de le dire, n'a nullement pris ce pacte au sérieux et l'on s'est enfoncé pour encore un siècle dans l'idée assez saugrenue que l'économie-discipline (economics) aurait par miracle découvert en sous-sol un continent glacé, l'économie-chose (economy), régie par des lois inflexibles et qui aurait la capacité inouïe de frigorifier toutes les superstructures construites audessus d'elle. Seule des sciences sociales, l'économie serait vraiment scientifique parce qu'elle seule aurait atteint le noyau rationnel et objectif de l'âme humaine.

Une erreur de température

Comment résumer l'innovation de Tarde pour apprendre à nous souvenir qu'il s'agit bel et bien de quantifier l'économie mais en la basculant tout entière dans l'intersubjectivité, seul moyen, paradoxalement de la rendre enfin quelque peu scientifique ? En évitant une autre erreur épistémologique, qui est aussi comme nous

masters of this discipline have wrongly believed, I repeat, that a dominant, or even exclusive, preoccupation with the external side of things could alone raise their observations to the dignity of a scientific corpus. Even when they had to directly envisage the psychological side of the phenomena they investigated— the motivations of the worker or the needs of the consumer, for example—they conceived of a human heart so simplified and so schematic: so to speak, a human soul so mutilated that this minimum of indispensable psychology had the air of a mere postulate fated to support the geometric unfolding of their deductions.

If we had quoted this passage at the beginning of our essay, it would have seemed like the usual lament against economists' mania for quantifying, whereas we must understand it, instead, as a call to look *everywhere*, and especially *elsewhere*, for the valuemeters capable of capturing "human souls" when they evaluate their good and their evil, when they believe, when they desire, when they pray, when they want, when they become intertwined. It is on this new and shifted basis that Tarde offers the different social sciences a kind of new *deal*:

[...] Political economy, thus surrounded, would lose, it is true, its mysterious isolation as an unstable block cast in the desert of an as-yet-unborn sociology, by metaphysicians or logicians. It would, however, gain by appearing in its true place as a social science, and by seeing its everyday notions, its divisions, and its theories, controlled by the sister-sciences which would be illuminated by its light and would illuminate it with theirs.

Needless to say, intellectual history did not take this pact in any way seriously, and people continued for a century to hold onto the relatively absurd idea that *economics* as a discipline had miraculously discovered underneath it a submerged frozen continent, the *economy*, governed by rigid laws and which had the unheard-of ability to freeze the superstructures built on top of it. Among the social sciences, economics alone was to be considered truly scientific because it alone had succeeded in reaching the rational and objective core of the human soul.

le verrons une grave erreur politique, celle de croire que, plus on multiplie les valorimètres et les chaînes métrologiques, plus l'histoire économique passe des passions à la raison, de l'irrationnel au rationnel, de la chaleur des marchandages traditionnels à « l'horreur économique » des marchés « néolibéraux ».

Dira-t-on que le progrès de la raison, accompagnement présumé du progrès de la civilisation, se charge de réaliser peu à peu l'abstraction imaginée par les économistes et de dépouiller l'homme concret de tous ses mobiles d'action, hormis le mobile de l'intérêt personnel ? Mais rien ne permet cette supposition et il n'est pas un seul aspect de la vie sociale où l'on ne voie la passion croître et se déployer en même temps que l'intelligence [...] Ainsi en est-il dans le monde conomique, et nulle part, pas même ici, je n'aperçois trace d'une transformation réfrigérante de l'homme dans un sens de moins en moins passionnel et de plus en plus rationnel [...]

L'économie récente, celle que Tarde observe depuis sa chaire au Collège de France, celle de la lutte des classes, de la première grande globalisation, de la migration massive du genre humain, celle des innovations frénétiques ponctuées par les grandes Expositions Universelles, du découpage des empires coloniaux, n'offre en aucune manière le spectacle d'un avènement de la raison. Elle offre plutôt le spectacle :

[...] des passions d'une intensité inouïe, des ambitions de conquêtes prodigieuses, une sorte de religion nouvelle, le socialisme, et une ferveur prosélytique inconnue depuis la primitive Église. — Voilà les intérêts, les intérêts passionnés, qu'il s'agit d'accorder ensemble et avec les intérêts, tout aussi passionnés, de capitalistes milliardaires coalisés, non moins qu'eux grisés par l'espoir de vaincre, par l'orgueil de la vie, par la soif du pouvoir.

Qu'est-ce alors que l'économie ? Nous pouvons maintenant la définir comme la « science des intérêts passionnés ».

Ne nous méprenons pas, Tarde ne vient pas nous dire que, hélas, la raison économique calculatrice et ratiocinante se trouverait déformée, kidnappée, perturbée par des passions, des

A Mistake in Temperature

How can we summarize Tarde's innovation so as to remember that the question is indeed one of quantifying the economy, albeit by shifting it entirely into the realm of inter-subjectivity—the only means, paradoxically, by which it can be rendered somewhat scientific?

First of all, by avoiding another epistemological error, which is also, as we shall see later, a serious political error: the mistake of thinking that the more valuemeters and metrological chains there are, the more economic history moves from passion to reason, from the irrational to the rational, from the warmth of traditional haggling to the "economic horror" of "neo-liberal" markets.

Will we say that the progress of reason, the supposed companion of the progress of civilization, takes responsibility for realizing little by little the abstraction imagined by economists, stripping concrete man of all the motives for action besides the motive of personal interest? But nothing lets us suppose this and there is not a single aspect of social life in which one does not see passion grow and unfold together with intelligence... So it is in the economic world, and nowhere, not even here, do I perceive traces of a refrigerating transformation of man in a less and less passionate and more and more rational direction.

The new economies observed by Tarde from his Chair at the Collège de France, that of class struggles, of the first great globalization movement, of the massive migrations of men, of frenzied innovations punctuated by the greatWorld Fairs, and the carving up of the colonial empires, in no way demonstrated the advent of reason. Rather, it presented a spectacle of:

[...] passions of unprecedented intensity, prodigious ambitions of conquest, a sort of new religion, socialism, and a proselytising fervour unknown since the primitive Church. These are the interests, the passionate interests, which it is a question of making agree with one another and with the equally passionate interests of billionaire capitalists, no less inebriated with the hope of winning, the pride of life, and the thirst for power.

coalitions, des contaminations, des rumeurs qui empêcheraient que ses calculs tombent justes ; il ne dit pas que, si nous parvenions par un miracle impossible, à nous défaire de tout ce fatras irrationnel, nous recouvrerions enfin la raison économique. Non, tout dans l'économie est irrationnel, tout dans l'économie est, si l'on veut, extra économique (au sens banalisé de ce terme)... Puisque qu'elle est faite de ces passions dont le développement stupéfiant du 19° siècle n'a fait qu'amplifier l'entrecroisement14. Or c'est cet entrecroisement que les économistes ont à la fois entrevu et, chose étonnante, aussitôt fui avec horreur comme s'ils y avaient vu la tête de Gorgone.

En concevant l'homo aeconomicus (sic), les économistes ont fait une double abstraction. C'en est une d'abord, et très abusive, d'avoir conçu un homme sans rien d'humain dans le coeur, et c'en est une autre, ensuite, de s'être représenté cet individu comme détaché de tout groupe, corporation, secte, parti, association quelconque. Cette dernière simplification n'est pas moins mutilante que l'autre, d'où elle dérive. Jamais, à aucune époque de l'histoire, un producteur et un consommateur, un vendeur et un acheteur, n'ont été en présence l'un de l'autre, d'abord sans avoir été unis l'un à l'autre par quelque relation toute sentimentale, voisinage, concitoyenneté, communion religieuse, communauté de civilisation, et, en second lieu, sans avoir été escortés chacun d'un cortège invisibles d'associés, d'amis, de coreligionnaires, dont la pensée a pesé sur eux dans la discussion du prix ou du salaire et finalement l'a imposé, au détriment le plus souvent de leur intérêt strictement individuel. Jamais en effet, même dans la première moitié du XIX° siècle -et cependant c'est la seule période de l'histoire du travail où toute corporation ouvrière ait paru anéantie en France- jamais l'ouvrier n'est apparu libre de tout engagement formel ou moral avec des camarades, en présence d'un patron tout à fait dégagé lui- ême d'obligations strictes ou de convenances envers ses confrères ou même ses rivaux.

Ce sont les attachements qu'il faut quantifier ; comment a-t-on pu l'oublier ? On dira que l'économie institutionnelle, que l'économie des conventions accepte depuis bien des années comme une évidence de tels imbroglios15. Certes, mais le livre de Tarde date de 1902 !

What, then, is economics? We can now define it as the "science of passionate interests."

We must not misunderstand this, though. Tarde is not saying that, alas, calculating economic reason finds itself distorted, kidnapped and perturbed by passions, coalitions, contaminations and rumors which prevent its calculations from being correct; he is not saying that, if, by some impossible miracle, we were able to rid ourselves of all of this irrational jumble, we would finally recover economic reason. No, *everything* in economics is irrational, *everything* in economics is, we might say, extra-economic (in the everyday sense of the word). And this is because it is made up of passions whose astonishing development in the 19th century only amplified their interconnections. It is precisely this intertwining that economists simultaneously caught sight of and, amazingly, fled immediately with horror, as though they had seen the head of Gorgon.

In inventing homo economicus, economists have engaged in a double abstraction. First, the unwarranted one of having conceived of a man with nothing human in his heart; second, of having represented this individual as detached from any group, corporation, sect, party, homeland, or association of any sort. This second simplification is no less mutilating than the first, whence it derives. Never, in any period of history, have a producer and a consumer, a seller and a buyer been in each other's presence without having first been united to one another by some entirely sentimental relation—being neighbours, sharing citizenship or religious communion, enjoying a community of civilization and, second, without having been, respectively, escorted by an invisible cortege of associates, friends, and coreligionists whose thought has weighed on them in the discussion of prices or wages, and has finally won out, most often to the detriment of their strictly individual interest. Never, indeed, not even in the first half of the nineteenth century—which is nevertheless the sole period in the history of labor conditions in which every workers' corporation in France seemed to have been destroyed—did the worker appear free from every formal or moral commitment to his comrades, in the presence of a boss himself entirely disengaged from strict obligations or propriety towards his own colleagues or even his own rivals.

Pourquoi avons-nous perdu un siècle ? D'autant plus qu'il va beaucoup plus loin que les prudents chercheurs d'aujourd'hui qui se contentent de corriger le système Ptoléméen du marché pur et parfait en lui ajoutant une multitude d'épicycles tournant en tous sens —les contrats, la confiance, l'information, les règles, les normes, les coalitions. Or, comme un Copernic dont personne n'aurait lu le livre, Tarde a déjà placé ailleurs le foyer quantitatif. Dans ce « cortège invisible d'associés » ne figure aucune Providence et surtout pas celle de la raison harmonisatrice. L'ambition de Tarde, d'autant plus radicale qu'il ne s'appuie sur aucune école, consiste bien à faire tourner les cycles 'intérêts passionnés autour d'un autre soleil, et celui-là, il éclaire et il brûle —il éclaire parce qu'il brûle.

Se rapprocher au lieu de s'éloigner

Mais pour saisir ce point, encore faut-il accepter de renoncer à une dernière prétention épistémologique, celle de la distance. Arrivé à ce point Tarde, toujours courtois, s'autorise une légère ironie devant les acrobaties des économistes pour s'éloigner au maximum des phénomènes qu'ils ont justement la chance de côtoyer de près et qui devraient, par conséquent, leur sauter aux yeux ! L'argument, tout à fait contre-intuitif, mérite qu'on s'y arrête. Tarde commence par distinguer deux psychologies non pas en fonction de la nature des objets auxquels on les applique, mais en fonction du degré de proximité que nous entretenons avec eux.

La nature éminemment psychologique des sciences sociales, dont l'économie politique n'est qu'une branche, aurait donné lieu à moins de contestations si l'on avait distingué deux psychologies que l'on a l'habitude de confondre en une seule. [...] il convient de remarquer que les objets du moi peuvent être ou bien des choses naturelles, insondables à fond en leur for intérieur hermétiquement clos, ou bien d'autres moi, d'autres esprits où le moi se reflète en s'extériorisant et apprend à se mieux connaître lui-même en découvrant autrui. Ces derniers objets du moi, qui sont en même temps des sujets comme lui, donnent lieu à un rapport entre eux et lui tout à fait exceptionnel, qui tranche nettement, en haut-relief, parmi les rapports habituels du moi avec les êtres de la nature, minéraux, plantes, et même animaux

The attachments are what must be quantified; how could this have been forgotten? It will be argued that institutional economics, the economics of conventions, has for years accepted such imbroglios as fact. That may be true, but Tarde's book was published in 1902! Why did we lose a century? This is all the more striking because Tarde goes much further than today's cautious researchers who are content to correct the Ptolemaic system of the pure and perfect market by adding to it a multitude of epicycles turning in all directions—contracts, trust, information, rules, norms, and coalitions. Yet, much like Copernicus had no one to read his book, Tarde already placed the quantitative focus elsewhere. There is no Providence in this "invisible cortege of associates," and certainly not that of harmonizing reason. Tarde's ambition, all the more radical seeing as it does not lean on any school, consists indeed in making the cycles of passionate interests revolve around a different sun, a sun which sheds light and burns—which sheds light *because* it burns.

Getting Closer Instead of Moving Away

To fully grasp this point, we must agree to give up one last epistemological pretension, that of *distance* and *exteriority*. Having reached this point, Tarde, ever courteous, allows himself a touch of irony regarding the acrobatic maneuvers economists perform in order to get as far away as possible from precisely the phenomena that they have the chance of being in close contact with, and which, as a result, should jump out at them!

The argument, which is completely counter-intuitive, merits further analysis. Tarde begins by distinguishing between two types of psychology, not in relation to the nature of the objects to which they are applied, but in relation to the degree of *proximity* we have to them.

The eminently psychological nature of the social sciences, of which political economy is but a branch, would have given rise to fewer objections had the distinction been made between two psychologies that are normally blended into one.... it is useful to note that the objects of the self can be either natural things, unfathomable in their hermetically sealed inner depths, or other selves, other spirits where the self is reflected by its external

inférieurs. [...] ils sont les seuls objets qui soient saisis par leur dedans, puisque la nature intime est celle-là même dont le sujet qui les regarde a conscience. Mais, quand le moi regarde les minéraux ou des astres, des substances matérielles quelconques, organiques ou inorganiques, les forces qui ont produit ces formes ne peuvent être devinées que par hypothèse, et leur signe extérieur seul est perçu.

Dans toute l'oeuvre de Tarde, on retrouve cette surprenante différence entre le monde humain et le monde naturel, différence qui ne recoupe nullement la distinction usuelle entre le monde symbolique d'un côté et le monde matériel de l'autre. Rappelons en effet que, pour Tarde, « tout est société » : les étoiles, les cellules, les corps, les agrégats politiques, les orages sous les crânes. « Matériel », pour lui, veut donc dire avant tout « social ». Serait-il sociobiologiste (ou comme on le disait à l'époque bio-sociologue) ? Aurait-il commis le péché de naturalisation ? ou pire de darwinisme social ? Non, parce qu'il existe une différence de saisie et non de nature entre les objets dits matériels et les sujets de la société : nous voyons les premiers de loin, en gros et de l'extérieur ; alors que nous voyons les seconds de près, en petit nombre, et de l'intérieur !

On comprend donc très bien que, lorsqu'il s'agit d'étudier les rapports du moi avec les êtres naturels et de fonder les sciences physiques, y compris même la biologie, le moi s'évertue, en bonne méthode, à s'oublier lui-même le plus possible, à mettre le moins possible de lui-même et des impressions personnelles qu'il reçoit du dehors dans les notions qu'il se fait de la matière, de la force et de la vie, à résoudre, s'il se peut, la nature tout entière en termes d'étendue et de points en mouvement, en notions géométriques, dont l'origine, toute psychologique aussi, ne se décèle qu'à des yeux d'analyste très exercés et n'implique d'ailleurs en rien leur nature psychologique.

Tarde ne prétend pas que les économistes auraient tort de traiter les choses humaines comme les choses naturelles sous prétexte que l'humain « échapperait à la nature et à l'objectivité », comme on le dit si souvent. Il reconnaît volontiers qu'il y a d'excellentes raisons, en physique, en chimie, en biologie, pour prendre les associations d'êtres à la manière de nuages statistiques soumis à des forces

manifestation and learns to know itself better by discovering others. The latter objects of the self, which are simultaneously subjects like it, give rise to an entirely exceptional relationship between them and it, which carves sharply, in high relief, among the usual relationships of the self with the entities of nature, minerals, plants, and even lower species of animals.... they are the only objects captured from the inside, because their intimate nature is the very one of which the subject observing them is conscious. However, when the self looks at minerals or stars, material substances of any sort, whether organic or inorganic, the forces that produced these forms can only be guessed at by hypothesis, and only their outward sign is perceived.

This surprising difference between the human world and the natural world, one that does not divide according to the usual distinction between the symbolic world, on the one hand, and the material world, on the other, can be found in all of Tarde's work. Let us remember that, for Tarde, "everything is society": stars, cells, bodies, political groups, the lively firings of the brain. "Material," for Tarde, therefore first and foremost means "social." Could he have been a socio-biologist (or as they said at the time, bio-sociologist)? Could he have committed the sin of naturalization? Or worse, that of social Darwinism? No, because there is a difference in capture and not in nature between the objects called material and the subjects of society: we can see the former from *afar*, *roughly*, and *from the outside*; whereas we see the latter from up close, in *small numbers*, and *from the inside*!

Thus, we understand very well that, when it is a question of studying the relationships of the self with natural beings and of establishing the physical sciences, including even biology, the self tries its best to systematically forget itself as much as possible, to put the least of itself and of the personal impressions it receives from the outside, in the notions it conceives of matter, of force and of life, to resolve, if possible, all of nature in terms of extension and points in motions, in geometrical notions, whose origin, also utterly psychological, only reveals itself to very practiced analytical eyes and in fact does not involve their psychological nature at all.

Tarde does not claim that economists would be wrong to treat human objects like

extérieures qui les régissent. Mais si nous adoptons cette perspective dans bien des cas, c'est parce que nous ne pouvons les saisir d'assez près, faute de pouvoir pénétrer dans leur intimité. Même si leur « origine », comme celle de toutes les monades, est psychologique et faite de relations, leur « nature », vue de loin et en bloc, ne semble plus l'être. En tous cas, il n'y aurait nul avantage, nul gain épistémologique, à en faire la supposition. Et le voilà qui en tire cette stupéfiante conclusion :

Mais est-ce une raison pour que, lorsque le moment est venu d'étudier les rapports réciproques des moi, c'est-à-dire de fonder les sciences sociales, le moi continue à s'efforcer de se fuir lui-même, et prenne pour modèle de ses nouvelles sciences les sciences de la nature ? Par le plus exceptionnel privilège, il se trouve, dans le monde social, voir clair dans le fond même des êtres dont il étudie les relations, tenir en main les ressorts cachés des acteurs, et il se priverait bénévolement de cet avantage, pour se modeler sur le physicien ou le naturaliste qui, ne le possédant pas, sont bien forcés de s'en passer et d'y suppléer comme ils peuvent !

« Se fuir lui-même ? » On comprend l'horreur que Durkheim a ressenti quand il a pris connaissance des travaux de son aîné… S'il y a pour Tarde une erreur à ne pas faire, c'est de prendre « les faits sociaux comme des choses » alors que si, dans les autres sciences, nous prenons les choses « pour des choses », c'est faute de mieux ! Comment les sociologues et, plus étonnant encore, les économistes ont-ils eu la folie de vouloir imiter les physiciens et les biologistes par un effort de mise à distance totalement artificiel, alors que les savants qu'ils imitent vendraient père et mère pour se trouver enfin proches des particules, des cellules, des grenouilles, des organes dans l'intime association desquels ils s'efforcent de se mêler par le secours de leurs instruments ? Pourquoi les économistes s'enfuient-ils en se donnant une distance que tout chercheur voudrait abolir, au risque de perdre l'occasion rêvée de comprendre le social, alors que les autres, les véritables savants, cherchent au contraire à tout prix, par l'invention de toutes sortes d'instruments, à se rapprocher de ce qui leur est éloigné ?

C'est là le noyau dur, le point difficile, technique, toujours aussi neuf de la proposition

natural objects under the pretext that, as is so often said, that which is human "eludes nature and objectivity." He willingly acknowledges that there are excellent reasons, in physics, in chemistry, or in biology, to take the associations of entities from the outside as statistical clouds, subject to external forces which govern them. But if we adopt this perspective in many cases, it is because we cannot grasp them from close enough, as we are not able to penetrate into their innermost beings. Even if their "origin," like that of all monads, is psychological and made up of relationships, their "nature," seen from a distance and as a whole, no longer appears to be such. In any case, there would be no advantage, no epistemological gain, in making such a supposition. And here he is, drawing the following stunning conclusion:

But is this a reason, when the moment comes to study the reciprocal relationships of selves—that is, to establish the social sciences—for the self to continue to try to run away from itself, and to take as a model for its new sciences the sciences of nature? By the most exceptional of privileges, he finds himself, in the social world, seeing clearly to the bottom of those beings whose relationships he studies, holding in his hands the hidden drives of the actors, and yet he would gladly give up this advantage to be able to model himself after the physicist or the naturalist who, not having it, is forced to do without it and to compensate for it as he can!

"To run away from itself"? We understand the horror that Durkheim felt when he learned of the work of his elder. If there is, for Tarde, a mistake to be avoided, it is to take social facts "as things," whereas, in the other sciences, if we take things "as things," it is for lack of a better alternative! How could sociologists and, even more surprisingly, economists, have had the crazy idea of wanting to imitate physicists and biologists through an entirely artificial effort at distancing, while the very thinkers they tried to imitate would give their right hands to find themselves at last close to particles, cells, frogs, bodies with whom they try to come into intimate association with the help of their instruments?

Why do economists run away by giving themselves a certain distance which any researcher would wish to eliminate, at the risk of losing the long dreamt of opportunity to understand

de Tarde : si nous distinguons dans un agrégat quelconque des associés d'une part et, d'autre part, des lois, des structures, des règles, c'est parce que nous sommes obligés d'ignorer ce qui les façonne de l'intérieur par le pullulement des évaluations et des duels logiques. Pour le dire de façon brutale, la notion de structure est un pis aller, un artefact de notre ignorance, elle-même due à notre trop grande distance... Nous allons montrer, plus loin, quelles étonnantes conséquences politiques Tarde va déduire de ce point qui demeure, cent ans après, pour la plus grande partie des sciences sociales, un paradoxe incompréhensible. Pour l'instant, comprenons qu'il va tirer, à l'inverse des économistes, tout le parti possible de « cet exceptionnel privilège » qui permet de saisir « les ressorts cachés » qui nous attachent aux biens, sans avoir à supposer des « lois naturelles » qui viendraient, en plus, donner forme à ces attachements. C'est grâce à ce privilège qu'il va inventer une sociologie et une économie qui vont pouvoir se passer de toute transcendance. La tête de Gorgone, c'est en face qu'il veut qu'on la regarde. Devant l'économie, lui ne fuira pas...

Mais, demandera-t-on, les économistes ne sont pas des sots, pourquoi ont-ils donc cherché à imiter une épistémologie qui les éloignaient autant de leur projet de quantification en croyant imiter les sciences exactes dont elles inversaient en fait le mouvement de libido sciendi ? La réponse de Tarde se rapproche beaucoup de celle de Karl Polanyi et il puise d'ailleurs à la même source par une citation de Sismondi17. Il faut de puissantes raisons politiques pour qu'on suspende tout bon sens et qu'on inverse ainsi tous les principes de méthode.

Pourquoi les économistes ont-ils envisagé l'objet de la science par le côté le plusmatériel ? Sismondi va répondre: 'Ce fut, dit-il, de la science des finances que naquit celle de l'économie politique, par un ordre inverse de celui de la marche naturelle des idées. Les philosophes voulaient garantir le peuple des spoliations du pouvoir absolu; ils sentirent que, pour se faire écouter, il fallait parler aux princes de leur intérêt et non de la justice et du devoir; ils cherchèrent à leur faire bien voir quelles étaient la nature et les causes de la richesse des nations, pour leur enseigner à la partager sans la détruire.' Voilà une des raisons pour lesquelles l'économie politique, dès ses débuts, a pris une couleur si positive, et a fait,

the social, while the others, the "true" scholars, try at all costs, with the invention of all sorts of instruments, to *come nearer* to that which is at a distance from them?

Here indeed is the core, the difficult, technical and ever new point of Tarde's proposition: if we can distinguish, in any given aggregate, associates, on the one hand, and laws, structures, and rules, on the other, it is because we are forced to ignore what shapes them from the inside through the swarming of assessments and battles of logic. To put it bluntly, the notion of structure is a makeshift one, an artifact of our ignorance, itself due to our having too great a distance with what we study. We shall show, further on, the surprising political consequences Tarde will deduce from this point, which remains, a hundred years later, an incomprehensible paradox for the majority of the social sciences. For the moment, let us understand that he will, unlike economists, make as much as possible of "this exceptional privilege" that makes it possible to capture the "hidden drives" that connect us to goods, without having to hypothesize about "natural laws" which would, *in addition*, give shape to these attachments. It is thanks to this privilege that Tarde invents a sociology and an economics which will be able to do without any transcendence. He will not flee in the face of economics. He wants us to look at the head of Gorgon head-on. But, one might wonder, economists are no fools, so why did they try to imitate an epistemology which distanced them so from their project of quantification in thinking that they were imitating the exact sciences whose *libido sciendi* they were in fact reversing? Tarde's answer to this is very similar to that of Karl Polanyi, and he draws, in fact, from the same source through a Sismondi quote. There have to be very powerful political reasons in order to suspend all common sense and to reverse all principles of method in this way.

Why did economists conceive of the object of their science in its most material aspects? Sismondi answers: "It was, he says, from the science of finance that was born that of political economy, through an order that was the reverse of the natural progression of ideas. Philosophers wanted to protect the population from the plundering ravages of absolute

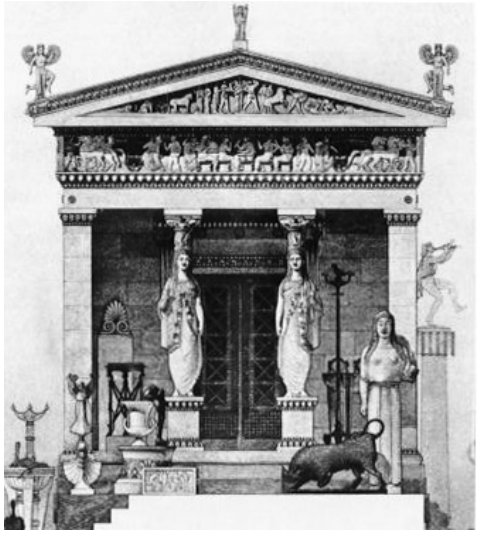
de parti pris, abstraction de toute considération d'ordre psychologique et moral.

Toute une discipline, des milliers de départements, des centaines de milliers de MBA, pour se protéger de la spoliation par le « pouvoir absolu » ? Tout ça pour mettre ses propriétés à l'abri ? L'invention de toute une science impersonnelle pour éviter qu'on ne fasse acception des personnes ? Une science désintéressée de l'intérêt tout entière fondée sur la défense des intérêts? On comprend le motif, mais, par pitié, demande Tarde, qu'on ne confonde pas cette solution commode avec les exigences d'une science qui méritait mieux. Il faut maintenant inverser l'inversion, remettre l'économie sur ses pieds et la faire enfin marcher sur ses deux jambes : les idées qui mènent le monde (et en particulier celles des économistes qui performent les passions et les intérêts) et les valorimètres qui en réfléchissent le mouvement pour en accentuer la lisibilité. Qu'on cesse de confondre l'économiediscipline —jamais ce mot ne fut plus juste— avec l'économie-chose. Entre l'economics et l'economy, il faut choisir. La seconde demeure toujours un continent inconnu puisque la première, occupée à la performer, n'a cessé d'en fuir la véritable composition.

power; they felt that, to make themselves heard, they needed to speak to the rulers of their interests and not of justice and duty; they tried to show them clearly what the nature and the causes of the wealth of nations were, to teach them to share it without destroying it." That is one reason why political economy, from its beginnings, took on such a positive color, and decided, due to their own bias, to disregard any psychological or moral consideration.

An entire discipline, thousands of departments, hundreds of thousands of MBA's, to protect us from the ravages of "absolute power"? All of that, to protect one's property? The invention of an entire impersonal science to avoid favoring people? A disinterested science of interest, entirely based on the defense of interests? We understand the reason, but, for heaven's sake, pleads Tarde, let us not confuse this convenient solution with the demands of a science that deserved better. Now we must invert the inversion, put economics upright again and let it walk at last on its own two feet: the ideas that guide the world (and in particular those of economists, who perform passions and interests) and the valuemeters which reflect their movement and accentuate their readability.We must stop confusing economics, the *discipline*—the word has never been more fitting—and the economy. The choice has to be made between *economics* and *economy*. The latter still remains an unknown continent because the former, busy performing it, has continuously fled its true composition.

Bruno Latour and Vincent Antonin Lépinay, *L'économie, science des intérêts passionnés: Introduction à l'anthropologie économique de Gabriel Tarde* (2008)



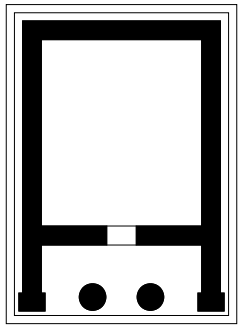
Siphnian treasury *(*525 BC*)*

I. Origines

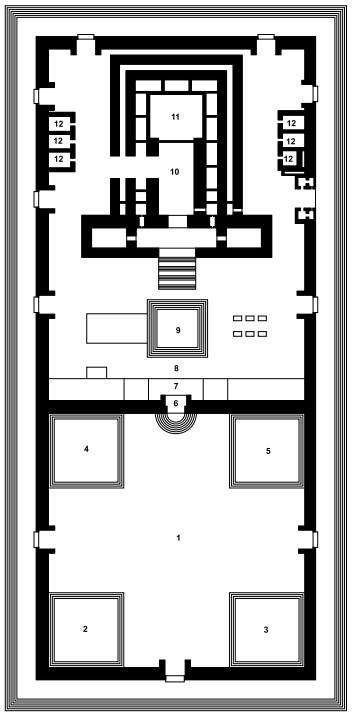
θησαυρός (THESAURUS)

A treasury much like a naikos (small Greek temple or shrine) and located in a temenos as storage of the valuable of foreign states. A temenos relates to a Greek antiquity, the enclosure of a sanctuary, the holy ground belonging to the God and governed by special rules, or the sacred precinct at a cult center: containing the altar, temple and other features.

Le Robert (2009)



Treasure of the Athenians, Delphi, Greece (490 BC)



1. *Cours des femmes*
2. *Chambre des Nazires*
3. *Chambre du bois*
4. *Chambre des huiles*
5. *Chambre des lepreux*
6. *Porte de Nicanor*
7. *Cours d'Israël*
8. *Cours des prêtres*
9. *Autel*
10. *Sanctuaire*
11. *Saint des Saints*
12. *Chambres des trésors*

Herod's Temple, Jerusalem (20 BC - 65 AD)

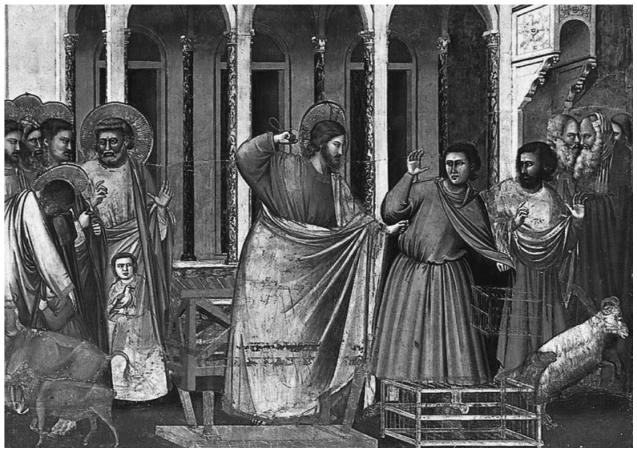
Giotto di Bondone, *Judas betrays Jesus* (1306)

The genealogy of guilt and the moralization of debt

(...) according to Nietzsche, the bad conscience is 'the serious illness that man was bound to contract under the stress of the most fundamental change he ever experienced – that change which occurred when he found himself finally enclosed within the walls of society and of peace.' All natural instincts, which are originally amoral in themselves, turn inward when they cannot discharge themselves outwardly. (...) In this relationship, since the debtor made a contract with the creditor and pledged his or her repayment as a duty, the creditor could inflict every kind of indignity and torture upon the body of the debtor. Nietzsche further states that if the debtor fails to repay, the creditor enjoys 'the pleasure of being allowed to vent his power freely upon one who is powerless.' Nietzsche continues by saying, 'In "punishing" the debtor, the creditor participates in the right of the masters.' (...) Nietzsche also illustrates that the development of a legal and political system ironically plays the role of protecting itself against the old instincts of freedom. As a result of the system, the right to punish is being transferred from the creditor to the legal and political organization, causing all instincts of wild, free, and prowling man to be turned backward against himself. In relation to this, Nietzsche now clearly defines the origin of the bad conscience. 'Hostility, cruelty, joy in persecuting, in attacking, in change, in destruction – all this turned against the possessors of such instincts: that is the origin of the "bad conscience."' For him, this aspect of bad conscience is about the moral psychology of a 'tamed' person.

Nietzsche believes that there is another aspect of bad conscience, which is deeply related to the genealogy of god in what Nietzsche calls the 'original tribal community.' According to Nietzsche, in primeval times, the living generation somehow recognized a juridical duty toward earlier generations, particularly toward the earliest, which established the tribe. Since the tribe could not exist without the sacrifices and accomplishments of the ancestors, the later generations have to 'pay them back' with sacrifices and accomplishments. This duty that the later generations have to respect is the debt that constantly grows greater. As Nietzsche argues, 'The fear of the ancestor and his power, the consciousness of indebtedness to him, increases, according to this kind of logic, in exactly the same measure as the power of the tribe itself increases, as the tribe itself grows ever more victorious, independent, honored, and feared.' Thus, the ancestor is later transfigured into a god out of fear. From Nietzsche's perspective, history has shown that the guilty feeling of indebtedness to god continues to grow for several millennia, and that as the maximum god, the Christian God becomes the ultimate creditor of human indebtedness.

Ilsup Ahn, *The genealogy of debt and the Phenomenology of forgiveness: Nietzsche, Marion, and Derrida on the Meaning of the peculiar Phenomenon*, The Heythrop Journal, USA (2010)



Giotto di Bondone, *Expulsion of the Money-changers from the Temple* (1304)

12. THEN JESUS ENTERED THE TEMPLE AND DROVE OUT ALL WHO WERE SELLING AND BUYING IN THE TEMPLE, AND HE OVERTURNED THE TABLES OF THE MONEY CHANGERS AND THE SEATS OF THOSE WHO SOLD DOVES.

13. HE SAID TO THEM, "IT IS WRITTEN, 'MY HOUSE SHALL BE CALLED A HOUSE OF PRAYER'; BUT YOU ARE MAKING IT A DEN OF ROBBERS.

24. NO ONE CAN SERVE TWO MASTERS. EITHER YOU WILL HATE THE ONE AND LOVE THE OTHER, OR YOU WILL BE DEVOTED TO THE ONE AND DESPISE THE OTHER. YOU CANNOT SERVE BOTH GOD AND MONEY.

Matthew 21.12-22 / Matthew 6:24

William Hogarth, The Rake's Progress. Plate VII. *The Rake in a Debtor's Prison* (1735)

DEBT: The first five thousand years

Throughout its 5000 year history, debt has always involved institutions – whether Mesopotamian sacred kingship, Mosaic jubilees, Sharia or Canon Law – that place controls on debt's potentially catastrophic social consequences. It is only in the current era, writes anthropologist David Graeber, that we have begun to see the creation of the first effective planetary administrative system largely in order to protect the interests of creditors.

What follows is a fragment of a much larger project of research on debt and debt money in human history. The first and overwhelming conclusion of this project is that in studying economic history, we tend to systematically ignore the role of violence, the absolutely central role of war and slavery in creating and shaping the basic institutions of what we now call "the economy". What's more, origins matter. The violence may be invisible, but it remains inscribed in the very logic of our economic common sense, in the apparently self-evident nature of institutions that simply would never and could never exist outside of the monopoly of violence – but also, the systematic threat of violence – maintained by the contemporary state.

Let me start with the institution of slavery, whose role, I think, is key. In most times and places, slavery is seen as a consequence of war. Sometimes most slaves actually are war captives, sometimes they are not, but almost invariably, war is seen as the foundation and justification of the institution. If you surrender in war, what you surrender is your life; your conqueror has the right to kill you, and often will. If he chooses not to, you literally owe your life to him; a debt conceived as absolute, infinite, irredeemable. He can in principle extract anything he wants, and all debts – obligations – you may owe to others (your friends, family, former political allegiances), or that others owe you, are seen as being absolutely negated. Your debt to your owner is all that now exists.

This sort of logic has at least two very interesting consequences, though they might be said to pull in rather contrary directions. First of all, as we all know, it is another typical – perhaps defining – feature of slavery that slaves can be bought or sold. In this case, absolute debt becomes (in another context, that of the market) no longer absolute. In fact, it can be precisely quantified. There is good reason to believe that it was just this operation that made it possible to create something like our contemporary form of money to begin with, since what anthropologists used to refer to as "primitive money", the kind that one finds in stateless societies (Solomon Island feather money, Iroquois wampum), was mostly used to arrange marriages, resolve blood feuds, and fiddle with other sorts of relations between people, rather than to buy and sell commodities. For instance, if slavery is debt, then debt can lead to slavery. A Babylonian peasant might have paid a handy sum in silver to his wife's parents to officialise the marriage, but he in no sense owned her. He certainly couldn't buy or sell the mother of his children. But all that would change if he took out a loan. Were he to default, his creditors could first remove his sheep and furniture, then his house, fields and orchards, and finally take his wife, children, and even himself as debt peons until the matter was settled (which, as his resources vanished, of course became increasingly difficult to do). Debt was the hinge that made it possible to imagine money in anything like the modern sense, and therefore, also, to produce what we like to call the market: an arena where anything can be bought and sold, because all objects are (like slaves) disembedded from their former social relations and exist only in relation to money.

But at the same time the logic of debt as conquest can, as I mentioned, pull another way. Kings, throughout history, tend to be profoundly ambivalent towards allowing the logic of debt to get completely out of hand. This is not because they are hostile to markets. On the contrary, they normally encourage them, for the simple reason that governments find it inconvenient to levy everything they need (silks, chariot wheels, flamingo tongues, lapis lazuli) directly from their subject population; it's much easier to encourage markets and then buy them. Early markets often followed armies or royal entourages, or formed near palaces or at the fringes of military posts. This actually helps explain the rather puzzling behaviour on the part of royal courts: after all, since kings usually controlled the gold and silver

mines, what exactly was the point of stamping bits of the stuff with your face on it, dumping it on the civilian population, and then demanding they give it back to you again as taxes? It only makes sense if levying taxes was really a way to force everyone to acquire coins, so as to facilitate the rise of markets, since markets were convenient to have around. However, for our present purposes, the critical question is: how were these taxes justified? Why did subjects owe them, what debt were they discharging when they were paid? Here we return again to right of conquest. (Actually, in the ancient world, free citizens – whether in Mesopotamia, Greece, or Rome – often did not have to pay direct taxes for this very reason, but obviously I'm simplifying here.) If kings claimed to hold the power of life and death over their subjects by right of conquest, then their subjects' debts were, also, ultimately infinite; and also, at least in that context, their relations to one another, what they owed to one another, was unimportant. All that really existed was their relation to the king. This in turn explains why kings and emperors invariably tried to regulate the powers that masters had over slaves, and creditors over debtors. At the very least they would always insist, if they had the power, that those prisoners who had already had their lives spared could no longer be killed by their masters. In fact, only rulers could have arbitrary power over life and death. One's ultimate debt was to the state; it was the only one that was truly unlimited, that could make absolute, cosmic, claims.

The reason I stress this is because this logic is still with us. When we speak of a "society" (French society, Jamaican society) we are really speaking of people organised by a single nation state. That is the tacit model, anyway. "Societies" are really states, the logic of states is that of conquest, the logic of conquest is ultimately identical to that of slavery. True, in the hands of state apologists, this becomes transformed into a notion of a more benevolent "social debt". Here there is a little story told, a kind of myth. We are all born with an infinite debt to the society that raised, nurtured, fed and clothed us, to those long dead who invented our language and traditions, to all those who made it possible for us to exist. In ancient times we thought we owed this to the gods (it was repaid in sacrifice, or, sacrifice was really just the payment of interest – ultimately, it was repaid by death). Later the debt was adopted by the state, itself a divine institution, with taxes substituted for sacrifice, and military service for one's debt of life. Money is simply the concrete form of this social debt, the way that it is managed. Keynesians like this sort of logic. So do various strains of socialist, social democrats, even crypto-fascists like Auguste Comte (the first, as far as I am aware, to actually coin the phrase "social debt"). But the logic also runs through much of our common sense: consider for instance, the phrase, "to pay one's debt to society", or, "I felt I owed something to my country", or, "I wanted to give something back." Always, in such cases, mutual rights and obligations, mutual commitments – the kind of relations that genuinely free people could make with one another – tend to be subsumed into a conception of "society" where we are all equal only as absolute debtors before the (now invisible) figure of the king, who stands in for your mother, and by extension, humanity.

What I am suggesting, then, is that while the claims of the impersonal market and the claims of "society" are often juxtaposed – and certainly have had a tendency to jockey back and forth in all sorts of practical ways – they are both ultimately founded on a very similar logic of violence. Neither is this a mere matter of historical origins that can be brushed away as inconsequential: neither states nor markets can exist without the constant threat of force.

One might ask, then, what is the alternative?

Towards a history of virtual money

Here I can return to my original point: that money did not originally appear in this cold, metal, impersonal form. It originally appears in the form of a measure, an abstraction, but also as a relation (of debt and obligation) between human beings. It is important to note that historically it is commodity money that has always been most directly linked to violence. As one historian put it, "bullion is the accessory of war, and not of peaceful trade."

The reason is simple. Commodity money, particularly in the form of gold and silver, is distinguished from credit money most of all by one spectacular feature: it can be stolen. Since an ingot of gold or silver is an object without a pedigree, throughout much of history bullion has served the same role as the contemporary drug

dealer's suitcase full of dollar bills, as an object without a history that will be accepted in exchange for other valuables just about anywhere, with no questions asked. As a result, one can see the last 5 000 years of human history as the history of a kind of alternation. Credit systems seem to arise, and to become dominant, in periods of relative social peace, across networks of trust, whether created by states or, in most periods, transnational institutions, whilst precious metals replace them in periods characterised by widespread plunder. Predatory lending systems certainly exist at every period, but they seem to have had the most damaging effects in periods when money was most easily convertible into cash.

So as a starting point to any attempt to discern the great rhythms that define the current historical moment, let me propose the following breakdown of Eurasian history according to the alternation between periods of virtual and metal money:

I. Age of the First Agrarian Empires (3500-800 BCE). Dominant money form: Virtual credit money

Our best information on the origins of money goes back to ancient Mesopotamia, but there seems no particular reason to believe matters were radically different in Pharaonic Egypt, Bronze Age China, or the Indus Valley. The Mesopotamian economy was dominated by large public institutions (Temples and Palaces) whose bureaucratic administrators effectively created money of account by establishing a fixed equivalent between silver and the staple crop, barley. Debts were calculated in silver, but silver was rarely used in transactions. Instead, payments were made in barley or in anything else that happened to be handy and acceptable. Major debts were recorded on cuneiform tablets kept as sureties by both parties to the transaction.

Certainly, markets did exist. Prices of certain commodities that were not produced within Temple or Palace holdings, and thus not subject to administered price schedules, would tend to fluctuate according to the vagaries of supply and demand. But most actual acts of everyday buying and selling, particularly those that were not carried out between absolute strangers, appear to have been made on credit. "Ale women", or local innkeepers, served beer, for example, and often rented rooms; customers ran up a tab; normally, the full sum was dispatched at harvest time. Market vendors presumably acted as they do in small-scale markets in Africa, or Central Asia, today, building up lists of trustworthy clients to whom they could extend credit. The habit of money at interest also originates in Sumer – it remained unknown, for example, in Egypt. Interest rates, fixed at 20 percent, remained stable for 2,000 years. (This was not a sign of government control of the market: at this stage, institutions like this were what made markets possible.) This, however, led to some serious social problems. In years with bad harvests especially, peasants would start becoming hopelessly indebted to the rich, and would have to surrender their farms and, ultimately, family members, in debt bondage. Gradually, this condition seems to have come to a social crisis – not so much leading to popular uprisings, but to common people abandoning the cities and settled territory entirely and becoming semi-nomadic "bandits" and raiders. It soon became traditional for each new ruler to wipe the slate clean, cancel all debts, and declare a general amnesty or "freedom", so that all bonded labourers could return to their families. (It is significant here that the first word for "freedom" known in any human language, the Sumerian *amarga*, literally means "return to mother".) Biblical prophets instituted a similar custom, the Jubilee, whereby after seven years all debts were similarly cancelled. This is the direct ancestor of the New Testament notion of "redemption". As economist Michael Hudson has pointed out, it seems one of the misfortunes of world history that the institution of lending money at interest disseminated out of Mesopotamia without, for the most part, being accompanied by its original checks and balances.

II. Axial Age (800 BCE – 600 CE). Dominant money form: Coinage and metal bullion

This was the age that saw the emergence of coinage, as well as the birth, in China, India and the Middle East, of all major world religions. From the Warring States period in China, to fragmentation in India, and to the carnage and mass enslavement that accompanied the expansion (and later, dissolution) of the Roman Empire, it was a period of spectacular creativity throughout most of the world, but of almost equally spectacular violence.

Coinage, which allowed for the actual use of gold and silver as a medium of exchange, also made possible the creation of markets in the now more familiar, impersonal sense of the term. Precious metals were also far more appropriate for an age of generalised warfare, for the obvious reason that they could be stolen. Coinage, certainly, was not invented to facilitate trade (the Phoenicians, consummate traders of the ancient world, were among the last to adopt it). It appears to have been first invented to pay soldiers, probably first of all by rulers of Lydia in Asia Minor to pay their Greek mercenaries. Carthage, another great trading nation, only started minting coins very late, and then explicitly to pay its foreign soldiers.

Throughout antiquity one can continue to speak of what Geoffrey Ingham has dubbed the "military-coinage complex". He may have been better to call it a "military-coinage-slavery complex", since the diffusion of new military technologies (Greek hoplites, Roman legions) was always closely tied to the capture and marketing of slaves. The other major source of slaves was debt: now that states no longer periodically wiped the slates clean, those not lucky enough to be citizens of the major military city-states – who were generally protected from predatory lenders – were fair game. The credit systems of the Near East did not crumble under commercial competition; they were destroyed by Alexander's armies – armies that required half a ton of silver bullion per day in wages. The mines where the bullion was produced were generally worked by slaves. Military campaigns in turn ensured an endless flow of new slaves. Imperial tax systems, as noted, were largely designed to force their subjects to create markets, so that soldiers (and also, of course, government officials) would be able to use that bullion to buy anything they wanted. The kind of impersonal markets that once tended to spring up between societies, or at the fringes of military operations, now began to permeate society as a whole.

However tawdry their origins, the creation of new media of exchange – coinage appeared almost simultaneously in Greece, India, and China – appears to have had profound intellectual effects. Some have even gone so far as to argue that Greek philosophy was itself made possible by conceptual innovations introduced by coinage. The most remarkable pattern, though, is the emergence, in almost the exact times and places where one also sees the early spread of coinage, of what were to become modern world religions: prophetic Judaism, Christianity, Buddhism, Jainism, Confucianism, Taoism, and eventually, Islam. While the precise links are yet to be fully explored, in certain ways, these religions appear to have arisen in direct reaction to the logic of the market. To put the matter somewhat crudely: if one relegates a certain social space simply to the selfish acquisition of material things, it is almost inevitable that soon someone else will come to set aside another domain in which to preach that, from the perspective of ultimate values, material things are unimportant, and selfishness – or even the self – illusory.

III. The Middle Ages (600 CE – 1500 CE). The return to virtual credit money

If the Axial Age saw the emergence of complementary ideals of commodity markets and universal world religions, the Middle Ages were the period in which those two institutions began to merge. Religions began to take over the market systems. Everything from international trade to the organisation of local fairs increasingly came to be carried out through social networks defined and regulated by religious authorities. This enabled, in turn, the return throughout Eurasia of various forms of virtual credit money.

In Europe, where all this took place under the aegis of Christendom, coinage was only sporadically, and unevenly, available. Prices after 800 AD were calculated largely in terms of an old Carolingian currency that no longer existed (it was actually referred to at the time as "imaginary money"), but ordinary day-to-day buying and selling was carried out mainly through other means. One common expedient, for example, was the use of tally-sticks, notched pieces of wood that were broken in two as records of debt, with half being kept by the creditor, half by the debtor. Such tally-sticks were still in common use in much of England well into the 16th century. Larger transactions were handled through bills of exchange, with the great commercial fairs serving as their clearing houses. The Church, meanwhile, provided a legal framework, enforcing strict controls on the lending of money at interest and prohibitions on debt bondage.

The real nerve centre of the Medieval world economy, though, was the Indian Ocean,

which along with the Central Asia caravan routes connected the great civilisations of India, China, and the Middle East. Here, trade was conducted through the framework of Islam, which not only provided a legal structure highly conducive to mercantile activities (while absolutely forbidding the lending of money at interest), but allowed for peaceful relations between merchants over a remarkably large part of the globe, allowing the creation of a variety of sophisticated credit instruments. Actually, Western Europe was, as in so many things, a relative late-comer in this regard: most of the financial innovations that reached Italy and France in the 11th and 12th centuries had been in common use in Egypt or Iraq since the 8th or 9th centuries. The word "cheque", for example, derives from the Arab *sakk*, and appeared in English only around 1220 AD.

The case of China is even more complicated: the Middle Ages there began with the rapid spread of Buddhism, which, while it was in no position to enact laws or regulate commerce, did quickly move against local usurers by its invention of the pawn shop – the first pawn shops being based in Buddhist temples as a way of offering poor farmers an alternative to the local usurer. Before long, though, the state reasserted itself, as the state always tends to do in China. But as it did so, it not only regulated interest rates and attempted to abolish debt peonage, it moved away from bullion entirely by inventing paper money. All this was accompanied by the development, again, of a variety of complex financial instruments.

All this is not to say that this period did not see its share of carnage and plunder (particularly during the great nomadic invasions) or that coinage was not, in many times and places, an important medium of exchange. Still, what really characterises the period appears to be a movement in the other direction. Most of the Medieval period saw money largely delinked from coercive institutions. Money changers, one might say, were invited back into the temples, where they could be monitored. The result was a flowering of institutions premised on a much higher degree of social trust."

IV. Age of European Empires (1500-1971). The return of precious metals

With the advent of the great European empires – Iberian, then North Atlantic – the world saw both a reversion to mass enslavement, plunder, and wars of destruction, and the consequent rapid return of gold and silver bullion as the main form of currency. Historical investigation will probably end up demonstrating that the origins of these transformations were more complicated than we ordinarily assume. Some of this was beginning to happen even before the conquest of the New World. One of the main factors of the movement back to bullion, for example, was the emergence of popular movements during the early Ming dynasty, in the 15th and 16th centuries, that ultimately forced the government to abandon not only paper money but any attempt to impose its own currency. This led to the reversion of the vast Chinese market to an uncoined silver standard. Since taxes were also gradually commuted into silver, it soon became the more or less official Chinese policy to try to bring as much silver into the country as possible, so as to keep taxes low and prevent new outbreaks of social unrest. The sudden enormous demand for silver had effects across the globe. Most of the precious metals looted by the conquistadors and later extracted by the Spanish from the mines of Mexico and Potosi (at almost unimaginable cost in human lives) ended up in China. These global scale connections that eventually developed across the Atlantic, Pacific, and Indian Oceans have of course been documented in great detail. The crucial point is that the delinking of money from religious institutions, and its relinking with coercive ones (especially the state), was here accompanied by an ideological reversion to "metallism".

Credit, in this context, was on the whole an affair of states that were themselves run largely by deficit financing, a form of credit which was, in turn, invented to finance increasingly expensive wars. Internationally the British Empire was steadfast in maintaining the gold standard through the 19th and early 20th centuries, and great political battles were fought in the United States over whether the gold or silver standard should prevail.

This was also, obviously, the period of the rise of capitalism, the industrial revolution,

representative democracy, and so on. What I am trying to do here is not to deny their importance, but to provide a framework for seeing such familiar events in a less familiar context. It makes it easier, for instance, to detect the ties between war, capitalism, and slavery. The institution of wage labour, for instance, has historically emerged from within that of slavery (the earliest wage contracts we know of, from Greece to the Malay city states, were actually slave rentals), and it has also tended, historically, to be intimately tied to various forms of debt peonage – as indeed it remains today. The fact that we have cast such institutions in a language of freedom does not mean that what we now think of as economic freedom does not ultimately rest on a logic that has for most of human history been considered the very essence of slavery.

Current Era (1971 onwards). The empire of debt

The current era might be said to have been initiated on 15 August 1971, when US President Richard Nixon officially suspended the convertibility of the dollar into gold and effectively created the current floating currency regimes. We have returned, at any rate, to an age of virtual money, in which consumer purchases in wealthy countries rarely involve even paper money, and national economies are driven largely by consumer debt. It's in this context that we can talk about the "financialisation" of capital, whereby speculation in currencies and financial instruments becomes a domain unto itself, detached from any immediate relation with production or even commerce. This is of course the sector that has entered into crisis today.

What can we say for certain about this new era? So far, very, very little. Thirty or forty years is nothing in terms of the scale we have been dealing with. Clearly, this period has only just begun. Still, the foregoing analysis, however crude, does allow us to begin to make some informed suggestions.

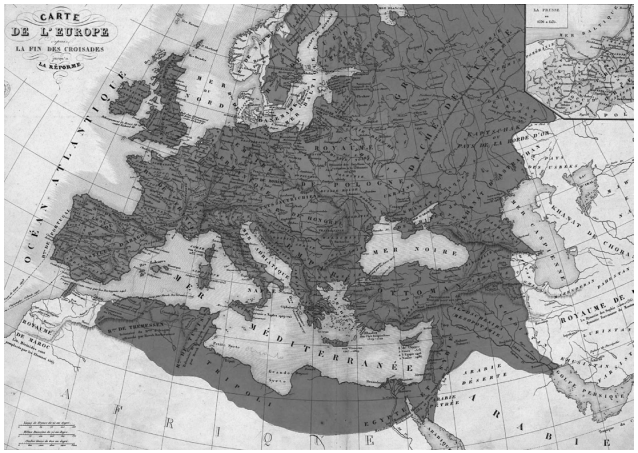
Historically, as we have seen, ages of virtual, credit money have also involved creating some sort of overarching institutions – Mesopotamian sacred kingship, Mosaic jubilees, Sharia or Canon Law – that place some sort of controls on the potentially catastrophic social consequences of debt. Almost invariably, they involve institutions (usually not strictly coincident to the state, usually larger) to protect debtors. So far the movement this time has been the other way around: starting with the '80s we have begun to see the creation of the first effective planetary administrative system, operating through the IMF, World Bank, corporations and other financial institutions, largely in order to protect the interests of creditors. However, this apparatus was very quickly thrown into crisis, first by the very rapid development of global social movements (the alter-globalisation movement), which effectively destroyed the moral authority of institutions like the IMF and left many of them very close to bankrupt, and now by the current banking crisis and global economic collapse. While the new age of virtual money has only just begun and the long-term consequences are as yet entirely unclear, we can already say one or two things. The first is that a movement towards virtual money is not in itself, necessarily, an insidious effect of capitalism. In fact, it might well mean exactly the opposite. For much of human history, systems of virtual money were designed and regulated to ensure that nothing like capitalism could ever emerge to begin with – at least not as it appears in its present form, with most of the world's population placed in a condition that would in many other periods of history be considered tantamount to slavery. The second point is to underline the absolutely crucial role of violence in defining the very terms by which we imagine both "society" and "markets" – in fact, many of our most elementary ideas of freedom. A world less entirely pervaded by violence would rapidly begin to develop other institutions. Finally, thinking about debt outside the twin intellectual straitjackets of state and market opens up exciting possibilities. For instance, we can ask: in a society in which that foundation of violence had finally been yanked away, what exactly would free men and women owe each other? What sort of promises and commitments should they make to each other?

Let us hope that everyone will someday be in a position to start asking such questions. At times like this, you never know.

David Graeber, *Dept: The first five thousand years*, Eurozine, first published in Mute 12 (2009)

Pieter Bruegel the Elder, *The Battle of the Money Bags and Strong Boxes* (after 1570)

II. Conquest



Europe's map at the end of the Crusades.

The Crusades contributed to increase the wealth of the Church and the power of the Papacy. Thus the prominent part which the Popes took in the enterprises naturally fostered their authority and influence, by placing in their hands, the armies and resources of Christendom, and accustoming the people to look to them as guides and leaders.

www.middle-ages.org.uk/effects-of-crusades.htm

Marinus Van Reymerswaele, *The moneychanger and his wife* (1539)

MARKETS, MERCHANTS AND PRINCES

Banking from the earliest times to the 16th century

The origins of banking can hardly be pinned down to a precise period or place. In the ancient world coinage, exchange, and lending were treated in a way which had many recognizable features of banking business. From the late twelfth century to the mid-fourteenth century the merchant communities of Italy developed techniques and specializations, which are still in the banker's toolbox. The banks of the Renaissance and early modem period are strong contenders as the earliest banking 'institutions' in a modern sense, while the nineteenth century could lay claim to the beginnings of fully professional banking. It may even be said that it was not until the very recent past - especially from the 196os to the early 198os - that banking emerged as a 'universal' business in terms of the sheer scale and scope of its modem operations.

The vocabulary of banking gives some clues to the origins of the business. The modem term 'bank' derives from the merchant's bench, or banco, in the marketplaces of medieval Italy. Traders in Lombardy preferred to set up their own dealing benches rather than permanent stalls or shops, but this homely style was not peculiar to money-dealers. Indeed, the 'bench' translation is more useful in tracing the origins of the concept of bankruptcy: the breaking of a merchant's bench in medieval Italy was the signal of his failure. Less literally but more relevantly the words 'bank', banco and the German banck were synonymous with the Italian monte. Meaning a mound or accumulation, the term was used to describe public loans in Venice as early as the twelfth century, and by the fourteenth century the charity loan banks of Italy were known as monti di pieta. These public loans and loan banks were no more than a part of the Italian banking scene, however. A clearer view of the origins of banking only emerges by recognizing its continuing, persistent characteristics.

Over the last century and more, definitions of banking have settled upon four key characteristics. To be recognized as a bank by businessmen and lawyers, an institution is expected to receive deposits of money from its customers; to maintain current accounts for them; to provide advances in the form of loans or overdrafts; and to manage payments on \ of its customers by collecting and paying cheques, bills and other forms of 'banking currency'. In each of these functions a bank is also required to offer security and safe-keeping. As part of that security, a bank must show that its operations enjoy privacy - that banking is not the servant of any other business, which it may have taken on. The price of its services will normally be set by the rates of interest, commission, or fees which it charges its customers. These features are common to all categories of banks on the modem financial scene, whether they are 'central' banks with governments as their main customers, commercial and savings banks with their millions of private customers, or merchant banks with their select lists of major accounts.

Some of these characteristics were evident in the ancient world. In Mesopotamia lending was available at interest from temples the royal treasuries and private landowners as long ago as he third millennium BC. In these transactions the lenders – for example the Egibi family of abylon in the first millenium BC – were deploying their own resources rather than receiving and using others' deposits.

In Greece, even before the appearance of coinage in the seventh century BC, the sanctuary at Delphi was used as a storehouse for bullion and valuables. A similar refuge was created at the temple of Apollo at Didyma near Miletus after the invasions of the Dorians, and later at Olympia. The Athenian economy, developing strongly in the sixth and fifth centuries BC, also produced prototype bankers - individual merchants who would accept deposits of coin and bullion for safe custody, paying out a rate of interest agreed by contract. The attractions of interest income were sufficiently great for Xenophon (c.43o--c.356 BC) to propose the formation of a safe-custody institution in which all Athenians could share the profits from interest. This dream, though not

realized, foreshadowed mutual and joint stock ownership of banks.

Elsewhere in the Mediterranean world, the money-changers in the temple of Jerusalem were described in the New Testament as exchanging coins for visiting merchants and also allowing interest on any money deposited with them. In republican and imperial Rome, in contrast to the Greeks' concern with safe-keeping, the emphasis fell upon improving methods of payment. In the second and first centuries BC the State and the patricians of Rome were using money-shops, tabernae argentariae or mensae numulariae, to deal with tax payments and to settle accounts with their creditors. An assignment or attributio could be used as an order to a money-shop to settle payments, in similar fashion to a draft or cheque. The dealers, or argentarii, also allowed interest on money lodged, and provided a money-changing service. For the less wealthy citizens of Rome, rudimentary loan banks used the proceeds of property confiscated from criminals to lend money at interest.

It was not until the twelfth and thirteenth centuries, in an Italy of revival and change, that the themes of banking history made a reappearance. On the surface the economic and cultural environment throughout Europe was hostile. The medieval economy remained land-based, dominated by the needs of Church and State. Wealth and income were largely committed to the support of the hierarchical, immobile structure of feudalism in which money, capital and credit played a secondary role to barter and the payment of dues 'in kind'. At the same time the Church was severe in its condemnation of the sin of usury, or 'making money with money'. However, even in the Dark Ages, Jewish merchants had kept alive the trading contacts between the Christian West and the Moslem East, and from the late eleventh to the mid-thirteenth century international trade was given real impetus by the crusades. In return for their financial and military support, the Italian cities of Venice, Genoa and Pisa won privileges throughout the reconquered eastern Mediterranean. The concessions included markets, warehouses and merchant 'quarters' in Constantinople and in the cities of the Egyptian and Levant coasts. The inflow of wealth to Italy brought strong economic growth not only to the great maritime powers but also to the cities inland - Lucca, Siena and Florence in the case of Pisa, Milan and Piacenza in the case of Genoa, and the towns of the Po valley in that of Venice.

The events of this period did not produce a banking tradition by accident or magic. Their real importance in financial history was the creation of customers for banking services. On one hand, the kings and princes of Christian Europe could not tackle their crusading adventures without external, international financing, and Italian merchants, especially the Genoese, responded to the challenge with shipments of coin and bullion to the Holy Land in return for credits with the royal treasuries of Europe. In contrast, the wealth sucked into the Italian cities in the age of the crusades itself generated civic and business demands for banking services. In Venice, by the thirteenth century, the international entanglements of the government created a large public debt, financed by its citizens. These creditors 'incorporated' their claims, which enabled citizens to settle their own debts and payments by transferring back and forth their holdings in the public debt.

The business demand for banking services was both stronger and more widely spread than the needs of city-states. In late twelfth-century Genoa, the term bancherius was being used to describe money-changers who took deposits and gave credit to local business customers. Similarly in thirteenth century Venice the banchi di scritta transferred payments and accepted deposits from their clients. Italian merchants were also international in their ambitions, particularly in their attendance at the network of trading fairs in northern Europe. From the twelfth century the fairs of Champagne were the most prominent European market-place, serving initially as trade centres for the cloth industries of Flanders and France. Six fairs were held each year - two at Troyes, two at Provins, and one each at both Lagny and Bar-sur-Aube - and they provided an almost continuous cycle of market activity. Merchants from Milan were attending the fairs by the 1170s, soon followed by traders from Piacenza and Lucca.

The special significance of the fairs for the Italian contingent was their role in the settlement of local and international debts. Each

fair concluded with a reckoning of debts incurred during the fair, and any debts or credits not settled were carried forward to the next neighbouring fair. This new and liberating system of credit was protected by safe conducts given by the counts of Champagne; it enabled the Italian merchants to journey to and from the north carrying only a bare minimum of coin specie. In the golden age of the fairs, from the late twelfth century to the end of the thirteenth, the 'Lombards' and the merchants of Paris and Flanders were joined by merchants and money-changers from Germany (especially Cologne), from Barcelona, Rome, Toulouse and the Cahors region. Indeed the dealers of Cahors and Figeac were important enough in the market to become notorious; by the late Middle Ages the term cahorsin was synonymous with usury.

By the second half of the thirteenth century the interchange between northern Italy and the fairs of Champagne was producing an identifiable banking industry. Financial specialization was its main feature with private enterprise rather than the demands of the state as its first concern. The merchants from Piacenza and Tuscany who had originally visited the fairs to buy cloth and sell alum and leather now travelled north purely to settle debts and offer exchange to the commodity merchants. In this way the fairs became a financial clearing-house as well as an international trade market. Banking clearances, giro di partita, were used to settle complex payments negotiated in other markets. So, for example, in 1257 a merchant from Lucca was able to buy Chinese silk at Genoa, promising that a colleague based in Piacenza would make the payment at the Champagne fairs.

These intermediaries were banking specialists, with their own style of organization and their own techniques. The banking 'firm' or 'company' was already emerging, made up of groups of associates and families who contributed working capital and deposits of cash. Increasingly in the thirteenth century, the heads of these firms remained at their Italian base-camps, leaving much of their dealing and information-gathering at the fairs in the hands of agents. This shift from travelling to 'sedentary' business became even more marked in the next century, when banking firms moved on from agencies to more permanent branch representation at home and overseas. The Bardi house of Florence, for example, operated over thirty branches in Italy and overseas with more than 350 personnel. In the early fourteenth century their foreign branches were found as far afield as London, Bruges, Spain, Moorish Africa, and the Levant. Perhaps the most important technical contribution of these Italian banking houses was their development of bills of exchange for settling payments, particularly in the heavy trading between northern Italy and the fairs of Champagne. Bills of exchange, a vital ingredient of modern banking history, were developed from the 'letters of exchange' used by the Genoese in the late twelfth and thirteenth centuries. In their fourteenth-century form, bills of exchange were written promises to pay a named individual a fixed sum at a near future date. Four individuals or firms participated in the transaction. First, a merchant (A) wished to make a payment to a trader (B) in a distant town or country. A local firm (AA) had an account with a firm (BB) in the relevant town or country. At A's request, AA would therefore write an order (the bill of exchange) to BB, authorizing payment from BB to B. In this fashion A would pay, and B would collect from, their local banking firms.

Delays in the courier services of medieval Europe meant that such transactions were temporary loans as well as payments. Interest could be charged indirectly through the rate of exchange quoted in the bill, avoiding any implication of usury. By the fourteenth century bills of this sort were beginning to serve as the currency of specialist banking firms in western Europe. Their use as a form of payment was to become even more widespread when, from the mid-fifteenth century, merchants and bankers were prepared to trade in bills by buying and selling them at discounted prices. This transition provided the economy of the late medieval period with its own form of banking currency. From the mid-fourteenth century Italian merchants were also using a form of negotiable cheque, the polizze, in which orders for payment could be made in writing rather than in person.

If the Italian firms of the late thirteenth century were the first direct ancestors of modern commercial banking, then the financial crises of the fourteenth century deserve to be treated as the predecessors of banking crises of the early modern

period. Throughout the Middle Ages there was never any shortage of financial failures. Expulsions of Jewish merchants and the penalization of Lombard traders were almost endemic in thirteenth- and fourteenth-century Europe, ensuring frequent mayhem in the pattern of credit at home and abroad. There were also cases of business failure generated by over-extension, as in the collapse of the house of Buonsignori of Sienna in 1295. More bankruptcies followed in Tuscany in the early fourteenth century. In these cases the failures were local rather than generalized crises, but the transition to widespread financial stress was not delayed for long. Towards the middle of the fourteenth century Florentine houses such as the Bardi, Peruzzi and Acciajoli were in the van of banking development, and their customers included merchants and princes throughout Europe. By the 1330s and 1340s, however, they were committing vast sums in advances to King Edward III of England; the total debt of nearly 1. 5 million gold florins was said to be 'worth a kingdom'. Disastrously for the Italian bankers, the debt was created in a territory that was still off the map of financial development. Worse still, Edward III was also rearming at great expense for the campaigns in France which led to the Hundred Years War. Default was inevitable, and the Bardi, Peruzzi and Acciajoli were forced to suspend payments between 1339 and 1343.

The disruption of international finance was immense, reducing the credit of merchants as well as princes. By any standard the suspension of the Florentine firms was a major banking crisis, the first spectacular example of default on a sovereign debt. It was also part of the much broader human and economic crisis of the mid-fourteenth century; the arrival of the Black Death in 1347-8 threw most of western and northern Europe into deep shock. The devastation was at its worst in city-ports such as Genoa (where the population of 65,000 was reduced to less than 30,000), Hamburg and Bremen. The economic effects were disastrous, not so much from the shortage of manpower as from the failure of demand.

In spite of these very unpromising conditions, however, banking came into fuller bloom. Florence, hit hard by the stoppage of its premier financial houses, was a longterm victim of the plague. Yet by the early fifteenth century the city could boast the best-designed banking facilities of the premodern age. The twin themes of Florence's sophistication were the progress of 'public' banking and the emergence of a formidable tradition of merchant banking. The city of Venice had long ago set a precedent in bringing together government creditors and Florence itself had incorporated its public debts into a Monte Communale in the thirteenth century. Although the Monte Communale was at first a small affair, with assets of less than 50,000 florins in the early fourteenth century, the financial and demographic disasters of the 1340s transformed its role. It now became a refuge of savings for the surviving citizens, lifting total assets from 600,000 florins in the early 1340s to 1. 5 million florins in 1364 and 3 million florins by 1400. By the turn of the century between 5,000 and 10,000 citizens were customers of the Monte, receiving interest at 5 per cent and transferring holdings between themselves in settlement of trade debts.

This forwardness in public banking was not unique to Florence. In the western Mediterranean a taula, in effect a municipal savings bank providing exchange and deposit services, was founded at Barcelona in 1401, and similar units were established at Valencia (1408), Gerona and Saragossa. Genoa, never behind in financial development, gave birth to the remarkable Casa di San Giorgio in 1407. As in Venice and Florence, the Casa brought together the State's creditors in a single fund, and their subscriptions and deposits were 'tradable'. The contributing creditors, as proprietors, also had authority to elect a board of eight directors. From 1408 until1444 the Banca di San Giorgio - subsidiary to the Casa – also accepted deposits and made loans to officials and to private bankers.

If Florence was an example and a model in public banking, it was even more obviously setting the pace in merchant banking. The Medici bank, Raymond Goldsmith has claimed ecently, was: . . . 'technically the most advanced financial institution before the late 16th century and possibly the late 17th century and was definitely surpassed in these respects only in the 19th century'.

The Medici family, originally from the

Mugello region north of Florence, first came to prominence in the city as merchants and office-holders in the late thirteenth century. A century later they had become a major political and trading clan, and in 1397 they established their own banking house. Under the direction of Cosimo de Medici (1389-1464), the bank achieved real economic and political distinction.

In many respects, Cosimo followed on from and developed the traditions of the Bardi and Peruzzi (one sign of that continuity being his marriage to Contessina Bardi of the old banking family). Like these predecessors and like the other banking houses of Florence, the Medici placed great reliance upon a network of information at home and abroad. Gregorio Dati, a contemporary of Cosimo, observed that the Florentine bankers had 'spread their wings over the world and have information from all its corners'. This network was partly maintained through branch offices; the firm usually operated between six and ten branches in major trading centres such as Venice, Naples, Geneva and Lyons. While Cosimo and his family held the largest shares in these branches, they were in fact self-standing partnerships, with local managers and investors participating in the capital and profits.

To supplement the branches, the Medici also employed local agents and correspondents throughout Europe, providing not only information but also an international structure of credit. The Medici and their correspondents kept accounts open in each others' names, enabling customers to make much greater use of bills of exchange in the early fifteenth century. In 1427, for example, the Medici houses at Florence, Rome and Venice were able to deploy over 62 per cent of their assets in loans and over 20 per cent in accepting bills of exchange from their correspondents . This was achieved on a relatively small capital base and, unlike the Bardi and Peruzzi with perhaps ten times the capital commitment, the Medici branches were not dependent upon large royal loans for their earnings. In comparison with their fourteenth-century counterparts, the Medici used their branch network to create a wide 'spread' of business and risk.

The Medici' s banking operations were not only ahead of their time in terms of techniques and communications. Their buildings, too, were designed in a grand fashion that reflected the family's political importance, pioneering the notion that banking needed confident, even palatial surroundings. The Medici palace in the Via Larga, Florence, was the centrepiece of this more conspicuous style in the 1440s. Its architect, Michelozzo, was also responsible for the Medici bank in Milan in the 1460s, and his mixing of the needs of business, fortress and palace was the ancestor of bank design down to the twentieth century. Cosimo and his successors, Piero (1416-69) and Lorenzo the Magnificent (1449-92), also emerged as patrons of the arts and letters on a scale which even a modem sponsorship budget could not encompass. Cosimo's extraordinary range of commissions included buildings by Brunelleschi as well as Michelozzo, and he was the principal patron of the sculptor Donatello and the artist Fra Filippo Lippi: Lorenzo also secured a key role in art history as the first patron of Michelangelo and as an important buyer of work by both Verrochio and Botticelli.

In the early fourteenth century the Medici's investments in buildings and in art appear to have been 'off the balance sheet' - that is to say separate from the conduct of banking and trading business. Towards mid-century, however, the heads of the family were prone to mingle the costs of their political and business activities. Lorenzo' s enemies even accused him of raiding public funds such as the Monte Communale and the Monte delle Doti, a dowry fund for girls, to meet business losses. These appropriations were not proved, yet by the 1470s and 1480s it was clear that the bank was at best in difficulty and at worst in terminal decline. The Bruges branch failed soon after its biggest customer, Duke Charles the Bold of Burgundy, was killed in 1477; Lorenzo was also forced to wind up the London office after defaults by King Edward IV. At Lyons a 'run' on the bank in 1483 added to the firm's distress. "The Medici continued to play a leading role in Italian affairs, producing politicians, patrons and the two Medici popes Leo X and Clement VII, but as bankers their ascendancy came to an end with the death of Lorenzo in 1492.

The house of Medici, precocious and colourful as it may have been, was not the only example of bankers' increasing sophistication in the fifteenth century. North of the Alps the

meteoric rise of the merchant Jacques Coeur created a major bank-type operation centred on his hotel at Bourges. Coeur was also a trader, an owner of ships and galleys, and a manufacturer whose entangled network of interests was instrumental in the revival of the Mediterranean ports of France in the early fifteenth century. But Coeur became yet another (and by no means the last) of the victims of sovereign lending. In 1451, soon after he had given a huge loan to Louis XI of France to finance the reconquest of Normandy from the English, Coeur was arrested and his fortune confiscated.

In contrast to the entrepreneurial, singlehanded banking ambitions of Jacques Coeur, the Fugger family of Augsburg created a more durable financial dynasty. Originally wool merchants, the Fuggers turned their interests in the fifteenth century to mining and finance. Precious metals and banking were essential allies in their success, since their gold, silver and copper mines in Hungary and Austria emerged as suppliers to coin mints throughout Europe. Having won the monopoly of silver production from the Schwaz mines in Tyrol in 1488, the Fuggers then enjoyed the fruits of a boom in mining for precious metals.

Between the late fifteenth and the mid sixteenth century this primacy turned the house of Fugger into the most influential and celebrated source of finance on the continent. Jacob Fugger the Rich (1459 – 1525) became the sole heir to the family's mining and banking operations in 1510, and under his guidance the house became the principal financier to the Habsburg empire in Germany, the Low Countries and Spain. The apex of that power was reached in 1519 with the election of the Habsburg Charles V as Holy Roman Emperor; loans from the Fuggers were deployed on a massive scale to encourage the electors to vote for Charles and against the rival claims of Francis I of France. The success of this enterprise won the Fuggers the role of court bankers throughout the Habsburg empire in the second quarter of the sixteenth century.

The Medici, the Fuggers, and rival houses such as the Pazzi of Florence and the Chigi were the most spectacular banking ventures of the fifteenth and early sixteenth centuries. Although in each case their ascendancy was based upon earlier success as bankers in the world of private enterprise, this prominence was achieved largely through their involvement with the finances of princes and popes. Yet there existed also in fifteenth-century Italy banks which catered for less conspicuous customers - new and unusual financial institutions known as the monti di pieta. The function of these banks was to lend small amounts of money at minimal interest to relieve suffering and distress amongst the poor. Loans were for very modest sums, on the security of pledges or pawns. Most of the funds were compiled from charitable donations, although in some cases the monti paid interest on deposits and made loans to the wealthy. The earliest monte di pieta opened in 1462 in Perugia - a city with a strong tradition of money-dealing and bank-type operations - and provided a model for nearly ninety monti throughout Italy fifty years later.

Amongst these establishments was the Monte Pia at Siena. The original unit was a small monte di pieta with a capital of only 8,000 florins drawn from the city's funds. There was a maximum of 8 florins for any one loan. After its closure in 1511 a new Monte Pia was formed in 1569, and in 1625 control passed to the newly-created Monte dei Paschi di Siena, a much larger enterprise with facilities for lending without security and for making grants towards public works projects. Originally described as a monte non vacabile - a banking institution which was not to be given up – its capital was guaranteed by the Medici rulers of Siena. Fittingly the non vacabile Monte dei Paschi di Siena has outlived its guarantors by more than 250 years.

In the long-term development of banking, the monti di pieta and their variants elsewhere (the huis van leening which opened in Amsterdam in 1614, for example) made real progress in filtering credit through to the poor and to the artisans and small traders of urban Europe. Nevertheless, the technical advance of banking remained in the hands of those private firms which could survive in international trade and finance. By the sixteenth century, after the long economic stagnation of the late Middle Ages, these firms were operating in very different and very challenging conditions. Population growth and the drain of wealth along the new trade routes to the Middle East and Far East

increased the demand for coinage and bullion, and despite the huge intake of gold and silver from the Americas (an average of over 110 tons of silver reached Spain each year between 1500 and 1650), this ferment of demand created scarcities of coin throughout the sixteenth century. Such stress in the international economy created all manner of inflationary pressures and trade imbalances and, in the development of banking, these challenges also forced a massive expansion in credit. If coins and bullion were in short supply, then alternative 'bank' currencies could fill the gap. The range of credit techniques was not much changed since the fourteenth century, but bills of exchange and other forms of credit payment were much more widely accepted and traded in the sixteenth century.

Western Europe's international fairs, which had been so important to financial development in the thirteenth century, continued to flourish and were vital to this expansion of credit three centuries later. In the early part of the sixteenth century the Lyons fairs were specially prominent in the settlement of trade payments; there were as many as 169 banking businesses in the city, of which 143 were Italian. These firms used Lyons as their base for the finance of the silk and spice trades, and the close links between the fairs at Lyons and Medina del Campo in Spain were also essential to the inflow of silver in the first half of the century. As many as 2,000 merchants were attending the fairs at Medina in the mid-sixteenth century, and were in residence for at least one quarter of each year.

Nevertheless, the informal market was giving way to a more formal and institutional approach. Cities such as Antwerp (1531), London (1571) and Seville (1583) established their own Bourse or Exchange to act as permanent markets for traders and brokers. Meanwhile the Italians altered both the location and the scope of the traditional fairs. In 1575 the major Genoese firms (whose government was now in alliance with Charles V) pulled out of Lyons and established their own fair at Besançon, in Hapsburg territory.

There was technical as well as political significance in the Genoese firms' evacuation to Besançon. The Italians were now specialists in foreign exchange, bankers rather than merchants. In 1550, for example, one French commentator found it extraordinary that the Italians would travel to the fairs empty-handed, and without anything besides their persons, with a little credit, a pen, ink and paper, and skill in handling, turning and diverting the exchanges from one country to another, according to the information they have of the places where money is dearest.

From the middle of the century the Genoese were moving into a' golden age' of banking and finance. In 1579 they transplanted their four-times-yearly fairs from Besançon, via Poligny and Chambery to their own Genoan city of Piacenza. Throughout these wanderings the markets kept their title of 'Besançon fairs'. Between fifty and sixty banking firms, banchieri di canto, controlled dealings at the fairs with perhaps twice as many trading firms in attendance to settle their international transactions. Each representative would bring to Piacenza the scartafaccio or bill book of his firm and would settle outstanding debts or payments before the end of each fair. These clearing operations also meant that the Besançon fairs saw relatively few deals in cash or bullion while millions of scudi were either paid by credit or rolled forward to the next fair.

The liberation of credit payments, particularly through the Genoese firms, had a double significance. Firstly, the financial and business community began to enjoy the benefits of lower interest rates as the expanding opportunities for 'clearing' payments, combined with less hostile attitudes to interest charges after the Reformation, drove down the price of borrowing in the later sixteenth century. Secondly, the preeminence of the Genoese bankers in the later sixteenth century altered the balance of sovereign debt in Europe. The Habsburg empire of Charles V was by far the largest of the royal borrowers, and in the first part of the century its banking needs continued to be supplied by the Fuggers and their associates the Welser and Hochstatter banks of Augsburg. By mid-century, however, Charles V and his heir Philip II of Spain were faced with political and religious challenges throughout Europe. The drain on imperial resources led, in 1557, to Philip's declaration of bankruptcy, in the aftermath of which the Fuggers and their banking allies could no longer sustain their lending. In their place Genoese bankers such

as the Grimaldi and Gentile provided new loans to Philip - usually with 'penalty' interest clauses, and complex conditions for payments and bullion shipments between Spain and the Genoese agents in Italy and Flanders.

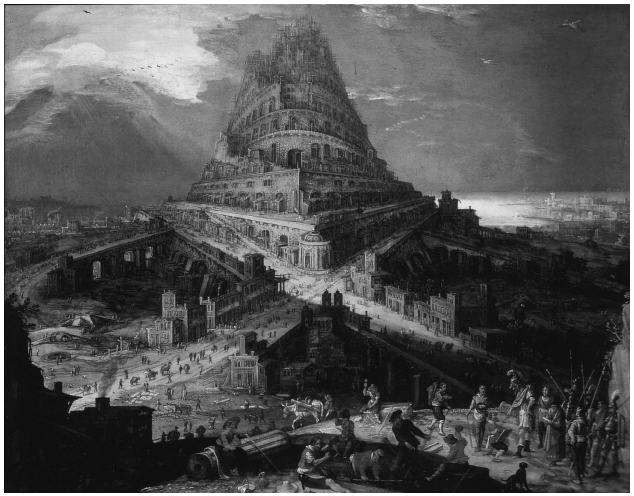
The management of payments to Flanders was especially important to Philip II, as the war in the Low Countries demanded vast sums for army pay and provisions. Spain, France and England were all embroiled in the war after 1572 and in each case their war finances needed the intermediation of the Italian and German bankers. In the Spanish case, the Genoese banks were transmitting an annual average of 5. 5 million florins to the Netherlands between 1561 and 1610. Three times that amount was transmitted in the pre-Armada year of 1587, mostly by bill of exchange. Whenever the Genoese bankers' domination was challenged, their payments system proved remarkably effective and durable. In 1575, for example, Philip struck back at his bankers by annulling all loan agreements since 1560, believing over-optimistically that the Fuggers and Spanish merchant bankers such as the Ruiz and Espinosa could take the Italians' place. The Genoese bankers responded by blocking payments of gold and bills of exchange to Flanders. So successful was this maneuver that the unpaid Spanish army in Flanders mutinied and sacked Antwerp in 1576. Philip had little choice but to negotiate with the Italians and reinstall them as his bankers in 1577.

Throughout the sixteenth century bankers such as the Fuggers and the Genoese played an essentially entrepreneurial role in public finance. Their banking services relied upon their flexibility as private firms, their familiarity with the international fairs, and the relative efficiency of their payments between European centres of trade. But perhaps the most striking feature of this entrepreneurial style of public lending was the fragility of sources of funds. Ironically, at a time when the techniques of payment were more widely used, the numbers of banking units in Europe were still falling. In Florence, where there had been eighty firms in banking before the Black Death, only eight banks remained at the beginning- of the sixteenth century. Similarly, in 1585 it was estimated that ninety-six of the one hundred and three private banks founded in Venice to date had closed or failed. Bank failures continued into the second half of the sixteenth century, narrowing the sources of credit into the hands of the larger firms.

Mismanagement, an often hostile cultural environment, and the effects of severe inflation all increased the vulnerability of private banking firms. For the largest firms - those who had made the transition from international banking to public finance - the greatest danger was still the volatile nature of European politics. The Genoese bankers at the court of Spain were masters in terms of capital resources and techniques, yet in 1575 they had faced failure both in Spain and in their own city. After their return as Philip II0's bankers they were severely tested by further state bankruptcies in 1596 and 1607. It was political opposition which would eventually drive them from the seat of power in Spain in 1627.

This vulnerability of bankers to sovereign debts had been a constant theme of the early development of banking since the fourteenth century. The Florentine dynasties, the Fuggers and the Genoese bankers all suffered eventually from their status as private or family businesses. At a time when the demands of state finance were increasing at a tremendous rate, the numbers and resources of private bankers could not keep pace indefinitely. Stability and larger resources could only come from a more permanent, institutional approach to public finance. It was this clarification of public and private finance that dominated the next phases of banking development.

Edwin Green, *Banking: an illustrated history*, Phaidon Press Limited, Oxford (1989)



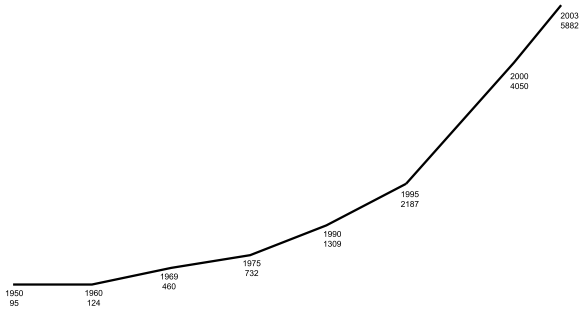
Hendrick van Cleve, *The Construction of the Babel Tower*

The Tower of Babel

1 Now the whole world had one language and a common speech.
2 As people moved eastward, they found a plain in Shinar and settled there.
3 They said to each other, "Come, let's make bricks and bake them thoroughly." They used brick instead of stone, and tar for mortar.
4 Then they said, "Come, let us build ourselves a city, with a tower that reaches to the heavens, so that we may make a name for ourselves; otherwise we will be scattered over the face of the whole earth."
5 But the LORD came down to see the city and the tower the people were building.
6 The LORD said, "If as one people speaking the same language they have begun to do this, then nothing they plan to do will be impossible for them.
7 Come, let us go down and confuse their language so they will not understand each other."
8 So the LORD scattered them from there over all the earth, and they stopped building the city. 9 That is why it was called Babel[c]—because there the LORD confused the language of the whole world. From there the LORD scattered them over the face of the whole earth.

Origin of BABEL:
Middle English, from Hebrew Bābhel, from Akkadian bāb-ilu ***Gate of God***

Genesis 11:1-9
Merriam-Webster, An Enciclopaedia Britannica Company



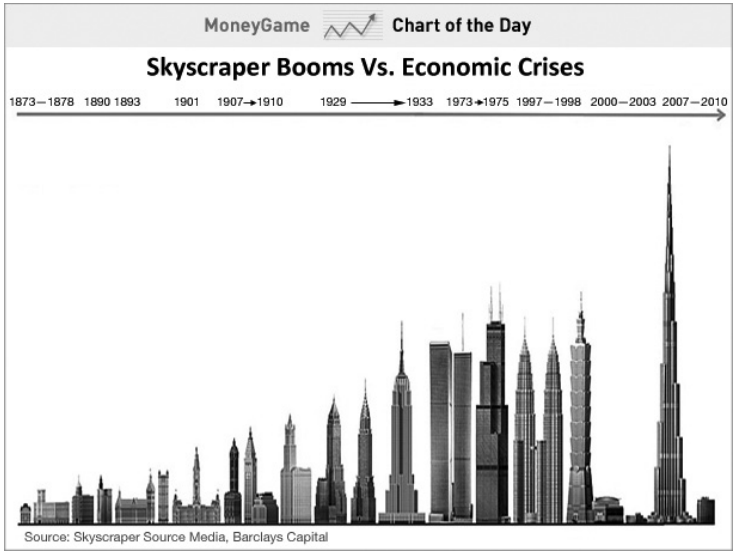
	1950	1960	1969	1975	1990	1995	2000	2003
Latin America	49	55	235	419	673	865	1478	2132
Overseas Territories	12	22	38	47	126	235	456	632
Europe	15	19	103	166	253	564	1043	1621
Asia	19	23	77	125	217	327	734	1040
Middle East	0	4	6	17	30	154	216	257
Africa	0	1	1	5	10	42	123	200
Total	95	124	460	732	1309	2187	4050	5882

US banking branches Abroad

A New Period in American Foreign Banking.

The year 1914 marked the beginning of a new period in the history of American foreign banking. In that year the Federal Reserve Act entered into effect and the World War began. The act contained provisions removing legal obstacles and permitting a free and full expansion of American foreign banking facili-ties. The war and post-war periods, by greatly stimulating American foreign trade and transforming the United States into a creditor nation, caused a striking expansion of American foreign banking machinery.

Edited by Sheila Mehlman, *The foreign expansion of American Banks* (1979)

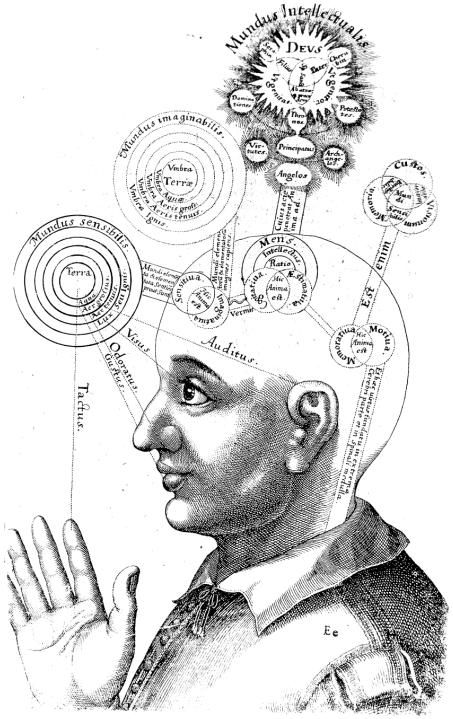


Barclays Skyscraper Index, *The Skyscraper Index,* Chart: Skyscraper booms vs Economic crises (2012)

Building booms, especially the construction of the tallest buildings in the world, coincide with economic crises according to the Barclays Skyscraper Index. And the height of the buildings also reflect the extent of the crisis.
For instance, the construction of three record breaking buildings, 40 Wall Street, the Chrysler building and the Empire State building coincided with the Great Depression. Most recently, the construction of the Burj Khalifa coincided with the current global recession.

This is because the construction of skyscraper booms indicate a widespread misallocation of capital and eventually, an economic correction.

Barclays Skyscraper Index, *The Skyscraper Index*, articles.businessinsider.com (2012)



Robert Fludd, Description of perception (17th century)

L'Economie offre le spectacle des passions d'une intensité inouïe, des ambitions de conquêtes prodigieuses, une sorte de religion nouvelle, le socialisme, et une ferveur proselytique inconnue depuis la primitive église. Voila les intérêts, les intérêts passionnés, qu'il s'agit d'accorder ensemble et avec intérêt, tout aussi passionnés, de capitalistes milliardaires coalises, non moins qu'eux grises par l'espoir de vaincre, par l'orgueil de la vie, par la soif du pouvoir.

Economy offers a spectacle of passions of unprecedented intensity, prodigious ambitions of conquest, a sort of new religion, socialism, and a proselytising fervour unknown since the primitive Church. These are the interests, the passionate interests, which it is a question of making agree with one another and with the equally passionate interests of billionaire capitalists, no less inebriated with the hope of winning, the pride of life, and the thirst for power.

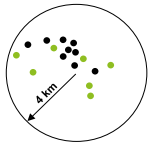
Gabriel Tarde, *Psychologie économique* (1902)

Wall Street Stock Exchange and Trinity Church, New York

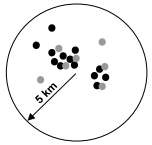
In old prints of lower Manhattan Island, the outstanding feature is a slim spire rising high above the shops, residences and counting houses around it—the spire of Trinity Church. Nowadays the only distant prospect of Trinity spire is up that chasm of counting houses from which residences long ago departed, Wall Street.

But the growing magnificence of the money-changers has by no means smothered religion in the Wall Street district. Only last week a new orthodox Jewish synagogue opened its doors there for the first time. The synagogue is merely an office building room given by Benjamin E. Greenspan, a lawyer.

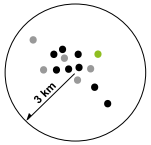
Religion & Finance, Time magazine (March 25th,1929)



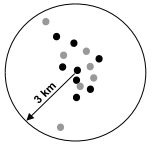
PARIS N 48.86/ E 2.35



LONDRES N 51.50/ W 0.13



FRANCFORT N 50.11/ W 8.68



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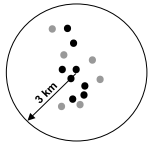

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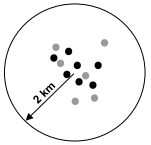
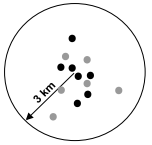
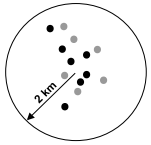


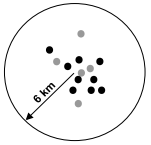
VIENNE N 48.21 / E 16.38



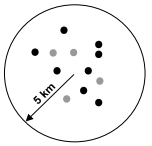
BUCAREST N 44.44 / E 26.10



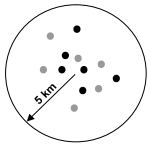
DUBLIN N 53.34 / E 6.27



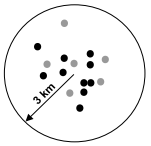
TOKYO N 41.6 / E 139.5



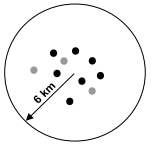
TAIPEI N 25.02 / E 121.38



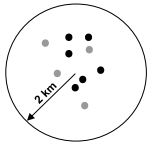
JOHANNESBURG S 26.12 / E 28.4



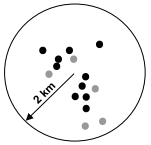
TORONTO N 43.40 / W 79.24



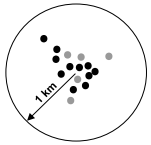
NEW DEHLI N 28.35 / E 77.12



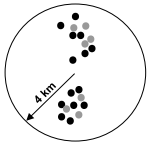
STOCKHOLM N 59.17 / E 18.3



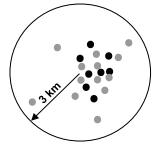
HAMBURG N 55.33 / E 9.59



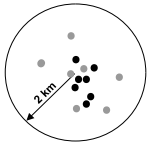
GENEVE N 46.21 / E 6.14



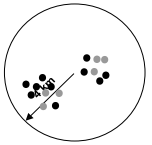
MANHATTAN N 40.78 / W 73.97



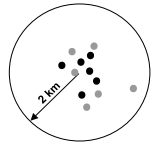
ROME N 41.90 / E 12.48



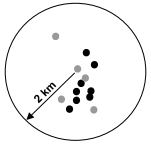
PRAGUE N 50.09 / E 14.42



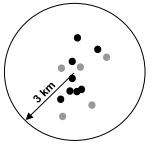
BERLIN N 52.52 / E 13.41



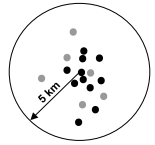
BUDAPEST N 47.50 / E 19.04



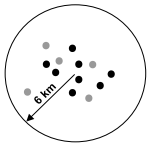
LOS ANGELES S 37.4 / W 72.34



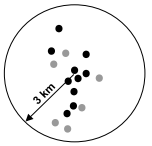
MOSCOU N 55.45 / E 35.56



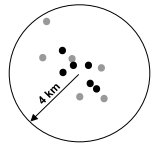
HONG-KONG N 22.18 / W 114.1



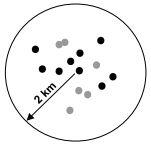
BEIJING N 39.55 / E 116.25



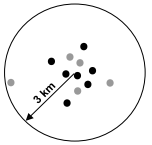
ST-PETERSBURG N 59.56 / E 30.18



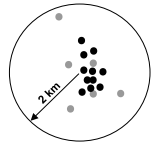
LIMA S 12.00 / W 77.24



LYON N 45.46 / E 4.50



ATHENES N 37.58 / E 23.53

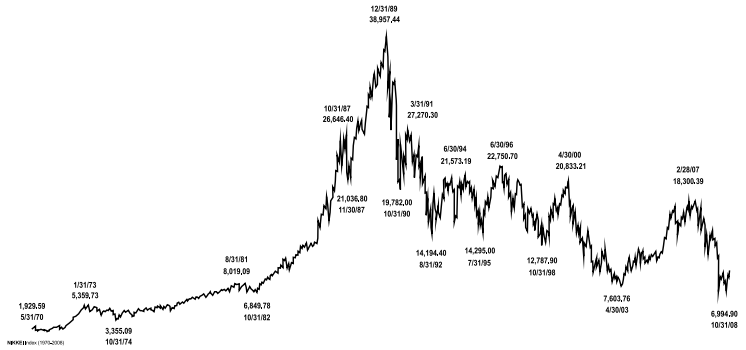


ZURICH N 47.22 / E 8.32

Location scheme of Banks and Churches

Michelangelo Antonioni, *L'Eclisse* (1962)

III. Probability



Nikkei Graph (1970-2008)

UNLESS YOU BELIEVE, YOU SHALL NOT UNDERSTAND.

Isaiah 7:9

THE BET	GOD EXISTS	GOD DOESN'T EXIST
EXISTENCE OF GOD	$(-b\ +\infty)$	$(-b\ +0)$
INEXISTENCE OF GOD	$(+b\ -\infty)$ ou $(+b\ +0)$	$(+b\ +0)$

Blaise Pascal, *Existence of God / Inexistence of God*

Let us then examine this point, and say, "God is, or He is not." But to which side shall we incline? Reason can decide nothing here. There is an infinite chaos which separated us. A game is being played at the extremity of this infinite distance where heads or tails will turn up. What will you wager? According to reason, you can do neither the one thing nor the other; according to reason, you can defend neither of the propositions. Do not, then, reprove for error those who have made a choice; for you know nothing about it.

"No, but I blame them for having made, not this choice, but a choice; for again both he who chooses heads and he who chooses tails are equally at fault, they are both in the wrong. The true course is not to wager at all."

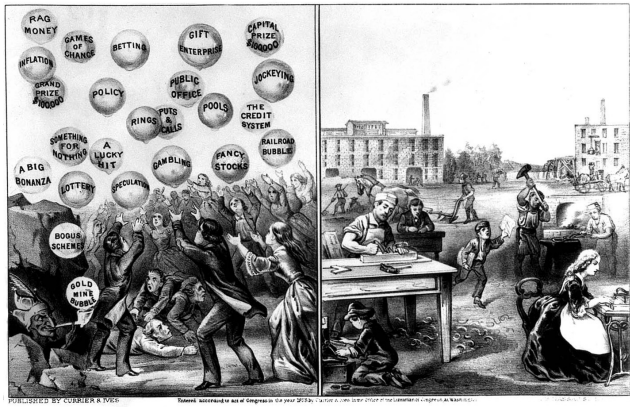
Yes; but you must wager. It is not optional. You are embarked. Which will you choose then? Let us see. Since you must choose, let us see which interests you least. You have two things to lose, the true and the good; and two things to stake, your reason and your will, your knowledge and your happiness; and your nature has two things to shun, error and misery. Your reason is no more shocked in choosing one rather than the other, since you must of necessity choose. This is one point settled. But your happiness? Let us weigh the gain and the loss in wagering that God is. Let us estimate these two chances. If you gain, you gain all; if you lose, you lose nothing. Wager, then, without hesitation that He is.

"That is very fine. Yes, I must wager; but I may perhaps wager too much."

Let us see. Since there is an equal risk of gain and of loss, if you had only to gain two lives, instead of one, you might still wager. But if there were three lives to gain, you would have to play (since you are under the necessity of playing), and you would be imprudent, when you are forced to play, not to chance your life to gain three at a game where there is an equal risk of loss and gain. But there is an eternity of life and happiness. And this being so, if there were an infinity of chances, of which one only would be for you, you would still be right in wagering one to win two, and you would act stupidly, being obliged to play, by refusing to stake one life against three at a game in which out of an infinity of chances there is one for you, if there were an infinity of an infinitely happy life to gain. But there is here an infinity of an infinitely happy life to gain, a chance of gain against a finite number of chances of loss, and what you stake is finite. It is all divided; where-ever the infinite is and there is not an infinity of chances of loss against that of gain, there is no time to hesitate, you must give all. And thus, when one is forced to play, he must renounce reason to preserve his life, rather than risk it for infinite gain, as likely to happen as the loss of nothingness.

For it is no use to say it is uncertain if we will gain, and it is certain that we risk, and that the infinite distance between the certainly of what is staked and the uncertainty of what will be gained, equals the finite good which is certainly staked against the uncertain infinite. It is not so, as every player stakes a certainty to gain an uncertainty, and yet he stakes a finite certainty to gain a finite uncertainty, without transgressing against reason. There is not an infinite distance between the certainty staked and the uncertainty of the gain; that is untrue. In truth, there is an infinity between the certainty of gain and the certainty of loss. But the uncertainty of the gain is proportioned to the certainty of the stake according to the proportion of the chances of gain and loss. Hence it comes that, if there are as many risks on one side as on the other, the course is to play even; and then the certainty of the stake is equal to the uncertainty of the gain, so far is it from fact that there is an infinite distance between them. And so our proposition is of infinite force, when there is the finite to stake in a game where there are equal risks of gain and of loss, and the infinite to gain. This is demonstrable; and if men are capable of any truths, this is one.

Blaise Pascal, VII. Qu'il est plus avantageux de croire que de ne pas croire ce qu'enseigne la religion chrétienne, *Les Pensées* (1870)



THE WAY TO GROW POOR. ✳ THE WAY TO GROW RICH.

Currier & Ives, *The way to grow poor. The way to grow rich.* (1875)

ALL MONEY IS A MATTER OF BELIEF.

Adam Smith, *The wealth of Nations* (1776)

Aerial view of Manhattan

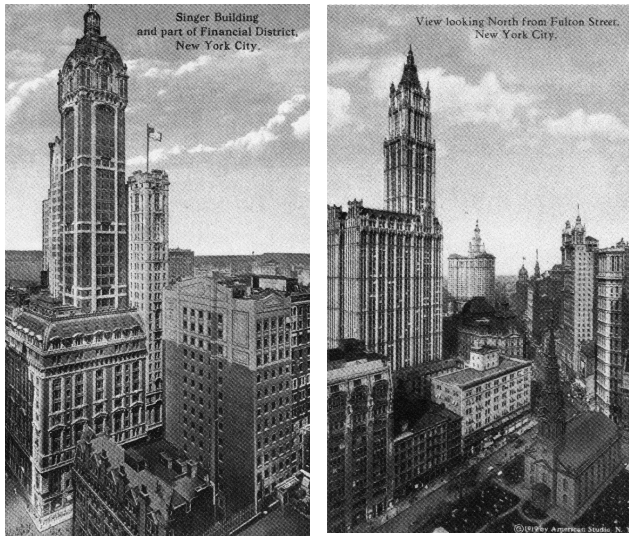
JUST SPECULATING:
Observations on the Dynamics of CBDs

The common cliché "the corporate skyline" suggests that American cities have been dominated by structures built by and symbolic of "Big Business." The phrase offers an easy shorthand for the increasing influence of corporations in the country's economy and culture, but it is profoundly misleading as a description of the dynamics of downtown growth. In all periods, the majority of skyscrapers have been speculative, not corporate buildings. Central business districts, or CBDs, must be understood as complex, competitive commercial markets where space is a commodity, and location and image count. From the 1880s through the 1920s, the consolidation and restructuring of industry and business and the rise of managerial, or corporate capitalism helped transform American cities and culture. Social and urban historians have analyzed how production and administration became separated, with executives and office workers located in urban buildings near financial and other services! The increasing wealth and power of the corporate sector and the rapid expansion of the white-collar workforce, including large numbers of women, gave rise to looming office buildings and lavish headquarters. In histories of the skyscraper, such conspicuous spires as the Singer, Metropolitan Life, and Woolworth Buildings have become standard representations of the growing presence and power of corporations in the modem city.

Indeed, scholars in various disciplines have equated big business and big building:>. Characterizing the different values of nineteenth- and twentieth-century city builders, cultural historians Thomas Bender and William Taylor contrasted the "civic horizontalism" of the earlier period with the "corporate verticality" of the modern metropolis.2 "Vertical expressions of corporate power" was the phrase used by social historian Olivier Zunz to describe early-twentieth-century skylines.3 Many architectural historians have explained skyscrapers as expensive expressions of corporate identity or as advertising. Kenneth Gibbs stated the central concern of his study of skyscrapers from the 1870s through the 1930s to be "the manner in which the tall office building functioned as an image-forming vehicle for big business". William Jordy referred to high rise development such as Rockefeller Center as "corporate urbanism." The words skyscrapers and corporate buildings are used interchangeably by many authors. For some, the association seems simply an elision-that is, they fail to mention any buildings erected as rental propertics.6 For others it reflects ideological assumptions. Marxist social scientists Joe Feagin and Robert Parker explain the growth of skylines in the first three decades of the twentieth century as paralleling the expansion of large independent and merged corporations during the "rise of oligopoly capitalism"; such firms, they claim "sought larger buildings for their functional utility and for their symbolism of power." While not false, such statements imply that most skyscrapers have been built, owned, or are occupied principally by large companies-which is demonstrably untrue.

Speculative buildings – structures erected by individuals or groups of investors purely as rental properties – have greatly outnumbered corporate construction in every period of skyscraper history. Most corporate head quarters Also lease a major portion of their building to outside tenants. This chapter argues that all skyscraper – even corporate showcases – can be viewed as real estate ventures, either as income-generating properties or as long-term investments in high-value urban land.

Few architectural historians have considered speculative skyscrapers either as a type or as forces shaping the skyline. The best work on the subject is an article by Gail Fenske and geographer Deryck Holdsworth, which despite its title, "Corporate Identity and the New York Office Building, 1895-1915," addresses both corporate and speculative buildings. Fenske and Holdsworth identify two forces as "agents of New York's transformation from a mid-nineteenth-century city, with an extended village-like character, to a twentieth- century skyscraper city." One was the "large-scale commercial enterprises, whose presence was announced by larger and larger business buildings identified with company names." The other was "scores of smaller commercial and professional firms and



Singer Building (1908) and Woolworth Building (1913) in context

their demand for office space close to key sites and key enterprises." In addition to the familiar topic of "Who built skyscrapers?" the authors thus posed a more original and intriguing question: "Who occupied them?"

Their research revealed that, in most cases, the occupants were not exclusively the companies that erected the trademark rowers. In the forty seven-story Singer Building on lower Broadway, the company's offices occupied just one floor of the rower; all others were rented, mostly to lawyers and financial services. Of the fifty-five stories of the Woolworth Building, that company's operations filled less than two floors, while the remaining space was leased, generally as small offices. A list of tenants in 1913 recorded around 600 names of individuals or companies; another of 1924 listed more than 400 lessees, including such enterprises as the Nestle Food Company, the Honolulu Iron Works, American Linseed Company, Patent Vulcanite Roofing, Bridgeport Brass, and the Franco-American Promoting Company. In the base section of the building, from the second through the twenty-fifth floor, there were eighty five office units per floor, and the majority of tenants rented one to three units. Unfortunately, Fenske and Holdsworth do nor fully discuss the implications of the numbers that so underscore the importance of smaller comprises and professional services in the economics of these corporate buildings. And though they also researched the mixed tenancy of several major speculative structures of the period, their analysis maintains the standard separation of corporate and speculative buildings.

Corporate versus speculative is a false distinction but, like most old saws, it has some validity. Corporate: headquarters are usually treated as an elite group, and because creating identity is part of function of a headquarters, many have impressive facades, opulent lobbies, and posh executive offices and board rooms. Because the sole purpose of speculative structures is to make money, budgets and buildings are often spare. Yet almost all corporate-owned buildings rent some of their floors to tenants. Seldom was a headquarters used entirely by a company's own employers, especially in the high-rent central business district. (Buildings such as New York's Lever House or Chicago's Island Steel were near anomalies). Creating a distinctive image is as important for speculative developers as for corporate owners, and they use precisely the same strategies to do so, including height, prime locations, and rich materials. Indeed the terms used by the real estate industry to describe office buildings refer not to ownership, but to quality; "Class A," "Class B," etc. There is a little difference in the interiors of the typical office floors of corporate or speculative buildings, because most corporate buildings were conceived from the outset as revenue-generating properties, the office Boor plans had to follow market formulas and be generic and flexible.

In writings on skyscrapers it is considered a verity that companies justified very tall or lavish headquarters as advertising and that a kind of "edifice complex" drove up building heights of corporate towers. indeed, the most conspicuous presences on the New York skyline in the early twentieth century were the brand-name Singer, Metropolitan Life, and Woolworth Buildings; from 1908 to 1913 each successively took the title of world's tallest building. At other times, though, the loftiest towers were speculative. In 1892 in Chicago, the highest landmark in the Loop was the Masonic Temple, which was financed by stock subscription. 11 In 1898, the tallest structure in Manhattan was the thirty-two story 15 Park Row, erected by a group of investors, the Ivins Syndicate. Likewise, in the early 1930s, the highest spires of New York-the Empire State, Chrysler, Cities Service, RCA, and Bank of Mru1hattan Company Buildings – despite some corporate-sounding names, were all speculative ventures. Extreme height has publicity value that equally benefits corporate or speculative owners.

Far more important than advertising value in driving up building heights were strong demand for office space and costly sites in prime locations. As land prices escalated, taller buildings were required to lower the costs of producing a square foot of rental space. High rents virtually ensured that a corporate building owner in a prestige district would become a landlord. A good example was the Bankers Trust Building at 14 Wall Street, across the street from the New York Stock Exchange. In 1910, the bank had paid the highest price yet recorded for Manhattan land, $820 per square foot, and after demolishing the

Gillender Building (1807) and Bankers Trust (1912). Successive towers on same site.

eighteen-story Gillender Building and adding an adjacent parcel, a thirty-nine story tower was shoehorned onto a site just 90 x 90 feet. The bank occupied only the lower three floors, renting the stories above, generally as small offices, to law firms, brokers, and other professionals who paid high rates for such a prime location. Bankers Trust's own staff operations were housed in less expensive space elsewhere. Many other examples of using tenants to finance a flagship building could be cited; at least forty percent of the floors leased to outside tenants seemed to have been standard through the century. In 1960, when The Chase Manhattan Bank erected its sixty-story headquarters in Lower Manhattan, only the lower half of me building was used by the bank, while floors thirty-four and up (except the top one) were leased ! The rentable area of One Chase Manhattan Plaza is 1,820,000 square feet. In 1995, Chase continued to lease thirty-eight floors of its main building, even though the net office space occupied by corporate operations in buildings in Lower Manhattan exceeded the total area of its headquarters. Corporations relocating home offices outside prime districts generally constructed more space than they needed, building to the optimal economic formula rather than to their present needs. A good illustration of this was the succession of structures erected by the Metropolitan Life Insurance Company. In the late 1880s, the company sold its building in Lower Manhattan and moved uptown to Madison Square and Twenty-third Street, where they erected an eleven-story building, completed in 1893. The rapid growth of the business required more and more space for burgeoning staff and files, and over the next decade, annexes were added until the headquarters covered nearly the entire block. After acquiring the last remaining parcel and demolishing the Madison Square Presbyterian Church, the company erected its fifty-story campanile. On completion in 1909, it was the world's tallest office building, and Metropolitan Life was the world's Largest insurer. Yet throughout these expansions, the company continued to lease about forty percent of its building to tenants. One function of the record-breaking tower was to proclaim the company's status, but the income-generating aspects were by no means incidental. In a report to his board, Vice President Haley Fiske called the rower "a proper investment of the company's funds" and boasted that it "didn't cost the company a cent because the tenants footed the bill." In addition to the advertising value and additional income from tenants, there were numerous advantages in a company owning its building. Control over the quality of the space, other tenants, and, especially, the duration of occupancy (with no leases to negotiate) proved advantageous for long-range planning. Further, corporate skyscrapers represented valuable assets in urban real estate. Many companies replaced a low rise structure with a taller one or sold an old building at a profit when they moved or downsized. Some recent examples of "recycling" headquarters in New York include the RCA Building (now GE) at Rockefeller Center, the Pan Am Building (now Met Life), and the AT&T Building (now Sony). Chicago's most notorious renaming was the Playboy headquarters (alias the Palmolive Building). Skyscrapers adapt easily to new uses or owners. In contrast, many suburban "corporate campuses" built in the 1970s and l980s whose companies have suffered hard times, have become giant white elephants.

In their article, Fenske and Holdsworth asserted that for advertising value, corporate towers were sited to maximize their "visibility to urban crowds." But while visibility is important, rentability was surely a far more powerful impetus. Unobstructed towers in prime areas offered well lit office space and views that translated into high rents. Rather than interpreting corporate skyscrapers simply as representations of big business, we need to understand them also as businesses themselves. Both corporate and speculative buildings are part of a marketplace where the space is for sale, and location and image have value. The chief consumers in this market were not large corporations, but small and medium-sized companies and firms. The preponderance of small tenants was more pronounced in the first half of the century, but even today, they represent the majority of renters. Around 1900, buildings were usually constructed with individual suites, mostly quite small. One expert noted that offices measuring 10 x 12 feet and 15 x 20 feet (120 to 300 square feet) rented more easily than larger ones. One of the most successful New York highrises of the period

Pan Am/Met Life Building. Corporate Buildings are easily recycled.

was the twenty-story American Tract Society Building, which was divided into more than 700 offices, with thirty-six per floor, ranging in size from about 100 to 150 square feet. The Park Row Building contained about 950 offices and some 3,500 tenants. In Chicago, offices were slightly larger, usually around 200 to 300 square feet, but each floor was still divided into many small units. The Masonic Temple had about 600 offices; the Monadnock 1,600.

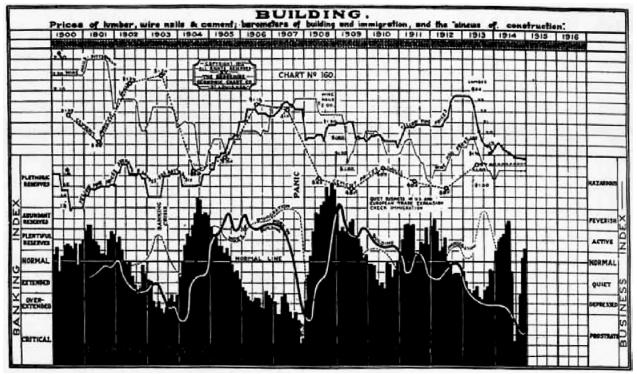
Throughout the century, the size of the average office increased, but the proportion of small renters to larger ones remained high. A survey of Detroit buildings in the 1920s showed that eighty-eight percent of downtown tenants occupied less than 1,000 square feet. With an average at that time of about 100 square feet per employee, this meant an office of ten or fewer. Less than two percent of tenants used 6,000 square feet or more. Similarly, in Boston, eighty-seven percent of tenants leased less than 1,000 square feet, while only one percent used more than 4,000 square feet. Even in 1990, according to a recent survey of Chicago buildings, nearly two-thirds of downtown tenants leased spaces of 1,000 to 2,500 square feet!

Looking inside the skyscraper at tenancy, we see not the hive of a single company, but a cross-section of interdependent enterprises and competing firms. Many historians view the modern city as being produced by hegemonic forces: Large corporations, moneyed interests, and government, usually seen as acting in collusion. Certainly, these are influential, but more significant for explaining CBD growth is the dynamic of small-scale capitalism that is, both me myriad tenants that fill downtown highrises and the highly confused and competitive real estate industry that constructs and operates them.

To understand the modern city, it is speculative development we should study. Cities grow primarily in the fits and starts that are real estate cycles. Their skylines – the heights of buildings, their density, and their spatial distribution – graph these cycles in 3-D. For example, the tallest buildings generally appear just before the end of a boom, their height driven up by the speculative fever that affects both developers and lenders. Speculative buildings constitute the majority of structures in every central business district, and they represent about two-thirds to three-quarters of new construction in nearly every period. Historians have paid little attention to this important subject, either as a category of buildings or as individual structures, except when they are the designs of well known architects.

Since there were no industry surveys until the mid-1940s, gauging the degree to which speculative buildings dominated skyscraper construction is difficult for the early decades of the century. My own rough estimate indicated that during the 1920s, when Chicago added some twenty major towers, about a third carried the names of corporations. During the same years in New York, about one hundred major buildings were constructed and the ratio was about four to one. Even in the post-World War II decade, the years most closely associated with corporate expansion and signature headquarters, the preponderance of highrise construction in New York was speculative {also called "competitive"). According to the Real Estate Board of New York, seventy-eight percent of new office construction from 1947 to 1961 was in competitive buildings. In postwar Chicago the stringent zoning discouraged speculative projects for about ten years, but after a change in zoning under Mayor Daley, larger structures were encouraged and building resumed.

Speculative developers represented a wide range of individuals and groups. Some were wealthy figures who regarded commercial architecture as a lucrative area of investment; for example, Peter and Shepherd Brooks, who erected and owned a number of Chicago's early skyscrapers, including the Montauk and Monadnock Buildings, directed their interests from Boston through correspondence with their local agent, Owen Aldis. At the other cod of the spectrum were rags-to-riches entrepreneurs such as Fred French and Irwin Chanin, who built up empires by leveraging each building into the next bigger one. Syndicates of stock holders or development corporations, often organized for a single project, were a common way to finance a structure. Some development groups represented two or three major investors, as in New York's Equitable or Empire State Buildings; others



Graph showing prices of various building materials, banking resources nationally and annual building (for all types of construction). White line against black field represents the building index.

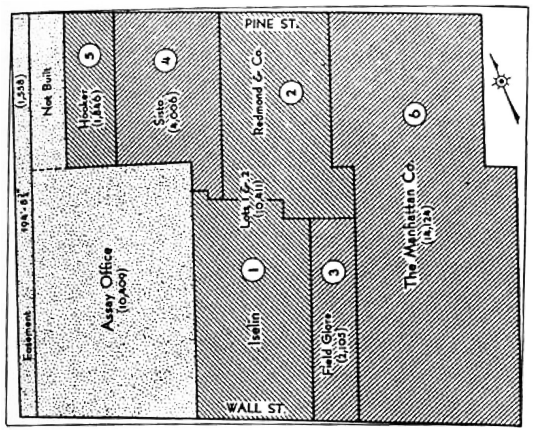
represented pooled resources, such as the fraternal orders that erected Chicago's Masonic Temple. Some developers were rich and powerful, others were lean and hungry: all were looki11g for an attractive return on their investment.

The word speculative needs to be examined briefly, since it is often used pejoratively, implying either a tight budget and low quality, or a sort of amoral rapaciousness, as in "greedy speculators." The term, however, simply refers to structures erected as rent- roducing properties. Quite literally, developers speculate on the future value of the property, estimating an income stream over the life of the building. Two types of speculative development should be distinguished, which I will call stm1dard conditions and boom behavior. The former is most important for the general urban scene, while the latter produces the most spectacular buildings.

In normal times, when costs of land, materials, and construction are predictable, developers use well-tested formulas to estimate the economics of a project. These calculations are based on the concept of the capitalization of net income. As Richard Hurd explained in his classic treatise of 1903, Principles of City Land Values, capitalization of ground rents (the process of translating future rents into a present value) is the fundamental basis of urban land values. Figuring capitalization involves many factors and multiple steps; from the gross rent of land and building must be deducted all charges for services, taxes, insurance, repairs, depreciations, and interest on the money invested. All these factors are considered over time. The real economic value of property (the price a developer should pay for it or sell it for) therefore becomes, as another expert explained, "the sum of all the net land incomes that will accrue in perpetuity, discounted for the period of time that will elapse before they arc received." This value takes into account the net income for thirty or forty years. As discussed in Part I, the conventional market formulas and the concept of economic height were widely known and followed in the industry. Most speculative building was not risky, but reserved in its calculations and highly responsive to market desires.

In booms, the so-called rational basis of land values is disregarded, and the answer to the question "What is the value of land?" becomes "Whatever someone is willing to pay." Some speculators estimate value on new assumptions of higher rents; others simply plan to turn a property for a quick profit. In the rapid population growth and the physical expansion of cities of the late-nineteenth and early-twentieth century, increasing demand for buildings would seem a certainty. But due to the cyclical character of the real estate industry, the riming of a project is crucial to its success, and the amount a property reaps in rents or sale depends on when in a cycle it is completed or comes onto the market.

Empirically, the recurrence of major booms every couple decades has long been noted, bur the historical patern of real estate cycles and a theory of their srage5 was first formulated in the 19305 in the work of economists such as Homer Hoyt and Roy Wenzlick. In *One Hundred Years of Land Values in Chicago* (1933), Hoyt charted and analyzed the cycles of Chicago real estate from the city's foundation in 1830s. For this extraordinary volume, he poured through tens of thousands of documents, including records of sales, annual reports of conveyances, construction records, and tax assessments, and from these, identified a pattern of demand, development, overbuilding, and decline that recurred five times in the city's hundred-year history. In these cycles he discerned "a series of forces that arc to a certain degree independent and yet which communicate impulses to each other in a time sequence, so that when the initial or primary factor appears, it tends to set the others in motion in a definite order. The description of the full cycle was very detailed, with some twenty stages: major steps included the growth of population as a factor in a rapid rise of rents; speculation in land; the role of easy credit in stimulating the volume of construction; overbuilding; a lull in new construction; stagnation and foreclosures. Hoyt concluded that the duration of a typical cycle from peak to peak was about eighteen years. Focusing on residential construction in St. Louis, Roy Wenzlick observed similar stages in its real estate cycle, which lasted fifteen to twenty years. This was about three times as long as the average business cycle, which he deemed important, since the duration meant that "few people were able to apply information in one cycle to corresponding conditions in the next."



Assembled lots for 40 Wall Street (Bank of Manhattan company building).

Indeed, a key question about cycles is, if their pattern is so predictable, why don't people foresee the inevitable bust? This conundrum can perhaps be answered by looking more closely at the dynamics of speculation and at a typical skyscraper development.

General prosperity and easy financing underlie all booms. The usual pattern is this: big profits for buildings completed early in the cycle attract many more developers and investors into the market. Booms create their own momentum, and contrary to the simple notion of supply and demand , they can proceed somewhat independent of the net need for office space. To fill a new building, a developer need only attract tenants from their present quarters; another's loss is his gain. Most important, though, the long lag between the conception and completion of building projects disguises the magnitude of all development until well after the supply of new space has exceeded demand. Many projects are initiated in a short span of time, until developers and lenders finally recognize that the market is glutted; then, for a number of years, there is virtually no new activity. Graphs of annual office construction show extreme curves, greater than those for other sectors of the building industry.

Speculating in land is a factor in all real estate cycles. Assembling buildable sites – especially one large enough to erect a profitable tower – usually required complicated negotiations with many owners or lessees. Brokers often performed this task, either for a client or on their own. In *1930, Fortune* magazine described the skyscraper at 40 Wall Street (which became known as the Bank of Manhattan Company Building) as a model of the process of site assemblage. Keeping the scope of their plans secret so as to protect against "hold-outs" brokers would approach owners of various plots to arrange for options in the names of different companies. Title to one lot might be taken by the real estate house for the developer; title to another would go to a corporation organized by the promoter. For 40 Wall Street there we re seven lots assembled, and the strategy of the brokers was compared to a military campaign:

The property is attacked from the principal from, and the lots facing the street – say Wall Street – are first secured. Then the secondary lots are taken. And by the time the gentleman in possession of the rear lots have begun to suspect that their properties have key value to a great scheme, they find themselves cut off from the sun and with only one possible profitable movement – backwards and out.

One unified lot was usually valued at 10 percent more than the sum of its pans, though some believed that it could be worth 50 percent more. For his work, the real estate agent would receive a commission of 2.5 percent on sales up to $l00,000, grading to 1 percent on sales of more than $2,000,000, a standard set by the Real Estate Board of New York.

Once a site was assembled, the promoter would hire an architect to create an impressive rendering that could be sent to the newspapers with a press release: announcing the project. Such publicity was often designed to attract a a major client or a buyer for the entire package; the plans for the Chrysler Building were sold in this manner. A quick turnover could prove very lucrative. A 1930 article in *Fortune* reported that most of the "killings" in skyscraper construction were made in this way, and that profits of $1 or $2 million could be made on a $500,000 cash investment. Some sites were reported to have changed hands several times before being built upon, making it possible, as the builder William Starrett noted, "to tum a profit without turning a spade fill of earth".

The next step for a speculator was to negotiate a sufficient number of leases to approach lenders for construction money. The three standard sources of funds were savings banks, insurance companies, and bond houses. Saving banks offered the best rates (about 5 percent or under), but their policies were conservative and they financed a maximum of 50 or 60 percent of the value of the completed structure. The second lowest rate was offered by insurance companies (around 5.5 percent), which, like the banks, did not lend either the full value of the property or the total cost of construction. Bond houses charged higher rates (around 6 to 10 percent), but would fund the entire sum; for this reason, as well as their willingness to accept higher risk projects than the other institutions, they became the most common form of financing for speculative office

Lower Manhattan, tallest towers all completed between 1929 and 1931

buildings.

Trade in bonds dealing exclusively or largely in building issues first developed in the 1890s to finance the growing demand for large commercial buildings-structures of a scale that required mortgages exceeding the borrowing capacity of most individuals. Their popularity increased greatly after World War I as a result of the public's familiarity with war bonds; offered in denominations of $100, $500, and $1,000, the bonds were accessible to small investors. Loans were secured by the future value of the property. The bonds performed somewhat like preferred stocks, though the investor did not own "shares" in a particular building, but rather, in the combined portfolio of the bond house. The practice was outlined in brief by Shultz and Simmons:

The theory of the bond issue was based on a gradual reduction of the principal through serial repayment or amortization of the mortgage. In easy Stages, from earnings of the property, annual payments amounting to about five percent of the principal were to be made after the second year. The security behind the mortgage was the steel and stone of the building. The amount of the loan and its soundness was predicated on the estimated net income of the property.

A typical bond yielded six percent, which was twice the rate paid on a commercial bank savings deposit and more than two percentage points higher than the rate offered by savings banks. With major companies such as S. W. Straus, there was minimal risk, at least through the 1910s.

The system worked well as long as demand for new office space: remained steady and the number of new buildings was moderate. In the mid-twenties, though, the very success of the bond houses attracted a flood of investors; in 1925, $675 million in real estate bonds were sold in the United States, more than a tenfold increase over the previous five years. In 1926, new issuances totaled nearly $1 billion. Under the pressure of consumer demand for bonds and in the heady atmosphere of the skyscraper boom, even conservative bond houses relaxed their lending standards. And as Shultz and Simmons observed (from their post. Depression perspective), some of the companies became mere sales agencies: "The inevitable result was that the aggressive and powerful organization, totally oblivious to the natural demand for office space due to business growth, rushed ahead with new office building construction."

Speaking to the national convention of building owners and managers in 1926, NABOM President Lee Thompson Smith denounced the actions of bond houses and speculative builders in the overproduction of new office space, warning that skyscrapers were being put up "entirely through the efforts of bond houses to sell bonds, whether the buildings were needed or not." He further charged that the overproduction was being caused by speculative builders "who borrow the hole cost of construction regardless of return... then sell the building at a profit and proceed to erect another somewhere else." Smith, of course, represented a professional organization interested in stable office rents and property values, and thus was understandably anxious about over building. His alarm – which went unheeded – was entirely accurate; by the mid 1930s, many of the bond houses were in receivership; the former paragon of the industry, S. W. Straus, defaulted on $214 million in bonds, affecting some 60,000 investors. The failure of the real estate bond market was as great a scandal in the 1930s as the Savings and Loan crisis of the 1980s. After the collapse of an inflated market, it is easy to look back on the grave errors of judgment that preceded a crash; yet the basic indicators of the twenties economy seemed to promise unimpeded growth. Pent-up demand for office space after World War I , the expanding numbers of the white-collar workforce and the increasing per-person average for office space all fueled the building industry. Each year, the summaries of annual construction figures reported record numbers. In New York in 1924, the *Real Estate Record and Builders Guide* headlined that construction was up 130 percent over the previous year, with "Continuous Unprecedented Volume of Contracts Awarded in the Five Boroughs." In 1926, contracts again exceeded all previous years, which "was a distinct surprise to close observers of the industry, many of whom in the early part of last year were firm in their belief that the high level of 1925 would seldom if ever be equaled." In 1927, the market was slightly less active, but 1928 was another record year. Industry expert Charles F. Noyes

Forty-second Street towers, all completed between 1928 and 1931

asserted: "Never has the outlook been brighter and never has a more prosperous year passed for the important operators and builders than 1928." The same held true for 1929.

The volume of office space constructed in New York from 1925 to 1929 was more than 17 million square feet, and projects initiated by 1930 and completed by 1933 added another 13 million, a total of 30 million square feet in eight years. Through the first five years of this phenomenal expansion, low vacancy rates continued to indicate a strong market for more new office buildings. From 1925 until 1931, occupancy for first-class properties citywide averaged between ninety-one and nearly ninety-six percent (ten percent vacancy was assumed to be normal, in order to accommodate the the normal pattern of leasing). The market in the financial district was particularly strong; in late 1929 and early 1930, occupancy was at ninety- nine percent. By mid-1931, though, the vacancy rate had shot up to seventeen percent, and it peaked in 1934 at around twenty-five percent.

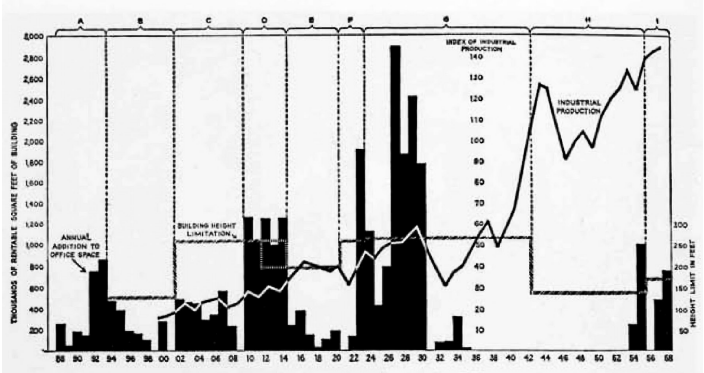
Several factors worked together to fuel the skyscraper boom of the late 1920s. The successive years of record-breaking construction and low vacancy rates for quality properties (new buildings were filling up at the expense of some older structures), prompted both developers and financiers to ignore warnings about overbuilding. As bond houses and other institutions, flush with prosperity, competed for real estate deals, finding financing became so simple that *Fortune* opened the article on speculative building with the line: "All a man needs to own a skyscraper is the money and the land. And he may be able to get along without the money." With the loans secured by nothing more than the future value of the property, developers had little to lose if they failed. In retrospect, it is clear that the system was doomed at some point to catastrophic failure. But, like the stock market in 1929, most people were caught up in the fever. As Frederick Lewis Allen explained in *Only Yesterday* (1931): "As you look at the high prices recorded on September 3, 1929, remember that on that day few people imagined that the peak had actually been reached. The enormous majority fully expected the Big Bull Market to go on and on".

Both building forms and the morphology of central business districts have a temporal dimension: they are shaped by the cyclical character of the real estate industry. Because escalating land prices drive up the number of stories needed to spread the cost of the lot, the tallest buildings generally appear at the end of a boom cycle. Around 1925, major New York towers avenged between thirty and forty Stories, but by the end of the decade, most new buildings were forty to forty-five stories, even for quite small sites. In 1930, Clark and Kingston demonstrated that the economic height for a major building on a large site (200 x 400 feet) in a prime district had risen to sixty-three stories. The surge of construction from 1929 to 1931 saw about a dozen towers over fifty Stories, including five between sixty-seven and eighty-five floors. Although precise equations for the most profitable number of stories depended on the cost of land and on anticipated rents (both of which related to location), in general, height was a barometer of a boom. The dominant towers in aerial photographs of Manhattan were almost all begun in two cyclical peaks – from 1910 to 191 3 or 1928 to 1931.

Cycles also affected density and spatial distribution. Favoring proven districts. developers often squeezed very tall buildings onto small sites, greatly intensifying concentrations. In addition, higher tax valuations on lots with skyscrapers caused an upward revaluation of adjacent properties based on their potential for multistory use; this action encouraged – or even forced – more intensive development of central areas. Developers also expanded at the edges of a successful zone. As one industry expert recommended in the *Record and Guide,* following a record year for conveyances:

Anyone who considers calmly the existing situation must reach the conc1usion that there is no surer way of making money in the world than to purchase improved real estate which carries itself in some central but less expensive district of Manhattan, particularly real estate situated on an avenue. .... It is the appreciation of this fact, coupled with the excellent renting conditions. which is responsible for the current activity and strength.

In the heady optimism of booms, some



Height limitation changes in Chicago

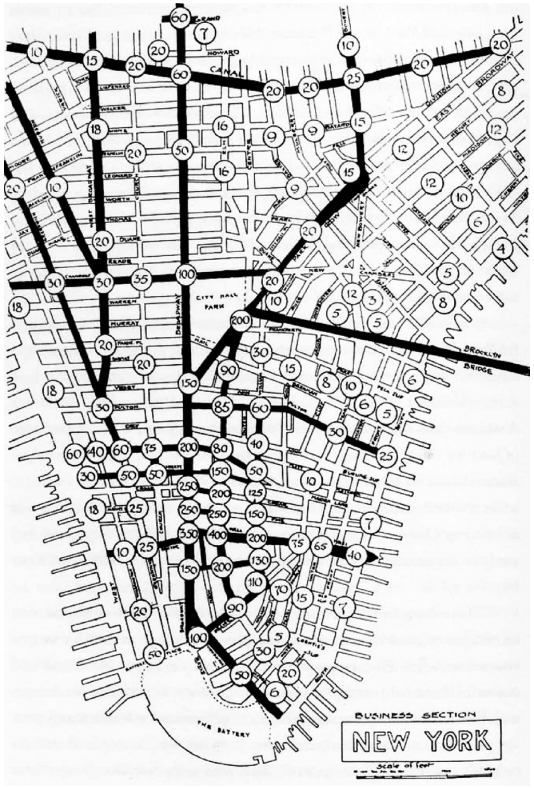
speculators pioneered in new areas, hoping that with large-scale projects, they could spawn a popular new district. This strategy failed with the Empire Stare, but worked at Rockefeller Center and on Chicago's North Michigan Avenue.

The oversupply of office space produced during booms often spurred a political reaction. Most municipal regulations were implemented during the downturn that followed a period of extreme overproduction. The height restrictions passed in 1893 in Chicago and New York's first zoning in 1916 were both enacted in the first phase of a real estate recession. Conversely, in the early 19205, when me Chicago office market experienced high demand and low vacancies, the city passed a new law that allowed towers. Keeping in mind the pattern of boom behavior, we can look back at major periods of construction in Chicago and New York and highlight the role of speculative development. Building booms corresponded to prosperity in me national economy, but the particular cycles in each city occurred in somewhat different times and reflected different local conditions. Chicago's cycles were exhaustively analyzed by Homer Hoyt, who described them as being "like tidal waves in their magnitude". In his view, the principal reasons for cycles were the steady pressures of population (which more man tripled between 1890 and 1930, from 1.1 million to 3.4 million residents) and real estate speculation. The boom that saw the rise of the first tall office buildings began in 1879 and peaked between 1889 and 1892, the years before height regulation. As discussed in Part I, buildings of this period included such landmarks of the Chicago School as the Rookery, Manhattan, Monadnock, Masonic Temple, Reliance, Old Colony, Fisher, and Marquette Buildings; there were twenty-one speculative highrises constructed during this three year peak, mostly financed by stock subscription. The glut of new space, made worse by the depression of 1893, resulted in a downturn of construction and land values that reached a nadir in 1898; not until 1902 were the: vacancies absorbed. As rents rose, there was pressure to build, but many in the real estate industry complained that the height limitation of 130 feet (about twelve stories) was not profitable, and that the regulation was hindering new construction. When the city council doubled the height limit to 260 feet in 1902, plans for eighteen new buildings were announced,

From 1902 until around 1915, growth in the Loop was strong and steady, without the characteristic pattern of boom and bust, and without a comparable surge of speculation that hit New York in 1905- 1906. Stimulated by high office rents, there was a flurry of construction in 1910, and especially in 1911 , when developers raced to file permits before the deadline that once again lowered the height limit, this time to 200 feet. From 1912 through 1914, Chicago added over a million square feet of office space each year. But alter the new cap took effect in 1914, construction dropped off almost completely until 1923 . This occurred in part because during the war years, much real estate investment was directed into agricultural land, which doubled in value through the 1910s. This situation reversed after 1920 as population pressures and the long hiatus in construction drove up rents; in 1920, in response to this pressure, the height limit returned to 260 feet.

By 1923, when the city enacted the zoning ordinance allowing a tower , land values and commercial rents had doubled in the Loop, and the boom was in full swing. During the peak years of construction from 1923 to 1929, around 13 million square feet of office space was created, nearly twice its previous total. The new buildings were widely distributed throughout the CBD, including in the western Loop and along the river, and on the developing commercial strip of North Michigan Avenue. For several years, the additional space was successfully absorbed by the expanding economy; in 1927, the overall vacancy rate in both new and old buildings was still under ten percent. A year later, though, many projects faced troubles with financing, and after the stock marker crash in October 1929, the situation- grew steadily worse. By 1931, the vacancy rate was over twenty percent.

New York experienced its cyclicity on a somewhat different schedule. Growth was slow in the last years of the century, but after 1900, general business prosperity began to affect the office-building market. Speculation was rampant by 1905, when a record number of conveyances were reported, a forty percent increase over the previous year. Demand for space in new



Land Values in Lower Manhattan (1903), Dollars per square foot

buildings was strong (rents for new buildings hit a peak in 1905 at around $3.50 per square foot, while older buildings brought only about $ 1.75); this naturally stimulated speculative construction. After several normal years, 1909 saw a record number of plans filed in Manhattan. Average growth was sustained through 1912, bur the next year, the *Record and Guide* reported "an almost uninterrupted and unprecedented stagnation"; the situation worsened through 1914, the same years that Chicago enjoyed record volume. Much of the new office space created in these years was concentrated in major structures such as the Adams Express, Woolwonh, and Equitable Buildings.

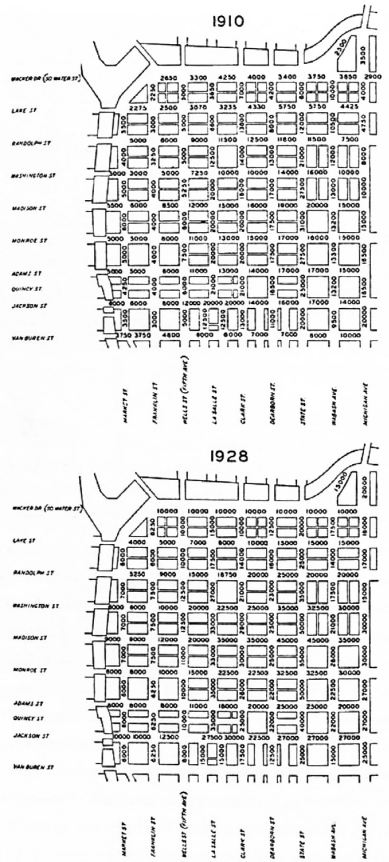
Most construction was focused on a tight geography of the canyons of Broadway and Wall Street. It is instructive to compare a map of land values in 1903 with photographs of Lower Manhattan's densely packed skyscrapers, for both dearly illustrate the astonishing contrast in values for property separated by only a few hundred feet. The most expensive land (5400 per square foot) was at the intersection of Wall and Broad Streets, the site of the New York Stock Exchange, and the next highest values (ranging from $350 to $250 per square foot) lined Broadway north of Trinity Church. Just two blocks to the west, though, values plummeted to $25 per square foot, and down to $10 near the waterfront. The lower values were reflected in form in the great expanse of older low rise structures from which the crowded towers rose.

Such tenfold and higher differences underscore the familiar quip that the first three rules of real estate development are "location, location, and location." Only in New York was there such a dramatic disparity in land values within a short radius. Indeed, Hurd's 1903 survey of twenty American cities showed that New York was the only one in which the value of land for office buildings was higher than for the best retail areas; prime financial land in Manhattan was valued at $35,000 per foot of frontage, while the best retail districts had values of about $18,000. The ratio was reversed in Chicago, where the costliest land, $15,000 per front foot, was used for department stores, while financial land averaged 58,000 per front foot.

Value relates to the intensity of use - the human traffic or the number of occupants – and the income it can generate, either as rents or in revenues from sales. The anchor of extreme wealth in Lower Manhattan and powerful financial institutions such as the New York Stock Exchange, major banks, and corporations made both proximity for business and prestige addresses much desired, and thus drove up the price of land and the heights of buildings. This was particularly true in the late nineteenth century through the 1910s, when the first tall office buildings clustered around Broadway and Walt Street and near City Hall on Park Row, but the financial district remained a focus of development through the 1920s. Even in 1941, a study entitled *Decentralization in New York City* gave ample reasons for the concentration in Lower Manhattan.

Dependence on network and telegraph, telephone, and cable lines coming to a central focus has tended to tie the financial district to one spot. It is important that financial institutions remain close to the shipping lines, Sub-treasury, Federal Reserve Bank, Customs House, Clearing House, and then principal depositors such as railroads, utilities, as well as other banks so that business may be transacted speedily and directors conveniently reached for meetings. The new clearing system of inter-office confirmation of transactions by comparison "tickets" requiring running has emphasized the need for concentration. Coffee, sugar, cotton, and cocoa markets are required by Exchange rules to have bank "margin depositories" within a given radius for accepting down payment against "future" trades and hence these exchanges must stick close together in a limited area.

In the 1920s, New York spawned its second CUD, Midtown – a vaguely defined area that had the transportation nexus of Grand Central Terminal as a dominant node, and a major cross-axis on Forty-second Street. Midtown stretched north. Fifty-ninth Street and south to around Thirty-fourth Street, principally on Fifth, Madison, Park, and Lexington Avenues. In the 1910s, Grand Central had spurred hotel and commercial development, but in the 1920s, office buildings became the principal use. I n the last years of the decade, a battalion of new skyscrapers



Chicago land values

and residential hotels lined East Forty-second Street and marched up Lexington Avenue. In Chicago, the areas devoted to office buildings spread more evenly through the Loop, and values did not show the dramatic disparities of Lower Manhattan. Hoyt compiled maps of land values for eight dates in the city's history. The years 1910 and 1928 are illustrated here; numbers refer to one foot of frontage, with a lot depth of about 160 feet, not per square foot, as in the New York map. In 1910, the highest prices were on State Street between Madison and Monroe Streets, the area of the major department stores; these were $27,500 to $31,000 per front foot. In the financial district around the Board of Trade and on South LaSalle Street, values were around $20,000, and the mix of office buildings and hotels on southern Michigan Avenue ranged from $10,000 to $20,000. By 1928, the numbers had risen fairly consistently throughout the Loop, generally 50 to 100 percent above values in 1910. South LaSalle property rose by around half, to $5,000, while at Randolph and State Streets, values increased from around $11,800 to $25,000. Some of the greatest gains were on Michigan Avenue: on blocks between Monroe and Washington Streets, values elevated from $10,000 and $15,000 to $30,000, while just south of the Michigan Avenue Bridge (opened in 1920), a group of tall towers built on relatively narrow lots created a critical mass that multiplied values sixfold and more, from around $2,500 to $3,500 to $15,000 to $20,000. All of these gains were shortlived, for by 1931, values were halved almost everywhere.

One reason for Chicago's multicentered office development may have been the circular route of the elevated mil lines that ringed the business district. As Hoyt suggested: "A different system of transit, such as subways, might have spread business development in a longer line. ... But the Loop land pattern was the inevitable result of a transportation system which intensified the natural advantages of the Loop area". The city's height restrictions also affected the spread by forcing horizontal, rather than vertical expansion; indeed, some of the political impetus behind the original ordinance came from property owners on the edge of the business district who hoped growth would extend their direction. Most of the Loop was built up block after block with flat-roofed boxes, ranging in height from 130 feet to 260 feet, depending on the current regulation. Despite the City Beautiful visions of Daniel Burnham and a generation of civic efforts, though, the skyline never developed a strong visual order. The post-zoning towers marked the widely dispersed points of new development, including both ends of LaSalle Street, along the Chicago River and Wacker Drive, and north and south on Michigan Avenue.

The question of whether municipal regulations dampened Chicago's deve1opment – especially speculative building-was raised in Part I in connection with the discussion of the slow revival of office construction after World War II. *As* we have seen, from the first ordinance in 1893, the fluctuations in height limits clearly affected short-term decisions about construction. Shultz and Simmons argued that the restrictions "crippled" the city's growth, because at times they capped the maximum building size below the level for profitable construction. In so doing, the authors contended, Chicago lost businesses that would have liked to erect a prominent tower, both for their own use and for its advertising value; indeed, they claimed some headquarters moved to New York. Their chart of Chicago's annual production of office space, the changing maximum heights. and the index of industrial production showed that, at certain points, new development lagged considerably behind the national economy.

The dynamics of urban growth and inter-city competition is very complicated, and their hypothesis was probably overstated. New York was vastly dominant in the U.S. *economy* throughout the first half of the twentieth century. In virtually every category-wholesale trade, imports and exports, banking, even manufacturing – the eastern metropolis far outranked Chicago and all other American cities. It seems natural that this commanding lead would correlate in business buildings. Yet, there also seems to be something logical in the idea that when larger structures are permitted, cities grow faster.

New York profited from its aggressive speculative environment. The initial laissez-faire climate, then the liberal zoning envelope, spawned more and more, and taller and taller rowers. In 1929, the planning journal *American*

Berenice Abbot, Cluster of twenties' towers near Michigan Avenue Bridge, Wall Street (1938)

City took a "skyscraper census", counting all buildings of twenty-one or more stories across the country. Of the total of 374, New York had 188 (with a couple of dozen more finished by 1931), while Chicago had 65. Of buildings exceeding 500 feet in 1931, Manhattan had 36, Chicago, 8. Even more impressive was New York's lead in the category of buildings of ten to twenty stories; its 2,291 to Chicago's 384 was a total larger than all other American cities combined. The net volume of office space was likewise disproportionate: between 1871 and 1923, Chicago added about 14 million square feet of office space; during the same period, New York constructed about 74 million." In the boom of the 1920s and early 1930s, Chicago added 13 million square feet of office space, New York, 38 million. Certainly one important factor in Manhattan's success as a business center was its vast supply of rentable space – most of it built by speculators – which ensured that the market remained highly competitive.

While New York continues to vastly outdistance Chicago in the total supply of office space (with over 316 million to 116 million square feet in 1991), the "Second City" claimed first place in one category when in the 1970s it became home to the world 's tallest building, the Sears Tower. Chicago takes pride in this primacy and its history of engineering prowess, and very tall buildings have been actively encouraged by the city government. In 1989, the Planning Commission approved the proposal (now postponed) for a new record-setter, a 1914-foot, needle-thin spire to be named the Miglin-Beitler Tower after its speculative developers. Such an unbashed embrace of bigness now seems characteristic of Chicago. In New York, however, professional and public opinion has shifted against great height, and several proposals for the world's tallest building, which were met with loud protests, were withdrawn." Civic boosterism and local politics can create a climate of what is possible in a city and play an important role in decisions, especially at the extremes.

In general, though, buildings grow tall for a number of reasons. One, often noted by historians and social critics, is to attract attention – thus advertising the building itself, the owner, or an anchor tenant. Another impetus is the boom-bust cycle through which the real estate industry periodically answers a real demand for new office space with rampant overbuilding. Cycles tend to produce an irrational-looking pattern when seen in two dimensions as a graph of annual production or on the skyline as very tall or densely clustered towers. Over the century, critics of the skyscraper city such as Lewis Mumford have denounced urban congestion and suggested that tall buildings are only acceptable as isolated structures. But that is not the nature of cities. Piling story on story only makes economic sense where land values are high – which is a condition that reflects the demand for location.

Skyscrapers are the ultimate architecture of capitalism. The first blueprint for every tall building is a balance sheet of estimated costs and returns. That bottom line is as true today as it was in 1893 when Barr Ferree noted that "a building must pay, or there will be no investor ready with money to meet its cost." Just as functional concerns, municipal codes, and individual sites affect building forms, so does the program for profit. The rise of the skyscraper and the development of downtowns cannot be interpreted without understanding the economic aspects of urban architecture. Cities are competitive commercial environments where buildings are businesses and space is a commodity. The principles that give them order arc complex, bur comprehensible, and in that, there is great beauty.

Carol Willis, *Just Speculating: Observations on the Dynamics of CBDs (1995)*

Chicago Mercantile Exchange, Anthony Suau (2008)

The tendency for financial services to run right over the cliff is accentuated by financial assets' habit of growing during booms. By lodging their extra assets as collateral, the intermediaries can put them to work and borrow more. Tobias Adrian, of the Federal Reserve Bank of New York, and Hyun Song Shin, of Princeton University, have shown that since the 1970s, debts have grown faster than assets during booms. This pro-cyclical leverage can feed on itself. If financial groups use the borrowed money to buy more of the sorts of securities they lodged as collateral, then the prices of those securities will go up. That, in turn, enables them to raise more debt and buy more securities.

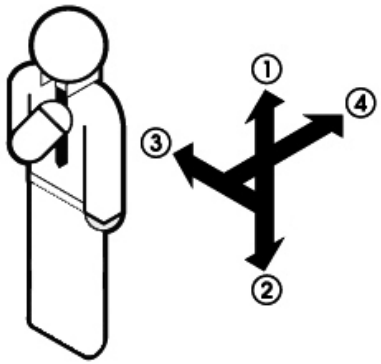
Indeed, their shareholders would punish them if they sat out the next round—as Chuck Prince let slip only weeks before the crisis struck, when he said that Citigroup, the bank he then headed, was "still dancing". Mr Prince has been ridiculed for his lack of foresight. In fact, he was guilty of blurting out finance's embarrassing secret: that he was trapped in a dance he could not quit. As, in fact, was everyone else.

Sooner or later, though, the music stops. And when it does, the very mechanisms that create abundant credit will also destroy it. Most things attract buyers when the price falls. But not necessarily securities. Because financial intermediaries need to limit their leverage in a falling market, they sell assets (again, the system is pro-cyclical). That lowers the prices of securities, which puts further strain on balance sheets leading to further sales. And so the screw turns until those without leverage will buy.

The financial system: What went wrong, www.economist.com (19th March 2008)

One dollar bill

IV. Signs



Instructions on how to do the Christian sign of the cross

(...) The sign is usually said to be put in the place of the thing itself, the present thing, 'thing' here standing equally for meaning or referent. The sign represents the present in its absence. It takes the place of the present. When we cannot grasp or show the thing, state the present, the being 'present' when the present cannot be presented, we signify, we go through the detour of the sign. We give or take signs. We signal. The sign, in this sense, is deferred presence. Whether we are concerned with the verbal or the written sign, with monetary sign, or with electoral delegation and political representation, the circulation of signs defers the moment in which we can encounter the thing itself, make it ours, consume or expend it, touch it, see it, intuit its presence. What I am describing here in order to define it is the classically determined structure of the sign in all the banality of its characteristics – signification as the *différence* of temporization. And this structure presupposes that the sign, which defers presence, is conceivable only on the *basis* of the presence that it defers and *moving toward* the deferred presence that it aims to reappropriate. According to this classical semiology , the substitution of the sign for the thing itself is both *secondary* and *provisional*: secondary due to an original and lost presence from which the sign thus derives; provisional as concerns this final and missing presence toward which the sign in this sense is a movement of mediation.

Jacques Derrida, *Margins of Philosophy* (1982)

Louis Sullivan, *Guaranty Building, Buffalo*, New York (1894)

THE TALL OFFICE BUILDING ARTISTICALLY CONSIDERED

The architects of this land and generation are now brought face to face with something new under the sun – namely, that evolution and integration of social conditions, that special grouping of them, that results in a demand for the erection of tall office buildings.

It is not my purpose to discuss the social conditions; I accept them as the fact, and say at once that the design of the tall office building must be recognized and confronted at the outset as a problem to be solved - a vital problem, pressing for a true solution.

Let us state the conditions in the plainest manner. Briefly, they are these: offices are necessary for the transaction of business; the invention and perfection of the high-speed elevators make vertical travel, that was once tedious and painful, now safe, rigid, economical constructions rising to a great height; continued growth of population in the great cities, consequent congestion of centers and rise in value of ground, stimulate an increase in number of stories; these successfully piled one upon another, react on ground values - and so on, by action and reaction, inter-action and inter-reaction. Thus has come about that form of lofty construction called the "modern office building." It has come in answer to a call, for in it a new grouping of social conditions has found a habitation and a name.

Up to this point all in evidence is materialistic, an exhibition of force, of resolution, of brains in the keen sense of the word. It is the joint product of the speculator, the engineer, the builder.

Problem: How shall we impart to this sterile pile, this crude, harsh, brutal agglomeration, this stark, staring exclamation of eternal strife, the graciousness of those higher forms of sensibility and culture that rest on the lower and fiercer passions? How shall we proclaim from the dizzy height of this strange, weird, modern housetop the peaceful evangel of sentiment, of beauty, the cult of a higher life? ...

As I am here seeking not for an individual or special solution, but for a true normal type, the attention must be confined to those conditions that, in the main, are constant in all tall office buildings, and every mere incidental and accidental variation eliminated from the consideration, as harmful to the clearness of the main inquiry.

The practical horizontal and vertical division or office unit is naturally based on a room of comfortable area and height, and the size of this standard office room as naturally predetermines the standard structural unit, and, approximately, the size of window openings. In turn, these purely arbitrary units of structure form in an equally natural way the true basis of the artistic development of the exterior. Of course the structural spacings and openings in the first or mercantile story are required to be the largest of all; those in the second or quasi-mercantile story are of a somewhat similar nature. The spacings and openings in the attic are of no importance whatsoever (the windows have no actual value), for light may be taken from the top, and no recognition of a cellular division is necessary in the structural spacing.

Hence it follows inevitably, and in the simplest possible way, that if we follow our natural instincts without thought of books, rules, precedents, or any such educational impedimenta to a spontaneous and "sensible" result, we will in the following manner design the exterior of our tall office building - to wit:

Beginning with the first story, we give this a main entrance that attracts the eye to its location, and the remainder of the story we treat in a more or less liberal, expansive, sumptuous way - a way based exactly on the practical necessities, but expressed with a sentiment of largeness and freedom. The second story we treat in a similar way, but usually with milder pretension. Above this, throughout the indefinite number of typical office tiers, we take our cue from the individual cell, which requires a window with its separating pier, its sill and lintel, and we, without more ado, make them look all alike because they are all alike. This brings us to the attic, which, having no division into office-cells, and no special requirement for lighting, gives us the power to show by means of its broad expanse of wall and its dominating weight and character, that which is

the fact - namely, that the series of office tiers has come definitely to an end.

This may perhaps seem a bald result and a heartless, pessimistic way of stating it, but even so we certainly have advanced a most characteristic stage beyond the imagined sinister building of the speculator-engineer-builder combination. For the hand of the architect is now definitely felt in the decisive position at once taken, and the suggestion of a thoroughly sound, logical, coherent expression of the conditions is becoming . Apparent.

When I say the hand of the architect, I do not mean necessarily the accomplished and trained architect. I mean only a man with a strong, natural liking for buildings, and a disposition to shape them in what seems to his unaffected nature a direct and simple way. He will probably tread an innocent path from his problem to its solution, and therein he will show an enviable gift of logic. If he have some gift for form in detail, some feeling for form purely and simply as form, some love for that, his result in addition to its simple straightforward naturalness and completeness in general statement, will have something of the"Charm of sentiment.

However, thus far the results are only partial and tentative at best; relatively true, they are but superficial. We are doubtlessly right in our instinct, but we must seek a fuller justification, a finer sanction, for it ....

We must now heed the imperative voice of emotion. It demands of us, what is the chief characteristic of the tall office building? And at once we answer, it is lofty. This loftiness is to the artist-nature its thrilling aspect. It is the very open organ-tone in its appeal. It must be in turn the dominant chord in his expression of it, the true excitant of his imagination. It must be tall, every inch of it tall. The force and power of altitude must be in it, the glory and pride of exaltation must be in it. It must be every inch a proud and soaring thing, rising in sheer exultation that from bottom to top it is a unit without a single dissenting line - that it is the new, the unexpected, the eloquent peroration of most bald, most sinister, most forbidden conditions.

The man who designs in this spirit and with the sense of responsibility to the generation he lives in must be no coward, no denier, no bookworm, no dilettante. He must live of his life and for his life in the fullest, most consummate sense. He must realize at once and with the grasp of inspiration that the problem of the tall office building is one of the most stupendous, one of the most magnificent opportunities that the Lord of Nature in His beneficence has ever offered to the proud spirit of man.

That this has not been perceived - indeed, has been flatly denied - is an exhibition of human perversity that must give us pause.

One more consideration. Let us now lift this question into the region of calm, philosophic observation. Let us seek a comprehensive, a final solution: let the problem dissolve.

Certain critics, and very thoughtful ones, have advanced the theory that the true prototype of the tall office building is the classical column, consisting of base, shaft, and capital - the molded base of the column typical of the lower stories of our building, the plain or fluted shaft suggesting the most notorious, uninterrupted series of office-tiers, and the capital the completing power and luxuriance of the attic.

Other theorizers, assuming a mystical symbolism as a guide, quote the many trinities in nature which indicates the beauty and conclusiveness of such trinities in unity. They aver the beauty of prime numbers, the mysticism of the number three, the beauty of all things that are in three parts to wit; the day, subdividing into morning, noon, and night; the limbs, the thorax, and the head constituting the body. So they say, should the building be in three parts vertically, substantially as before, but for different motives.

Others, of purely intellectual temperament, hold that such a design should be in the nature of a logical statement; it should have a beginning, a middle, and an ending, each clearly defined - therefore again a building, as above, in three parts vertically.

Others, seeking their examples and justification in the vegetable kingdom, urge that such a design shall above all things be organic. They quote the suitable flower with its bunch of leaves at the earth, its long graceful stem, carrying the gorgeous single flower. They point to the pine tree, its massy roots, its lithe, uninterrupted trunk, its tuft of green high in the air. Thus, they say, should be the design of the tall office building:

again in three parts vertically.

Others still, more susceptible to the power of a unit than to the grace of a trinity, say that such a design should be struck out at a blow, as though by a blacksmith or by mighty Jove, or should be thought-born, as was Minerva, full grown. They accept the notion of a triple division as permissible and welcome, but non-essential. With them it is a subdivision of their unit: the unit does not come from the alliance of the three; they accept it without murmur, provided the subdivision does not disturb the sense of singleness and repose.

All of these critics and theorists agree, however, positively, unequivocally, in this, that the tall office building should not, must not, be made a field for the display of architectural knowledge in the encyclopaedic sense; that too much learning in this instance is fully as dangerous, as obnoxious, as too little learning; that miscellany is abhorrent to their sense; that the sixteen-story building must not consist of sixteen separate, distinct, and unrelated buildings piled one upon the other until the top of the pile is reached.

To this latter folly I would not refer were it not the fact that nine out of every ten tall office buildings are designed in precisely this way in effect, not by the ignorant, but by the educated. It would seem indeed, as though the "trained" architect, when facing this problem, were beset at every story, or at most, every third or fourth story, by the hysterical dread lest he be in "bad form"; lest he be not bedecking his building with sufficiency of quotation from this, that, or the other "correct" building in some other land and some other time; lest he be not copious enough in the display of his wares; lest he betray, in short, a lack of resource. To loosen up the touch of this cramped and fidgety hand, to allow the nerves to calm, the brain to cool, to reflect equably, to reason naturally, seems beyond him; he lives, as it were, in a waking nightmare filled with the desjecta membra of architecture. The spectacle is not inspiriting.

As to the former and serious views held by discerning and thoughtful critics, I shall, with however much of regret, dissent from them for the purpose of this demonstration, for I regard them as secondary only, non-essential, and as touching not at all upon the. vital spot, upon the quick of the entire matter, upon the true, the immovable philosophy of Jhe architectural art. This view let me now state, for it brings to the solution of the problem a final, comprehensive formula. .

All things in nature have a shape, that is to say, a form, an outward semblance, that tells us what they are, that distinguishes them from ourselves and from each other.

Unfailingly in nature these shapes express the inner life, the native quality, of the animal, tree, bird, fish, that they present to us; they are so characteristic, so recognizable, that we say, simply, it is "natural" it should be so. Yet the moment we peer beneath this surface of things, the moment we look through the tranquil reflection of ourselves and the clouds above us, down into the clear, fluent, unfathomable depth of nature, how startling is the silence of it, how amazing the flow of life, how absorbing the mystery. Unceasingly the essence of things is taking shape in the matter of things, and this unspeakable process we call birth and growth. Awhile the spirit and the matter fade away together, and it is this that we call decadence, death. These two happenings seem jointed and interdependent, blended into one like a bubble and its iridescence, and they seem borne along upon a slowly moving air. This air is wonderful past all understanding.

Yet to the steadfast eye of one standing upon the shore of things, looking chiefly and most lovingly upon that side on which the sun shines and that we feel joyously to be life, the heart is ever gladdened by the beauty, the exquisite spontaneity, with which life seeks and takes on its forms in an accord perfectly responsive to its needs. It seems ever as though the life and the form were absolutely one and inseparable, so adequate is the sense of fulfillment.

Whether it be the sweeping eagle in his flight or the open apple-blossom, the toiling work-horse, the blithe swan, the branching oak, the winding stream at its base, the drifting clouds, over all the coursing sun, form ever follows function, and this is the law. Where function does not change, form does not change. The granite rocks, the ever-brooding hills, remain for ages; the lightning lives, comes into shape, and dies in a twinkling.

It is the pervading law of all things organic, and inorganic, of 'all things physical and metaphysical, of all things human and all

things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. This is the law.

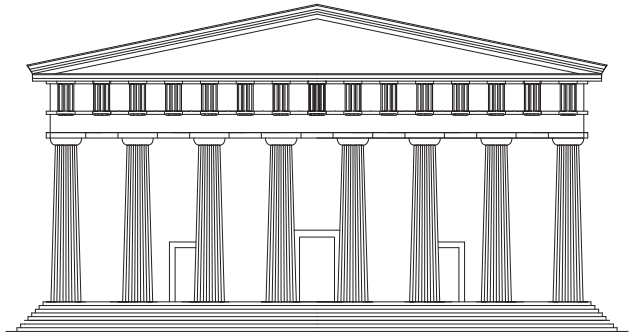
Shall we, then, daily violate this law in our art? Are we so decadent, so imbecile, so utterly weak of eyesight, that we cannot perceive this truth so simple, so very simple? Is it indeed a truth so transparent that we see through it but do not see it? Is it really then, a very marvelous thing, or is it rather so commonplace, so everyday, so near a thing to us, that we cannot perceive that the shape, form, outward expression, design or whatever we may choose, of the tall office building should in the very nature of things follow the functions of the building, and that where the function does not change, the form is not to change?

Does this not readily, clearly, and conclusively show that the lower one or two stories will take on a special character suited to the special needs, that the tiers of typical offices, having the same unchanging function, shall continue in the same unchanging form, and that as to the attic, specific and conclusive as it is in its very nature, its function shall equally be so in force, in significance, in continuity, in conclusiveness of outward expression? From this results, naturally, spontaneously, unwittingly, a three-part division, not from any theory, symbol, or fancied logic.

And thus the design of the tall office building takes its place with all other architectural types made when architecture, as has happened once in many years, was a living art. Witness the Greek temple, the Gothic cathedral, the medieval fortress.

And thus, when native instinct and sensibility shall govern the exercise of our beloved art; when the known law, the respected law, shall be that form ever follows function; when our architects shall cease struggling and prattling handcuffed and vainglorious in the asylum of a foreign school; when it is truly felt, cheerfully accepted, that this law opens up the airy sunshine of green fields, and gives to us a freedom that the very beauty and sumptuousness of the outworking of the law itself as exhibited in nature will deter any sane, any sensitive man from changing into license, when it becomes evident that we are merely speaking a foreign language with a noticeable American accent, whereas each and every architect in the land might, under the benign influence of this law, express in the simplest, most modest, most natural way that which it is in him to say; that he might really and would surely develop his own characteristic individuality, and that the architectural art with him would certainly become a living form of speech, a natural form or utterance, giving surcease to him and adding treasures small and great to the growing art of his land; when we know and feel that Nature is our friend, not our implacable enemy-that an afternoon in the country, an hour by the sea, a full open view of one single day, through dawn, high noon, and twilight, will suggest to us so much that is rhythmical, deep, and' eternal in. the vast art of architecture, something so deep, so true, that all the narrow formalities, hard and fast rules, and strangling bonds of schools cannot stifle it in us-then it may be proclaimed that we are on the high-road to a natural and satisfying art, and architecture that will soon become a fine art 'in the true, the best sense of the word, an art that will live because it will be of the people, for the people, and by the people.

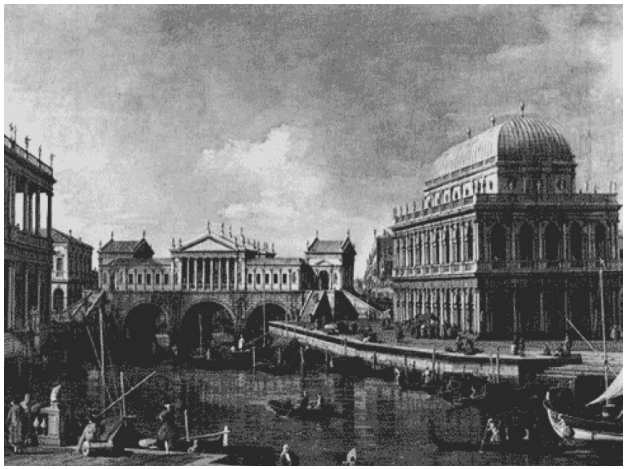
Louis Sullivan, *The Tall Office Building Artistically Considered* (1896)



Second bank of the USA, Philadelphia (1819)

La supériorité de la demeure divine sur les habitations des mortels semble leur rappeler a tout instant la distance qui sépare les créatures du créateur, et, en faisant dominer son temple si fort au-dessus de leurs têtes, rend l'idée de son existence et de sa puissance toujours présente a leurs yeux comme a leurs esprits.

Dictionnaire historique d'architecture, Quatremère de Quincy (1832)



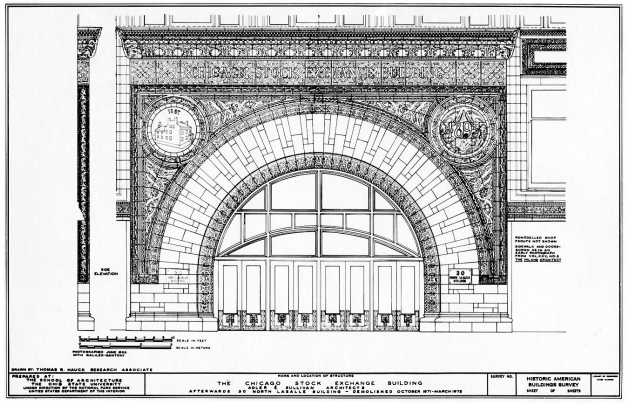
Capriccio Giovanni Antonio Canaletto (1744)

During the past century and a half, certain generic types of structures – among them banks, churches, courthouses, firehouses, and railway stations – have asserted as if by right a predominant architectural presence in our towns and cities. (...)

For the buildings I am speaking of also possessed a tendency to resemble one another outside the generic type to which they belonged; as a result my imaginary stranger might well have mistaken a firehouse tower for the tower of a railway station, a courthouse for a bank, a bank for a basilica. Different as they were in function – within this set of walls, one worshipped Almighty God, within that set of walls one worshipped Almighty Dollar – they were often bizarrely alike in respect to style and scale.

A reason for this blurry blending of architectural identities is that the various types of buildings that traditionally make up the hearts of our cities have been designed less to serve a practical purpose then to serve as a symbol of that purpose. It is a primary requirement of symbols that they be easily recognized.

Joel Stein and Caroline Levine, *Money matters: a critical look at bank architecture* (1990)



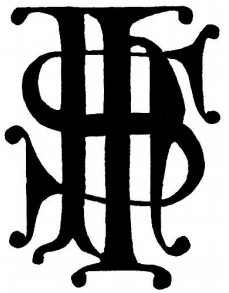
Adler & Sullivan, Chicago Stock Exchange: Facade (1894)

Unlike homes and warehouses, corporate architecture operates in a public arena in which questions of imagery assume proportionately greater importance. Corporations, in dealing with the public, must establish prestige, status and reputation that will in some way work to the advantage of the company. This image-making is directed primarily to customers, stockholders, competitors, and executives and workers within the company. and occasionally to legislators, business critics and writers as well. Architecture is merely one of the many ways available to business leaders for altering public opinion and improving public relations.

This was the case in the 1880s in Chicago and the West and in the 1920s. In both cases, then, in periods of criticism and investigation and in periods of prosperity and public cooperation with business, the tall office building functioned as a carrier of ideas, as a means of symbolic expression divorced from considerations of the artistic development of architects and the technological development of building methods. The object in pointing out the similarities between the imagery of the 1920s and that of the 1880s in Chicago and the West, and also the similarities between the Equitable's imagery of the 1870s and the several phases of the philanthropic image, was not to suggest that history repeats itself or follows predictable cycles. Rather, the evidence seems to indicate two basic or fundamental orientations for the general appearance of business architecture. One depends upon, reflects and conveys nonbusiness values, whether religious, artistic or political, and the other draws upon, mirrors and refers to business values , the ideals or rules of action esteemed by the business community. The fluctuation, as it were, from one to the other appears to be determined by the balance between the opinion businessmen have of themselves and the opinion society has of business. This balance, in turn, is determined by social and business conditions, both general and specific. Lewis Mumford succinctly described the difference between the two basic orientations for business architectural imagery when he contrasted the early Chicago towers with those of the early twentieth century: " Business, and not the fake religion of business, was what the earlier skyscrapers expressed. ''

Kenneth Turney Gibbs, *Business Architectural Imagery in America 1870-1930* (1985)

Dollar symbol - Times New Roman font
EMBLEM



Christogram - Glasgow Necropolis
EMBLEM

Cass Gilbert, *Woolworth Building* (1913)
LANDMARK

Notre-Dame Cathedral, Strasbourg (1439)
LANDMARK

London Stock Exchange
MONUMENTALITY

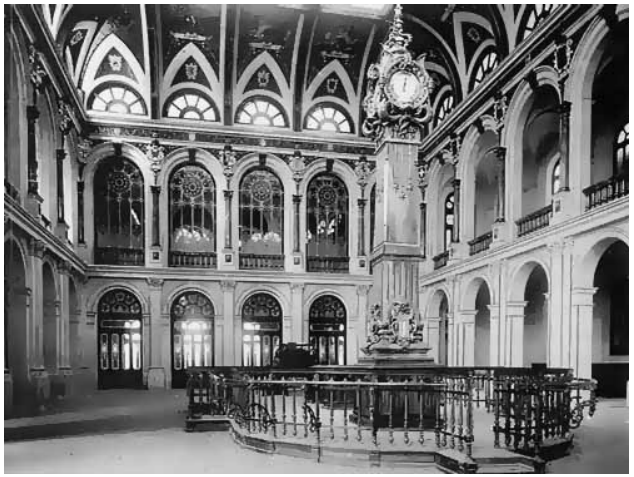
Pantheon, Rome
MONUMENTALITY

Thomas Bowles, *London Royal Exchange* (1751)
BELL TOWER

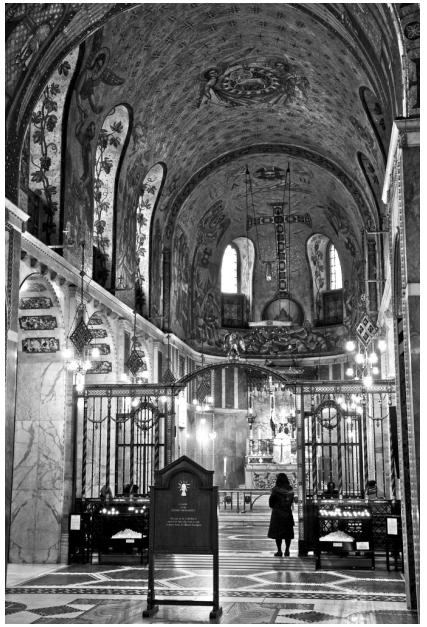
Saint Paul's Cathedral, London (1708)
BELL TOWER

Andreas Gursky, *Chicago Mercantile Exchange* (1997)

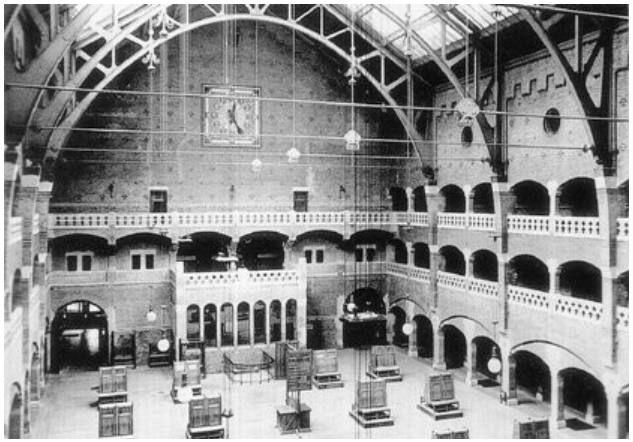
Thomas Struth, *Pantheon*, Rome (1990)



Stock Exchange, Madrid
SEGREGATION



John Francis Bentley, *Westminster Cathedral* (1903)
SEGREGATION



Hendrik Petrus Berlage, *Amsterdam Stock Exchange* (1903)
FURNITURE

St. Patrick Cathedral, Dublin (1191)
FURNITURE

Louis Henry Sullivan, *Bayard Condict Building* (1899)
ORNAMENT

Kölner Dom (1880)
ORNAMENT

Louis Henry Sullivan, *National Farmers Bank*, Owatonna, Minnesota (1908)

ICONOGRAPHY

Abside San Miniato al Monte, Florence

ICONOGRAPHY

Vault

TREASURE

Shrine

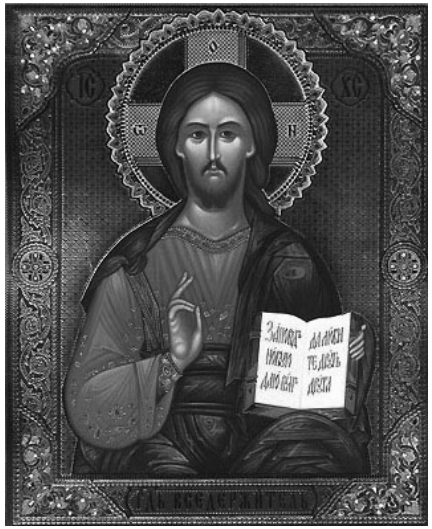
TREASURE

Stock traders
OUTFIT

Catholic ritual
OUTFIT

Stock traders

HAND GESTURES



Jesus blessing

HAND GESTURES

IN GOLDMAN SACHS WE TRUST.

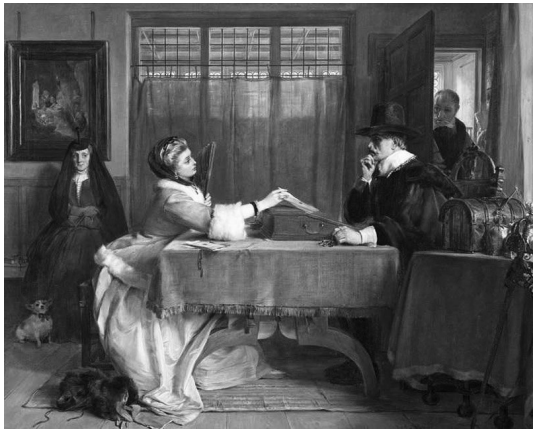
Goldman Sachs's slogan
RHETORIC

IN GOD WE TRUST

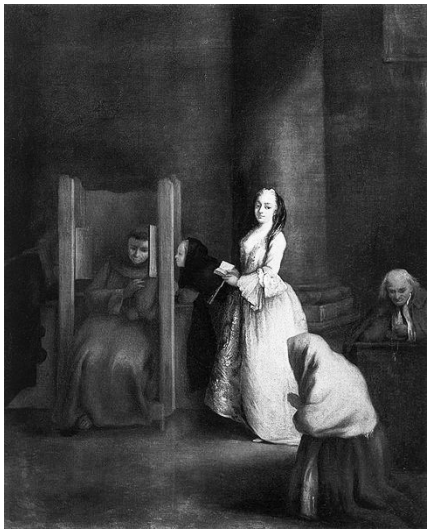
Dollar bill
RHETORIC

Andreas Gursky, *New York Stock Exchange* (1991)
GATHERING

Saint Peter's Basilica
GATHERING



John Callcot Horsley , *The Banker's Private Room* (1870)
SECRET



Pietro Longhi, *The Confession* (c.1750)
SECRET

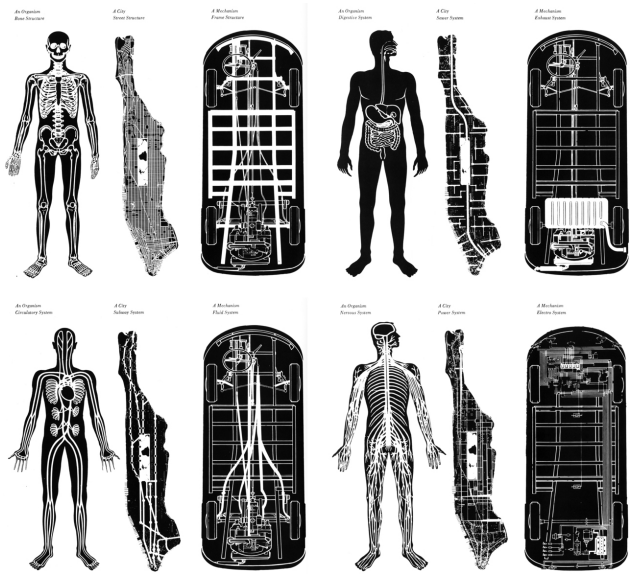
Finance Conclave

CONCLAVE

Papal Conclave

CONCLAVE

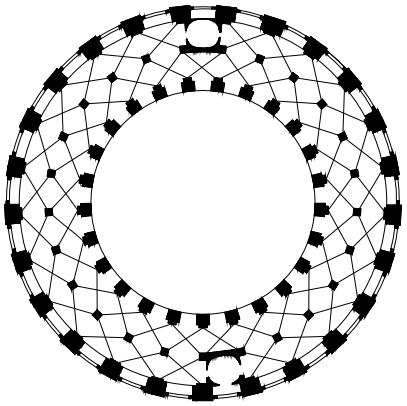
POSTSCRIPT



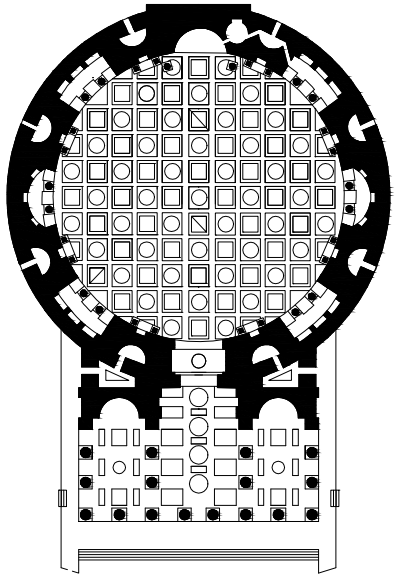
Oswald Mathias Ungers, Morphologie City Metaphors *(1982)*

"JEDES GEBILDE IST HYPERTROPHIERTE MATERIE. DER GLEICHE VORGANG ZEIGT SICH AN TECHNISCHEN APPARATEN. EIN FAHRZEUG VERÄNDERT SICH JE NACH DEM ZWECK, DEN ES ERFÜLLEN SOLL. ES KANN EIN RENNWAGEN, EIN OMNIBUS, EINE KUTSCHE, EIN PKW SEIN, JE NACHDEM OB SCHNELLIGKEIT, FASSUNGSVERMÖGEN, STABILITÄT ODER KOMFORT GEWÜNSCHT WERDEN. ÄHNLICH VERHÄLT ES SICH NACH EGON FRIEDELL MIT DEM BAU DER NATÜRLICHEN GESCHÖPFE: DER ELEFANT IST EIN RIESIGER GREIF- UND TASTRÜSSEL, DER TIGER: EIN REISSENDES GEBISS, DIE KUH: EIN KAU- UND VERDAUUNGSMAGEN, DER HUND: EINE WITTERNASE AUF VIER FÜSSEN."

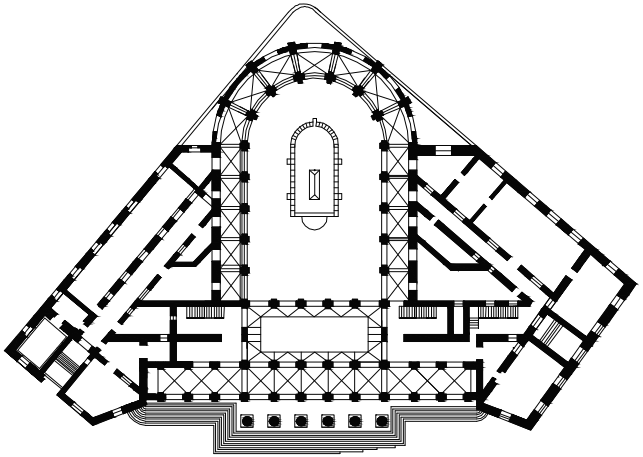
Oswald Mathias Ungers in: Die Sache mit den Quadraten, Zum 80. Geburtstag des großen deutschen Architekten Oswald Mathias Ungers, *Hans Kollhoff (2006)*



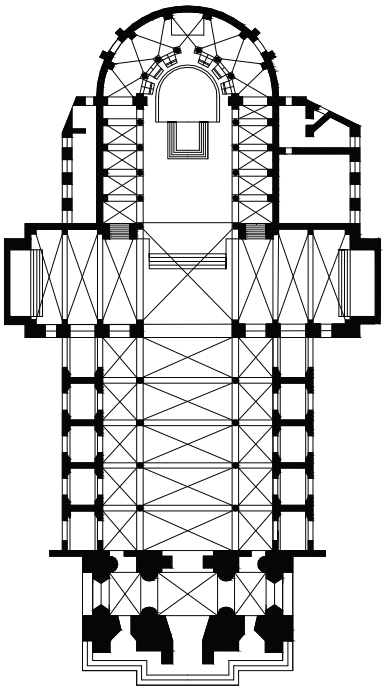
Bourse de Paris (1763)



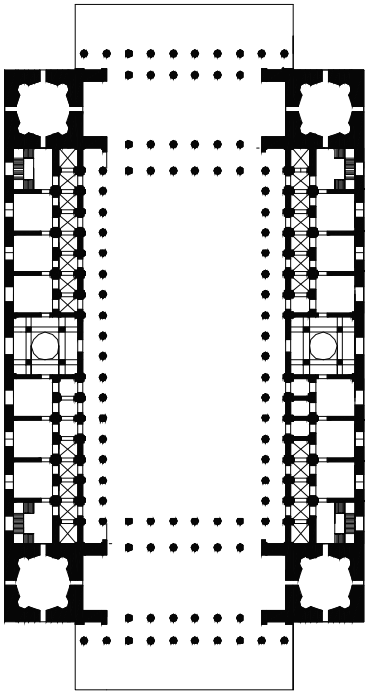
Panthéon, Rome (27 BC - 125 AD)



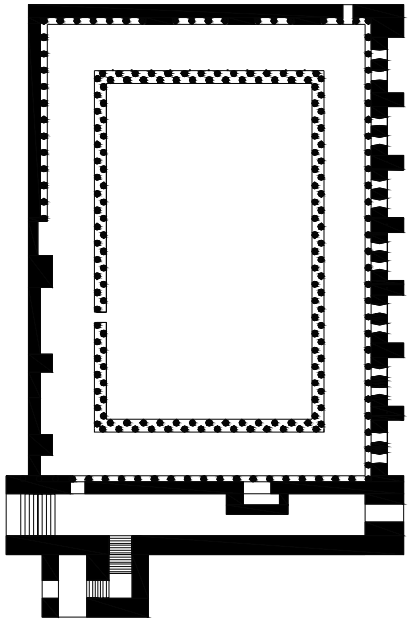
Bolsa de Madrid (1831)



Rennes Cathedral (1490-1853)



Plan for an *Exchange market,* New York (1699)



Cloister of Mont Saint-Michel Abbey (1228)

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Bruno Latour et Vincent Antonin Lépinay
Version avril 2008. A paraître en livret autonome aux Empêcheurs, La découverte, automne 2008

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Adriano Cornoldi
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Edited by Paul Thiry, Richard M. Bennett and Henry L.Kamphoefner
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Verlag der Buchhandlung Walther König, 2. Auflage 2011

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Georges Didi-Huberman
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Michelangelo Antonioni, *L'Eclisse* (1962)

THERE WILL BE BLOOD (2007)
Paul Thomas Anderson

L'ECLISSE (1962)
Michelangelo Antonioni

ZABRISKIE POINT (1970)
Michelangelo Antonioni

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Dziga Vertov

Office
ETH Zürich
Departement Architektur
HIL F 65.3
Wolfgang-Pauli-Str. 15
8093 Zürich Hönggerberg
SWITZERLAND
+41 44 633 28 52

Visiting Professors
François Charbonnet: charbonnet@arch.ethz.ch
Patrick Heiz: heiz@arch.ethz.ch

Assistants
Philipp Oehy: oehy@arch.ethz.ch
Leonor Macedo: macedo@arch.ethz.ch
Pedro Guedes: guedes@arch.ethz.ch

Website ETH
http://www.arch.ethz.ch/darch/entwurf/charbonnet-heiz/

Website Made in
www.madein2003.ch

Students' studio
Room HIL D 15
+41 44 633 27 97