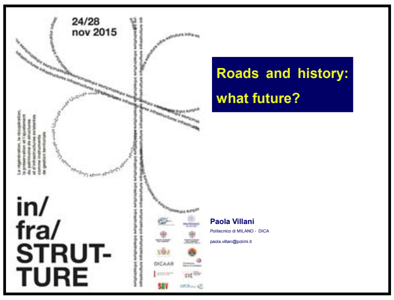

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Roads and history: what future?

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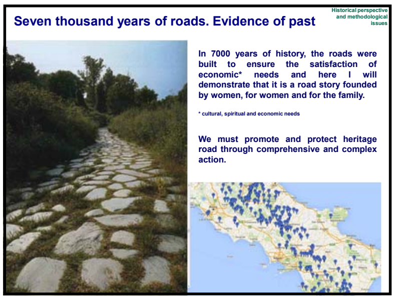


Seven thousand years of roads. Evidence of past

In 7000 years of history, the roads were built to ensure the satisfaction of economic* needs and here I will demonstrate that it is a road story founded by women, for women and for the family.

* cultural, spiritual and economic needs

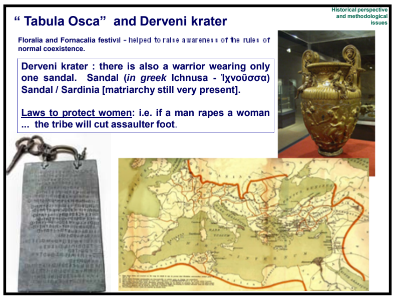
We must promote and protect heritage road through comprehensive and complex action.

"Galatia"

As Strabo asserts, Italy and Mediterranean lands are inhabited by several tribes united almost from a single ethnic group, similar administration, similar cults and specific activities such as mining and metalworking, horse breeding, commerce. They were a population cohesive and supportive to each other, shared a language (Semitic, considered of Phoenician straight). They were first ones to trace streets and to place milestones, furthermore they used to collect safe assets due to the tolls on transit. These early inhabitants, in Italy called by historians proto-Etruscans, took precautions - in a real self-defense system –in order that they could not be dispossessed by the Romans in any way, and thus, in order to protect those lands which belonged to them for generations, they had introduced ad hoc rules. Such rules were already included when drafting the "Law of the Twelve Tables" or "Tabula Osca" and as well, through them, for centuries, many taxes had not being paid, for example among them, those ones due to the norm of the right of burial. This perfectly explains the high number of busts and tombs along the Appian Way and other consular roads: from solemn tribute to the ancestors to a mere ploy to make an income for the coming centuries, and if necessary, transforming appropriate areas for graves in commerce places.

" Tabula Osca" [Oscan Tablet]

Inscribed on both sides, the tablet chronicles a series of dedications to different deities or supernatural beings. The front side has 25 lines and describes the sacred place where religious ceremonies in honour of the goddess Ceres took place. It also explains that every year during the Floralia or Fornacalia festival worshipers were expected to offer sacrifices to four different gods and that that every other year a special ceremony was held at the sanctuary's altar. The other side of the tablet (with 23 lines) lists 17 different divinities that the local Sannite population were at any one stage devoted to. The tolls on transit and ticket to access at Temple .



" Tabula Osca" and Derveni krater

Floralia and Fornacalia festival - helped to raise awareness of the rules of normal coexistence.

Derveni krater : there is also a warrior wearing only one sandal. Sandal (*in greek* Ichnusa - Ἰχνοῦσσα) Sandal / Sardinia [matriarchy still very present].

Laws to protect women: i.e. if a man rapes a woman ... the tribe will cut assaulter foot.

The original tripartite ethnic division Ramnes, Tities and Luceres corresponding to

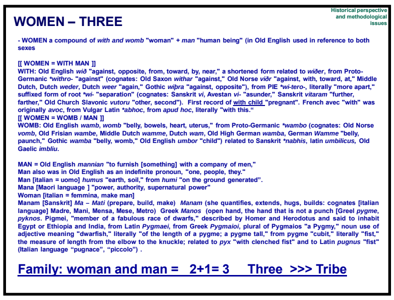
- Ramnes = *quelli che si comportano bene, i valorosi in grazia di Dio* Ramnes = Old English *ramm* "male sheep," also "battering ram" and the zodiac sign; earlier *rom* "male sheep," a West Germanic word (cognates: Middle Low German, Middle Dutch, Dutch, Old High German *ram,* Old Norse *rammr* "strong," Old Church Slavonic *ramenu* "impetuous, violent" Sanskrit *arya-* "compatriot;" in later language "noble, of good family. Sanskrit *tantram*, literally "loom, warp," hence, figuratively, "groundwork, system, doctrine," from *tan* "to stretch, extend," from PIE root **ten-* "to stretch, extend«
- Tities = *quelli/e di cui non sappiamo nulla ma brutti e dispettosi* [Old English *tit* small animal or small horses. Similar words in related senses are found in Scandinavian (Icelandic *tittr*, Norwegian *tita* "a little bird")]
- Luceres = *quelli che paiono calorosi e splendenti ma dei quali non ci si deve fidare, quelli da cui occorre difendersi, "le teste calde"* [Old Frisian *leuk* "tepid, weak," or from Old English *hleowe* "warm," all from Proto-Germanic **khlewaz*, lukewarm, figurative sense of "lacking in zeal" (of persons or their actions). Old English *hleo* "shelter, cover, defense, protection," from Proto-Germanic **khlewaz* (cognates: Old Norse *hle*, Danish *læ*, Old Saxon *hleo*, Dutch *lij* "lee, shelter") "warm" (compare German *lau* "tepid," Old Norse *hly* "shelter, warmth"), which might link it to PIE **kele-* "warm."

Expression Ramnes, Tities and Luceres is now *Tom, Dick and Harry*
(Meaning : The Good, the Ominous* and the Bad. * Ugly, nasty, spiteful; random or unknown people.)

Albanian: Filan apo Fisteku
Arabic: فلان، علان وترتان (Fulàn, 'Illàn and Tirtàn)
Azero: Ali, Vali, Pirvali
Turkish: Ali ile Veli
Bulgarian: Suljo i Puljo (Сульо и Пульо)
Chinese : 阿貓阿狗 (pinyin: ā māo ā gǒu "Cat and dog ")張三李四 (Zhang sān Lǐ Si: Zhang and Lǐ are common surname while 三 四 and are the numbers three and four)
Dutch: Jan en Alleman
Farsi: Are, Oore, Shamsi Kooreh
French: Pierre, Paul ou Jacques
English: Tom, Dick and Harry
Italian: Tizio, Caio, Sempronio
German: Hinz und Kunz

Japanese 猫も杓子も (neko mo mo shakushi. Literally: "Cats and ladles") is a play on words because it can be translated as "cats and ladles" or «cats and hunchbacked, deformed». Anyway, the ancient ideogram for heat 熱 was changed with that 猫

Norvegian: Gud og hver mann (God and every man)
Portoguese: Fulano, Beltrano e Sicrano
Romanian: Ion, Vasile, Gheorghe, Ana
Russian: Ivanov, Petrov, Sidorov
Serbian: Pera, Mika i Žika
Spanish: Fulano, Zutano, Mengano y Perengano
Svedish: Andersson, Pettersson och Lundström
Ukrainian: Fedja, Vasja



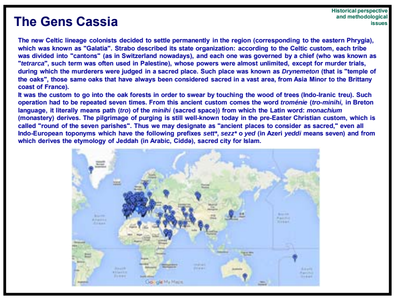
WOMEN – THREE

- WOMEN a compound of *with and womb* "woman" + *man* "human being" (in Old English used in reference to both sexes

[[WOMEN = WITH MAN]]
WITH: Old English *wið* "against, opposite, from, toward, by, near," a shortened form related to *wiðer*, from Proto-Germanic **withro-* "against" (cognates: Old Saxon *withar* "against," Old Norse *viðr* "against, with, toward, at," Middle Dutch, Dutch *weder*, Dutch *weer* "again," Gothic *wiþra* "against, opposite"), from PIE **wi-tero-*, literally "more apart," suffixed form of root **wi-* "separation" (cognates: Sanskrit *vi*, Avestan *vi-* "asunder," Sanskrit *vitaram* "further, farther," Old Church Slavonic *vutoru* "other, second"). First record of with child "pregnant". French avec "with" was originally *avoc*, from Vulgar Latin **abhoc*, from *apud hoc*, literally "with this."
[[WOMEN = WOMB / MAN]]
WOMB: Old English *wamb*, *womb* "belly, bowels, heart, uterus," from Proto-Germanic **wambo* (cognates: Old Norse *vomb*, Old Frisian *wambe*, Middle Dutch *wamme*, Dutch *wam*, Old High German *wamba*, German *Wamme* "belly, paunch," Gothic *wamba* "belly, womb," Old English *umbor* "child") related to Sanskrit **nabhis*, latin *umbilicus,* Old Gaelic *imbliu*.

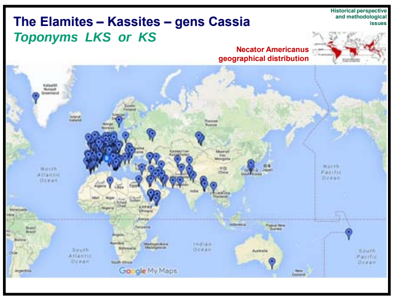
MAN = Old English *mannian* "to furnish [something] with a company of men,"
Man also was in Old English as an indefinite pronoun, "one, people, they."
Man [italian = uomo] *humus* "earth, soil," from *humi* "on the ground generated".
Mana [Maori language] "power, authority, supernatural power"
Woman [italian = femmina, make man]
Manam [Sanskrit] *Ma – Mati* (prepare, build, make) *Manam* (she quantifies, extends, hugs, builds: cognates [italian language] Madre, Mani, Mensa, Mese, Metro) Greek *Manos* (open hand, the hand that is not a punch [Greel *pygme*, *pyknos*. Pigmei, "member of a fabulous race of dwarfs," described by Homer and Herodotus and said to inhabit Egypt or Ethiopia and India, from Latin *Pygmaei*, from Greek *Pygmaioi*, plural of Pygmaios "a Pygmy," noun use of adjective meaning "dwarfish," literally "of the length of a pygme; a pygme tall," from pygme "cubit," literally "fist," the measure of length from the elbow to the knuckle; related to *pyx* "with clenched fist" and to Latin *pugnus* "fist" (Italian language "pugnace", "piccolo") .

Family: woman and man = 2+1= 3 Three >>> Tribe



The Gens Cassia

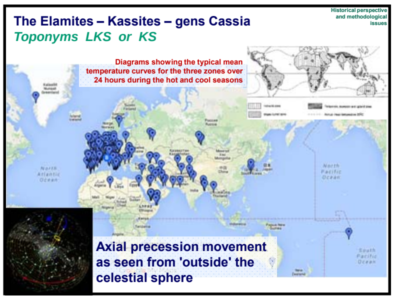
The new Celtic lineage colonists decided to settle permanently in the region (corresponding to the eastern Phrygia), which was known as "Galatia". Strabo described its state organization: according to the Celtic custom, each tribe was divided into "cantons" (as in Switzerland nowadays), and each one was governed by a chief (who was known as "*tetrarca*", such term was often used in Palestine), whose powers were almost unlimited, except for murder trials, during which the murderers were judged in a sacred place. Such place was known as *Drynemeton* (that is "temple of the oaks", those same oaks that have always been considered sacred in a vast area, from Asia Minor to the Brittany coast of France).
It was the custom to go into the oak forests in order to swear by touching the wood of trees (Indo-Iranic treu). Such operation had to be repeated seven times. From this ancient custom comes the word *troménie* (*tro-minihi*, in Breton language, it literally means path (*tro*) of the *minihi* (sacred space)) from which the Latin word: *monachium* (monastery) derives. The pilgrimage of purging is still well-known today in the pre-Easter Christian custom, which is called "round of the seven parishes". Thus we may designate as "ancient places to consider as sacred," even all Indo-European toponyms which have the following prefixes *sett**, *sezz** o *yed* (in Azeri *yeddi* means seven) and from which derives the etymology of Jeddah (in Arabic, Ciddə), sacred city for Islam.



The Elamites – Kassites – gens Cassia

Toponyms LKS or KS

Necator Americanus
geographical distribution



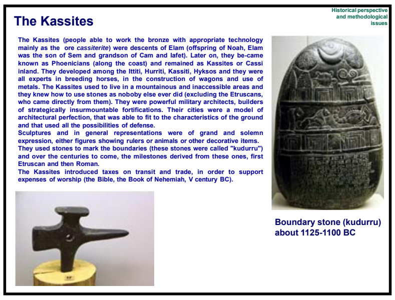
The Elamites – Kassites – gens Cassia

Toponyms LKS or KS

Historical perspective
and methodological
issues

Diagrams showing the typical mean temperature curves for the three zones over 24 hours during the hot and cool seasons

Axial precession movement as seen from 'outside' the celestial sphere

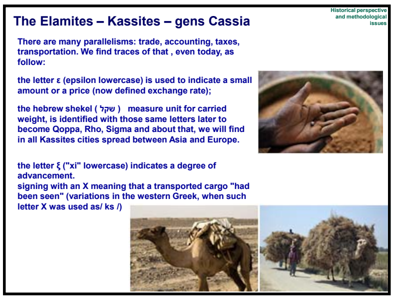


The Kassites

Historical perspective
and methodological
issues

The Kassites (people able to work the bronze with appropriate technology mainly as the ore *cassiterite*) were descents of Elam (offspring of Noah, Elam was the son of Sem and grandson of Cam and Iafet). Later on, they be-came known as Phoenicians (along the coast) and remained as Kassites or Cassi inland. They developed among the Ittiti, Hurriti, Kassiti, Hyksos and they were all experts in breeding horses, in the construction of wagons and use of metals. The Kassites used to live in a mountainous and inaccessible areas and they knew how to use stones as noboby else ever did (excluding the Etruscans, who came directly from them). They were powerful military architects, builders of strategically insurmountable fortifications. Their cities were a model of architectural perfection, that was able to fit to the characteristics of the ground and that used all the possibilities of defense.
Sculptures and in general representations were of grand and solemn expression, either figures showing rulers or animals or other decorative items.
They used stones to mark the boundaries (these stones were called "kudurru") and over the centuries to come, the milestones derived from these ones, first Etruscan and then Roman.
The Kassites introduced taxes on transit and trade, in order to support expenses of worship (the Bible, the Book of Nehemiah, V century BC).

Boundary stone (kudurru)
about 1125-1100 BC



The Elamites – Kassites – gens Cassia

Historical perspective
and methodological
issues

There are many parallelisms: trade, accounting, taxes, transportation. We find traces of that , even today, as follow:

the letter ε (epsilon lowercase) is used to indicate a small amount or a price (now defined exchange rate);

the hebrew shekel (שקל) measure unit for carried weight, is identified with those same letters later to become Qoppa, Rho, Sigma and about that, we will find in all Kassites cities spread between Asia and Europe.

the letter ξ ("xi" lowercase) indicates a degree of advancement.
signing with an X meaning that a transported cargo "had been seen" (variations in the western Greek, when such letter X was used as/ ks /)

The Elamites – Kassites – gens Cassia

Toponyms LKS or KS ל ק ש

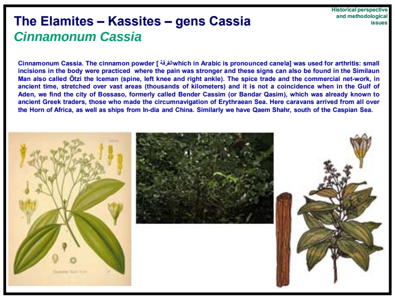
יֵשׁ Meaning «There is»

Historical perspective
and methodological
issues

שקל (Shin Qof Lamed) when reading it backwards, as used in European languages, they are nothing more than LKS (from which toponyms such like La Cassa in Torino, Cassano d'Adda, all the aLCaZar, because aLCàSser in Catalan etc.). Furthermore, the word) שקsk) means "bag" or "pocket" and - always read backwards - KS, in hebrew, like the preceding lemma with reversed letters) שקkash included in the lemma of the shekel ,(שקלindi-cates either "straw" or "straw basket" or "rush". First traders in the ancient world were Kassites, they had introduced weights and measures, payment systems, precise mode of transport and they spoke Hebrew and moved in a very large area, from the Atlantic to Asia far to the south of Egypt. This term KS turned into Cassia in European countries and, in the Semitic-speaking countries, into Qeshm (island in the Strait of Hormuz in the Persian Gulf, commercially very prosperous until 211 BC) or into Qs. Such term is still present in all languages of the world and it indicates fundamental vegetable substances from the medical and practical point of view, both for food consumption or to others uses.

Zangbeto are the traditional guardians of the night in the Yoruba religion of Benin and Togo which are known as the "Nightwatchman". Similar to Sandal/Sardinian Mamuthones, Zangbetos are revered and they are as unofficial policemen to patrolling the streets, watching all childrens and watch down criminals and presenting to the community to they punish . Originally created to scare the enemy away, Zangbeto wanders around the streets to detect thieves and witches, and to provide law and order.

Janus
ancient Italic deity, guardian god of portals, doors, and gates; patron of beginnings and endings, c. 1500, from Latin Ianus, literally "gate, arched passageway," perhaps from PIE root *ei- (1) "to go" (cognates: Sanskrit yanah "path," Old Church Slavonic jado "to travel")



The Elamites – Kassites – gens Cassia

Cinnamonum Cassia

Historical perspective
and methodological
issues

Cinnamonum Cassia. The cinnamon powder [القرفة which in Arabic is pronounced canela] was used for arthritis: small incisions in the body were practiced where the pain was stronger and these signs can also be found in the Similaun Man also called Ötzi the Iceman (spine, left knee and right ankle). The spice trade and the commercial net-work, in ancient time, stretched over vast areas (thousands of kilometers) and it is not a coincidence when in the Gulf of Aden, we find the city of Bossaso, formerly called Bender Cassim (or Bandar Qasim), which was already known to ancient Greek traders, those who made the circumnavigation of Erythraean Sea. Here caravans arrived from all over the Horn of Africa, as well as ships from In-dia and China. Similarly we have Qaem Shahr, south of the Caspian Sea.

The Elamites – Kassites – gens Cassia

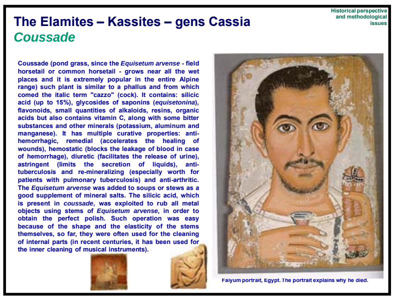
Cassia Syrinx

Historical perspective
and methodological
issues

Cassia Syrinx. Multiple uses of Cassia Syrinx, a name that refers in general to cinnamon (cinnamon, able to reduce risk factors associated with diabetes and cardiovascular diseases), and also etymology in various languages, from Hebrew to Greek, to refer to both connection systems (ducts, pipes) and a system that innervates the body, in the medical field: from Hebrew qəsi `â to greek κασία (kasía) then to Latin cassĭa(m).

Belen, Israel

Dougga, Tunis



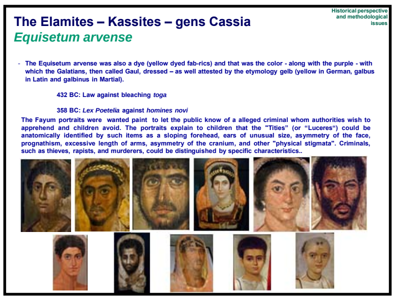
The Elamites – Kassites – gens Cassia

Coussade

Historical perspective
and methodological
issues

Coussade (pond grass, since the *Equisetum arvense* - field horsetail or common horsetail - grows near all the wet places and it is extremely popular in the entire Alpine range) such plant is similar to a phallus and from which comed the italic term "cazzo" (cock). It contains: silicic acid (up to 15%), glycosides of saponins (*equisetonina*), flavonoids, small quantities of alkaloids, resins, organic acids but also contains vitamin C, along with some bitter substances and other minerals (potassium, aluminum and manganese). It has multiple curative properties: anti-hemorrhagic, remedial (accelerates the healing of wounds), hemostatic (blocks the leakage of blood in case of hemorrhage), diuretic (facilitates the release of urine), astringent (limits the secretion of liquids), anti-tuberculosis and re-mineralizing (especially worth for patients with pulmonary tuberculosis) and anti-arthritic. The *Equisetum arvense* was added to soups or stews as a good supplement of mineral salts. The silicic acid, which is present in *coussade*, was exploited to rub all metal objects using stems of *Equisetum arvense*, in order to obtain the perfect polish. Such operation was easy because of the shape and the elasticity of the stems themselves, so far, they were often used for the cleaning of internal parts (in recent centuries, it has been used for the inner cleaning of musical instruments).

Faiyum portrait, Egypt. The portrait explains why he died.



The Elamites – Kassites – gens Cassia

Equisetum arvense

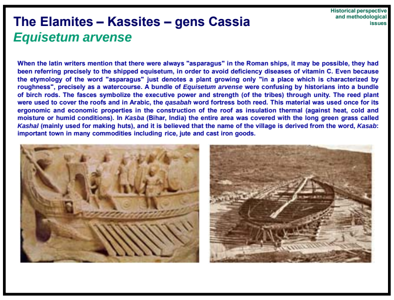
Historical perspective
and methodological
issues

- The Equisetum arvense was also a dye (yellow dyed fab-rics) and that was the color - along with the purple - with which the Galatians, then called Gaul, dressed – as well attested by the etymology gelb (yellow in German, galbus in Latin and galbinus in Martial).

432 BC: Law against bleaching *toga*

358 BC: *Lex Poetelia* against *homines novi*

The Fayum portraits were wanted paint to let the public know of a alleged criminal whom authorities wish to apprehend and children avoid. The portraits explain to children that the "Tities" (or "Luceres") could be anatomically identified by such items as a sloping forehead, ears of unusual size, asymmetry of the face, prognathism, excessive length of arms, asymmetry of the cranium, and other "physical stigmata". Criminals, such as thieves, rapists, and murderers, could be distinguished by specific characteristics..



The Elamites – Kassites – gens Cassia

Equisetum arvense

Historical perspective
and methodological
issues

When the latin writers mention that there were always "asparagus" in the Roman ships, it may be possible, they had been referring precisely to the shipped equisetum, in order to avoid deficiency diseases of vitamin C. Even because the etymology of the word "asparagus" just denotes a plant growing only "in a place which is characterized by roughness", precisely as a watercourse. A bundle of *Equisetum arvense* were confusing by historians into a bundle of birch rods. The fasces symbolize the executive power and strength (of the tribes) through unity. The reed plant were used to cover the roofs and in Arabic, the *qasabah* word fortress both reed. This material was used once for its ergonomic and economic properties in the construction of the roof as insulation thermal (against heat, cold and moisture or humid conditions). In *Kasba* (Bihar, India) the entire area was covered with the long green grass called *Kashal* (mainly used for making huts), and it is believed that the name of the village is derived from the word, *Kasab*: important town in many commodities including rice, jute and cast iron goods.

The Elamites – Kassites – gens Cassia

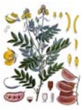
Equisetum arvense

Cassia Sena or Cassia Obovata used for therapeutic properties and to lighten hair and make blond.

Cassia Aethiopica is also used for medicinal purposes.

Cassie (in French) is also a variety of mimosa, which is still growing in Provence and much used in perfumery for its yellow flowers.

Khash, a nutritious winter food, is a traditional dish in Afghanistan, Armenia, Azerbaijan, Iran, Iraq, Georgia, Bulgaria and Turkey. A variation of that is found in other Arab countries such as in Egypt and is known as *Kawari*' and *Kissra* in Sudan. The dish is known in Kuwait, Bahrain and other Persian Gulf countries as *Pacha* ((پاچةtoo and for this reason, in Europe, we say "live like a Pasha". The correlation with the *ordo equester* is certainly this because there were three ranks of pashas: the first, or highest class, had the privilege of bearing a standard of three horse-tails, the second of two, and the third of one. Only the Sultan himself was entitled to four tails, as sovereign commander in chief.



The Elamites – Kassites – gens Cassia

Cassava - Manioc

Cassava similar in French cassave, in Spanish casabe, Portuguese cassave, and Haiti caçabi (earlier in English as *cazabbi*) called also manioc, used as food in tropical America.

The Elamites – Kassites – gens Cassia

Many parallelisms between Hebrew and Greek and about the Elamites (also known as the Kassites and then gens Cassia)

There are many parallelisms between Hebrew and Greek and about the Elamites (also known as the Kassites and then gens Cassia), who were always busy with accounting, taxes, transportation. First, they had introduced weights and measures, payment systems, mode of transport, agricultural, farming and fabric techniques, and they spoke Hebrew and moved in a very large area, from the Atlantic (and had contacts with *Koishan* language populations) to Asia far to the south of Egypt.

But even in the English language there is evidence:

- *Cashroom*, gaelic Cas (foot) with room/chrom instrument of tillage called also foot plough;

- *Cash*, a box for money, used in these contexts was derived from the Tamil kāsu, a South Indian monetary unit, Sanskrit karsha, Sinhalese kasi;

- *Casket* and *chest*, small box for jewels

- *Caseation*, coagulation of milk;

- *Caseharden*, to harden on the surface;

- *Cassie* (or *casie*, *caisy, caysie, cazzie, caiss*), a basket, like a pannier, made of straw, or dried reeds used for carrying food.

- In Old English, *caserm*, one of a series of small temporary building for soldiers;

- Antique Irish *cashmel* is a circle wall enclosing a group of churches and their appartenence;

The Elamites – Kassites – gens Cassia

Many parallelisms between Hebrew and Greek and about the Elamites (also known as the Kassites and then gens Cassia)

- *Cassock* (French *casaque*, Italian *casacca*, Spanish *casaca*) a long coat worn by some soldiers, also that of a horseman.
- *Cashmere*, whoolen fabric;
- Casbah, North African Arabic dialect *kasba* o *qasaba* "fortress." *Ksar* or *Ksour* (Maghrebi Arabic: قصرqser, plural *qsur* for a network of fortified villages);
- *Cast-off*, abandoned;
- *Cast-iron*, an alloy of iron and carbon, also used in the construction of buildings. Cast, metallurgy three-dimensional form and a manufacturing process using a fluid medium in a mould, so as to produce a casting;
- *Castellated*, in defensive architecture "furnished with turrets and battlements";
- *Cast*, launch the process whereby a anchor, a bait or lure is placed into or onto the water;
- *Caster*, a thrower, who rectifies the rivers, who use the foot plough (*cashroom*)
- *Castrametation*, the art or science of laying out an encampment;
- *Kiosk*, open pavillon, Turkish koshk "pavillion, palace".
- *Kiss*, to put, bring, take or to touch gently or lightly still present in the term "kiss and make up" words based on the K*S which then find in "Kama Sutra" which means the role (sutra) of love

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The Elamites – Kassites – gens Cassia

Many parallelisms between Hebrew and Greek and about the Elamites (also known as the Kassites and then gens Cassia)

- *Kiss*, to put, bring, take or to touch gently or lightly still present in the term "kiss and make up" words based on the *K*S* which then find in "*Kama Sutra*" which means the role (sutra) of love. Correspondences that we also find in the word *cashew*, "anacardo" in Italian "similar to the heart"

- *Squad*, a small military unit (*contubernium* was the minimal unit in the Roman legion and soldiers shared a tent);
- *Squat*, hidden from observation;
- *Scearp* (Old English) cutting, keen, sharp;
- *Scatter*, disperse, disseminate;
- *Scarry*, precipitous, rocky;
- *Scarp*, an escarpment, steep embankment, (Old English) fortification;
- *Scaffold*, wooden framework;

The Elamites – Kassites – gens Cassia

Many parallelisms between Hebrew and Greek and about the Elamites (also known as the Kassites and then gens Cassia)

- *Scarlet*, rich cloth often bright red in color; there were three different kinds of *toga trabea*: one of purple only, for the Gods; another of purple and a little white, for kings; and a third, with scarlet stripes and a purple hem, for augurs and equestrian class. The *toga trabea*, as shown in its etymology (trabs), was decorated with bands in relation to the various tribes of belonging. It's interesting to note that Sextus Pompeius Festus, attributes the etymology of the term "Trabs proprie dicitur duo ligna compacta" (this refers to pieces of wood joined together).
- *Scavage*, a tool formerly levied on merchant strangers by the mayors, sheriff, corporations of various towns, on good offered for sale;
- *Scavenger*, an officer whose duty it way to take scavage and later to keep the street clean;
- *Scatter*, to separate and drive off in various directions
- *Score*, a notch, scratch, or incision.
- *Scot*, a payement, local contribution
- *Scallop*, shell.

Peace in the Mediterranean Sea was, however, commercial, if you want, and ended just when the Romans started to invade nearby areas. Thus, they conquered Illyria (in 228 BC) and just afterwards, the North African coast (with the foundation of New Carthage). The word "pax romana", then must have sounded like a mockery for all those people who had been living more or less peacefully for over a millennium.

The Elamites – Kassites – gens Cassia

Etymology

Even in central and south Italy, there are toponyms that refer to the properties of the Gens Cassia.
By analyzing the Latin terms that have the prefix "Cass", there are a very few words listed in the Grammatica compiled by Sextus Pompeius Festus, or just the following ones:

- *Cassiculum*, *reticulum* to *cassibus* for *diminutionem dictum* [formerly grid with small grooves so said for shortening] as "a" was used in the abbreviated meaning of antiquo (in this case antiquis), cassibus is a masculine plural ablative (*cassis*, *casside* instead is a feminine one and shows a generic helmet, while *cassida*, *cassidae* has the meaning of metal helmet). So Cassiculum indicated a network of small paths, cassis, network). We have an example along the roads network which connecting Alba Fucens and Rieti with Otricoli bridge: here from which you reached the via Cassia at Sutri, with the street gutter made of tuff.
- *Caseus* to coeundo dictus [Caseus, once used to say coeundo] (coeundo comes from coeo, which is the verb assuming multiple meanings: 1) to go or come together, come together, assemble, convene, meet, gather 2) to approach with hostile intent , come to quarrel, fight, 3) form an alliance)
- Cassilam antiqui pro casside ponebant [Cassilam, our ancestors used this term for a helmet, see the Riace bronzes helmets in Figure 2] and this explains well why the words cassis, casside, in Latin, became feminine, in later centuries]. And a galea was a Roman soldier's helmet.
- Cassabundus, crebo credens. Cassabundus, as Festus mentions, means "crebo credens". The word crebo is revealed to be a sure error of transcription and in the an-cient incunabula was certainly a shortened word: creberrime. The meaning of "crebe. credens " is "frequently giving faith" and it is also the only logical explanation given by Sextus Pompeius Festus, since in ancient time, there were no traffic signals and therefore, it was neces-sary to continually seek to establish the direction to take. From cassabundus comes our usual word "wanderer", because the neutral cassus, cassa, cassum, means "empty, vain, useless."
- - Castellarius, a few "castles" remain in Italy but all share this particular characteristic: the villages appear according to a centripetal winding model and naturally centered on a for-tress or a castle, which is placed on top of a hill whose slopes intertwine and wriggle out a myriad of perspectives and concentric bands of houses clinging precari-ously to the steep rock.

The Elamites – Kassites – gens Cassia

Symbols and places of origin

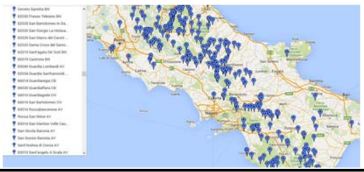
First inhabitants of Rome were divided into several tribes (Gaul) and converged on what would be later called as Campus Martius for certain ceremonies or rituals and to discuss and elect leaders. It was forbidden to address issues of common interest other than in public meetings. These places were called "*septae*" and still today, it is said to be "divided into seven". Architectural items remain: elliptical corrals where they could vote and pray to the ancestors as tutelary deities. This was a common practice throughout Italy, and we find these same toponyms in many Italian regions (toponyms beginning with *sett**, *sezz**, *sep**, *ses**, *sit**, *sis**, *sed**, *sal**, *sap**, *seq**, *sib**, *equ**, *acq**, *cav**, *bri**) because in all these places, public meetings were held and equitable judgements were taken on those who had done wrong. Near a toponym *br** there's always one of these toponyms *seq**, *sep**, etc. for the plublic meetings: e.g. in Sessola.

An immense area was similarly organized , up from Spain to Asia and from northern Europe to Africa. We find traces about that in toponyms and vocabulary of many languages.

The Elamites – Kassites – gens Cassia

Toponyms of the gens Cassia

By analyzing the toponyms in northern regions and in neighboring Switzerland, we can set up a meaningful pic-ture and perhaps that is not yet fully explored, toponyms beginning with cass*, cast*, bri*, gard*, sett*, sezz*, sep*, ses*, sit*, sis*, sed*, sap*, seq*, sib*, equ*, acq*, cav* and also all the toponyms prefixed with Gard (Gardone Val Trompia, Gardone Riviera) since the toponym Garda is the evolution of the Lombard term warda, or guard, which means a high place, suitable for military lookout or fortified barrier. And in spanish "garganta" is a pass (for controls) between mountains and "garamantes" in Arabic language. Name that we find thousands of miles away in Qatar (Gwada) or Pakistan (Gwādar and Al Khawr) or India (Gwalior), all strategic locations. Persian) گادgad) is "travel around" and in Urdu is "protected place": from here comes the name of Pasargadae where lies the tomb of Cy-rus the Great.



The Elamites – Kassites – gens Cassia

Symbols and places of origin

Historical perspective
and methodological
issues

The two Dioscuri, Castor and Pollux - always represented with a horse and even on the back of coins (*quinarius*) which were spread in the second century BC: gens Cassia had as symbol Castor and Pollux with their two horses: Dioscuri [name indicating two Kouroi or two male statues without clothes (from singular Kuros, standing male statue)] the two “kouroi” were always represented with a small metal helmet (*cask*, in Latin *cassis*) while with one hand holding a spear and the other one holding the reins. Even the two very famous Riace bronzes were two “kouroi”.

Women

Involving communities

Historical perspective
and methodological
issues

Female resources worldwide determine the participation of others women in projects involving communities and form the basis for initiation of new business projects: women always optimizes resources, more rational use of time, take care and caregivers. In some countries women determine the choices for whole community and they can implement the same collaborative approach that characterized their role over the millennia.

There are many projects in the transport sector and infrastructure maintenance: worldwide use the indispensable role of women. In many countries, they are the basis of a new form of entrepreneurship. In other women have only the role of support for different modes, based on sharing, re-balancing of roles, the conquest of the territory, heritage preservation and access to economic resources.

manage, management
from Italian *maneggiare* "to handle," especially "to control a horse," from Latin noun *manus* "hand".
Influenced by French *manège* "horsemanship" (earliest English sense was of handling horses).

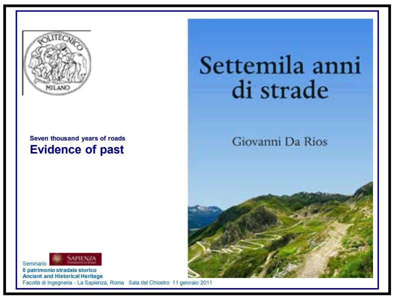
dharma
in secular sense, "caste custom, right behavior;" in Buddhism and Hinduism, "moral law," from Sanskrit, "law, right, justice," related to dharayati "holds," and cognate with Latin f*irmus*, all from PIE root **dher-* "to hold firmly, support".

Firm, "strong, steady" (of things), "permanent, enduring" (of agreements), "steadfast, steady" (of persons), "sound, well-founded" (of arguments), from Old French *ferm* "strong, vigorous; healthy, sound; steadfast, loyal, faithful", from Latin firmus "strong, steadfast, enduring, stable," figuratively "constant, steadfast, trusty, faithful," from PIE root **dher-* "to hold, support" (cognates: Sanskrit *dharmah* "custom, law," Greek *thronos* "seat," Lithuanian *dirzmas* "strong," Welsh *dir* "hard," Breton *dir* "steel“Old Persian *framatara* “autority”, Sanskrit *Pramana* and *Pramatara*, “chief”. Cognates “business house [soustain]," originally "signature," from Italian *firma* "signature," from firmare "to sign," from Latin firmare "make firm, affirm," in Late Latin, "confirm (by signature)," from firmus "firm, stable". Nasalized form is *sancire* "make sacred, confirm, ratify, ordain."

Different projects each other and programs implemented in various countries

Involving communities

Historical perspective
and methodological
issues



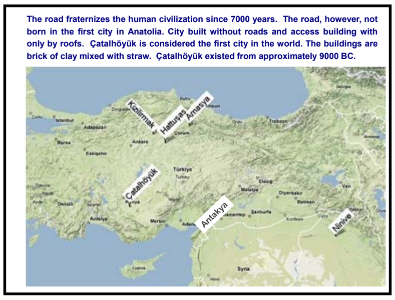
Seven thousand years of roads

Evidence of past

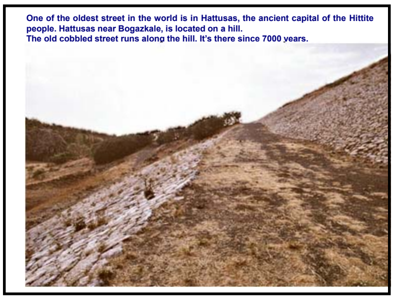
Settemila anni di strade

Giovanni Da Rios

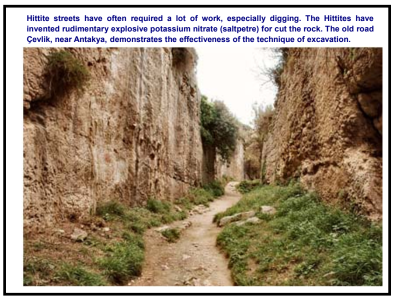
Seminario
Il patrimonio stradale storico
Ancient and Historical Heritage
Facoltà di Ingegneria - La Sapienza, Roma   Sala del Chiostro 11 gennaio 2011



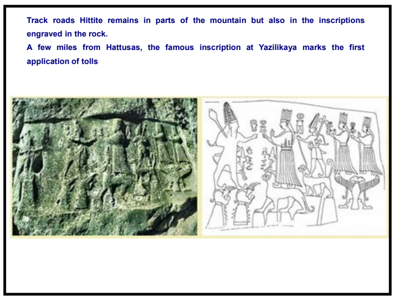
The road fraternizes the human civilization since 7000 years. The road, however, not born in the first city in Anatolia. City built without roads and access building with only by roofs. Çatalhöyük is considered the first city in the world. The buildings are brick of clay mixed with straw. Çatalhöyük existed from approximately 9000 BC.



One of the oldest street in the world is in Hattusas, the ancient capital of the Hittite people. Hattusas near Bogazkale, is located on a hill.
The old cobbled street runs along the hill. It's there since 7000 years.



Hittite streets have often required a lot of work, especially digging. The Hittites have invented rudimentary explosive potassium nitrate (saltpetre) for cut the rock. The old road Çevlik, near Antakya, demonstrates the effectiveness of the technique of excavation.



Track roads Hittite remains in parts of the mountain but also in the inscriptions engraved in the rock.

A few miles from Hattusas, the famous inscription at Yazilikaya marks the first application of tolls

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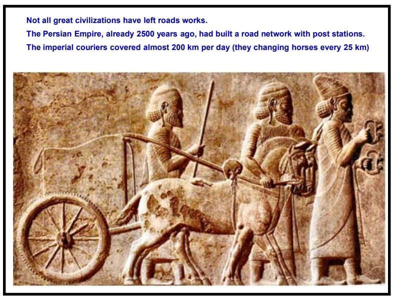
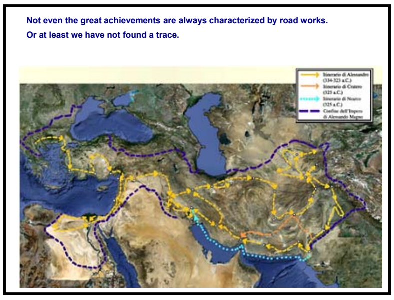


Not all great civilizations have left roads works.

The Persian Empire, already 2500 years ago, had built a road network with post stations.

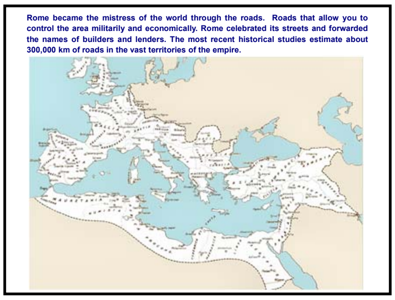
The imperial couriers covered almost 200 km per day (they changing horses every 25 km)



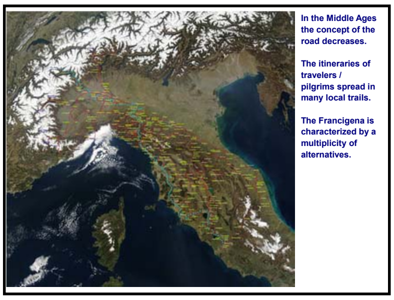
Not even the great achievements are always characterized by road works.

Or at least we have not found a trace.

Itinerario di Alessandro (334-323 a.C.)
Itinerario di Cratero (325 a.C.)
Itinerario di Nearco (325 a.C.)
Confine dell'Impero di Alessandro Magno



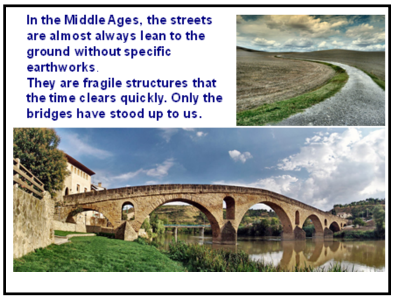
Rome became the mistress of the world through the roads. Roads that allow you to control the area militarily and economically. Rome celebrated its streets and forwarded the names of builders and lenders. The most recent historical studies estimate about 300,000 km of roads in the vast territories of the empire.



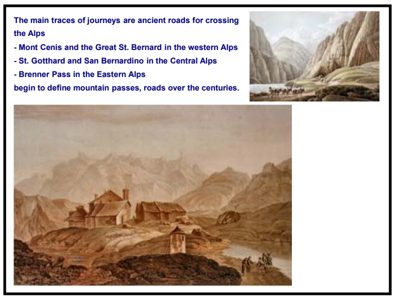
In the Middle Ages the concept of the road decreases.

The itineraries of travelers / pilgrims spread in many local trails.

The Francigena is characterized by a multiplicity of alternatives.



In the Middle Ages, the streets are almost always lean to the ground without specific earthworks.
They are fragile structures that the time clears quickly. Only the bridges have stood up to us.

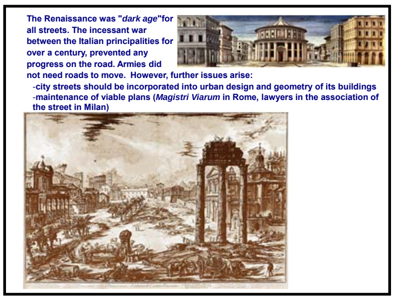


The main traces of journeys are ancient roads for crossing the Alps

- Mont Cenis and the Great St. Bernard in the western Alps
- St. Gotthard and San Bernardino in the Central Alps
- Brenner Pass in the Eastern Alps

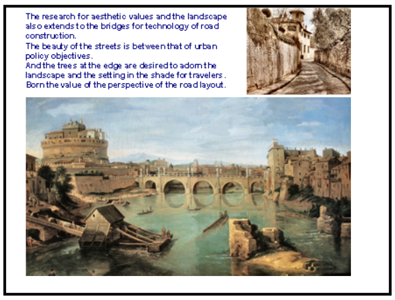
begin to define mountain passes, roads over the centuries.

In the late Middle Ages, the road becomes the subject of feudal power. The story of Matilda of Canossa, owner of the territories of the Apennines, and subsequent order of the Templars, to demonstrate the economic potential and the domination of the roads.

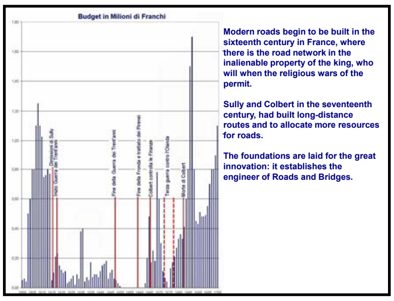


The Renaissance was "*dark age*"for all streets. The incessant war between the Italian principalities for over a century, prevented any progress on the road. Armies did not need roads to move. However, further issues arise:

- -city streets should be incorporated into urban design and geometry of its buildings
- -maintenance of viable plans (*Magistri Viarum* in Rome, lawyers in the association of the street in Milan)



The research for aesthetic values and the landscape also extends to the bridges for technology of road construction.
The beauty of the streets is between that of urban policy objectives.
And the trees at the edge are desired to adorn the landscape and the setting in the shade for travelers.
Born the value of the perspective of the road layout.

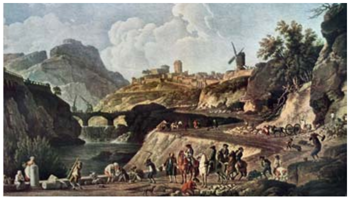


Modern roads begin to be built in the sixteenth century in France, where there is the road network in the inalienable property of the king, who will when the religious wars of the permit.

Sully and Colbert in the seventeenth century, had built long-distance routes and to allocate more resources for roads.

The foundations are laid for the great innovation: it establishes the engineer of Roads and Bridges.

The organization of Ponts et Chaussées leads to innovation in the road network:
- from corvées goes to the roadmen
- by fearless journeys of the Grand Tour to regular postal services and transport
- roads will be equipped with stations for postal services and transport
- bridges will have a shape and a more precise static

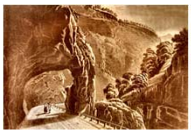
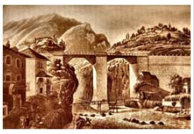


Napoleon's ambition leads to real progress for the network of roads. Napoleon wants to "change the face"in the territory of the Empire, with the excellent work for a modern road network.

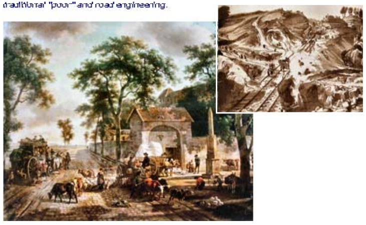
Napoleon decides and personally checks each new road.

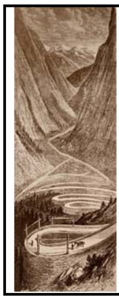
The new road of the Simplon Pass is among his masterpieces.

And *Ponts et Chaussées engineers* faithful performers.

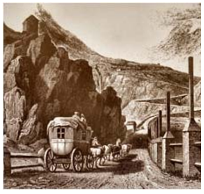



In the nineteenth century with the development of railways, the road loses much of its importance. A chariot can't compete with steam mechanical energy.
The railway mania is spreading rapidly around the world.
Majestic bridges, long tunnels and excavations are impressive compared to the traditional "poor" and road engineering.



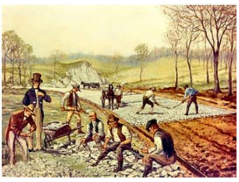
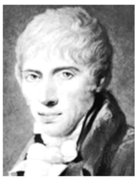


In the early decades of the nineteenth century, new roads leading to the neck of Splügen, then the Stelvio, are artistic episodes. The road becomes a landscape itself.
Prints and engravings illustrate the work of the road across Europe. Many artifacts from the period have survived to this day. Are evidence of an era.



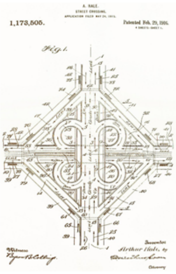
The adoption of metal materials for the bridges - in late 1700 - open new topics on the architecture of the street. Many artifacts from the period have survived to this day. Are evidence of an era.

The nineteenth century led to solve the problems of the road.
John Loudon MacAdam lays the foundations of the modern history of the ballast.
History has rewarded him pass the name of its basic design: the macadam.

The role of the road is gaining importance with the advent of new vehicles. Bicycles and automobiles replaced horse-drawn vehicles for thousands of years associated with the concept of the road.
The road becomes the star of a new mobility

Dust and mud characterized the early years of the automobile.
The new road surface: the old macadam is covered and protected by tar, bitumen, asphalt.
Start the modern history of the flooring.



The jump from past to present is the highway.

The car becomes the dominant subject of the road.

The technical construction focuses on the needs of cars.

In 7000 years of history, the roads have given cultural, spiritual and economic needs that go far beyond the physical substance of the material works.
We must promote and protect heritage road through comprehensive and complex action that leads to an antiques museum itself.
An excellent example is the Swiss National Museum Gotthard in summit of the pass. Museum opened in 1986.
Is an effective way to confirm the definition of Paul Valéry:
La mémoire est l'avenir du passé
Memory is the Future of the Past

Accra (Ghana)

Torino (Italie)

La soutenabilité de la mobilité urbaine

Bobo–Dioulasso (Burkina Faso)

Porte de la Paix céleste à Pékin (Chine)

La forte polarisation de Dakar a conduit à une forte pression foncière dans la capitale, induisant en même temps une urbanisation non contrôlée, qui s'est traduite par l'occupation de zones inondables et la prolifération de l'habitat spontané.

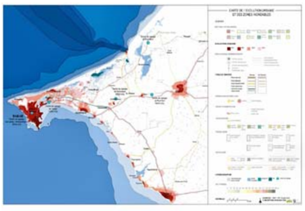


Figure 2 : Carte de l'évolution urbaine et des zones inondables

Dakar – 2015

La soutenabilité de la mobilité urbaine

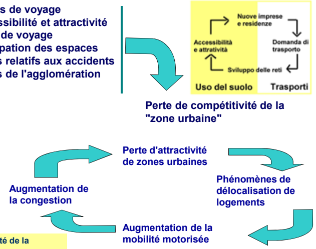
Occupation de zones inondables, prolifération de l'habitat spontané, absence d'ouvrages de drainage et d'assainissement pour l'évacuation des eaux .

Dakar - inondation 2012

La soutenabilité de la mobilité urbaine

Transport et développement durable: analyse économique

- Temps de voyage
- Accessibilité et attractivité
- Frais de voyage
- Occupation des espaces
- Coûts relatifs aux accidents
- Coûts de l'agglomération



Perte de compétitivité de la "zone urbaine"

Perte d'attractivité de zones urbaines

Phénomènes de délocalisation de logements

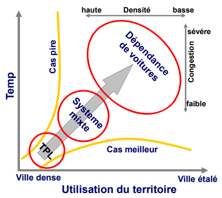
Augmentation de la mobilité motorisée

Augmentation de la congestion

La soutenabilité de la mobilité urbaine

Les infrastructures de transport et la localisation des activités

Corrélation espace / temps et choix modal

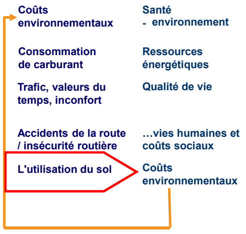


Source: Jean-Paul Rodrigue, *Urban Transportation*, Dept. of Economics & Geography, Hofstra University, Hempstead, 2003

La soutenabilité de la mobilité urbaine

Politecnico di MILANO
paola.villani@polimi.it

Le développement structurel des interventions de la mobilité durable serait avantages immédiats et économique positif quantifié par la méthode de l'évaluation du Cycle de Vie, pour évaluer les impacts environnementaux associés aux thèmes de la mobilité, à travers l'identification et la quantification de la consommation de matières premières, de l'énergie et émissions dans l'environnement et l'évaluation des opportunités générées par la diminution de ces impacts.
L'analyse concerne le cycle de vie des véhicules, des bâtiments et des infrastructures de l'extraction brute de matériau au traitement ultérieur, la production, le transport et la distribution de véhicules, l'utilisation (et tous les coûts associés à l'utilisation des voitures), la maintenance, le recyclage et l'emplacement final du produit après utilisation.



Coûts environnementaux	Santé - environnement
Consommation de carburant	Ressources énergétiques
Trafic, valeurs du temps, inconfort	Qualité de vie
Accidents de la route / insécurité routière	…vies humaines et coûts sociaux
L'utilisation du sol	Coûts environnementaux

La soutenabilité de la mobilité

Kinshasa : à voir le nombre des artères en dégradation dans les différentes Communes

L'action humaine joue un rôle prédominant dans l'apparition des érosions en particulier en milieu urbain. Globalement, on peut reconnaître les causes suivantes en ce qui concerne les érosions à Kinshasa :
- Existence d'un sol non consistant de nature sablo - argileux, très fragile, instable et facilement transportable par l'eau ;

- Relief collinaire à forte pente pouvant atteindre 12 à 20 % voire 30 à 40 % sur certains sites ;

- Occupation anarchique des terres et construction des maisons par auto - construction sans l'assistance des personnes qualifiées sur des sites à risques non viabilisés préalablement en violation des normes urbanistiques et architecturales;

- Absence d'ouvrages de drainage et d'assainissement pour l'évacuation des eaux usées et pluviales ;

- Tracés des rues et avenues perpendiculaires aux courbes de niveau transformant celles - ci en canaux où s'engouffrent avec impétuosité les eaux sauvages de pluies ;

- Une pluviosité importante caractérisée par des pluies intenses, fréquentes et abondantes pendant 8 mois de l'année et dont la grande majorité se produisent sous forme d'orages (70%).

Tout le monde est Pays
L'Office de voirie et drainage est responsable dans la mesure où il a pour rôle de surveiller l'état des routes dans l'ensemble du Pays, or ce n'est pas le cas dans les villes où cet office commence bien les travaux, mais il ne les achève pas ou avec difficulté.

L'utilisation de sol et les ouvrages de drainage

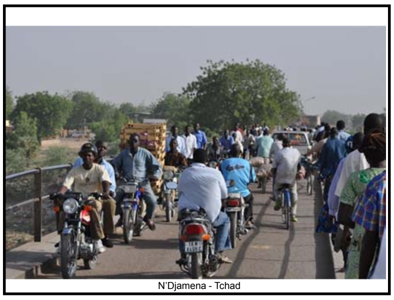
Kinshasa : à voir une route détruite par les eaux [2015] L'action humaine joue un rôle prédominant dans l'apparition des érosions en particulier en milieu urbain. Globalement, on peut reconnaître les causes suivantes en ce qui concerne les érosions :
- existence d'un sol non consistant de nature sablo - argileux, très fragile, instable et facilement transportable par l'eau ;

aBrou - La Porte des Eléphants

Abjdian

N'Djamena - Tchad

N'Djamena - Tchad



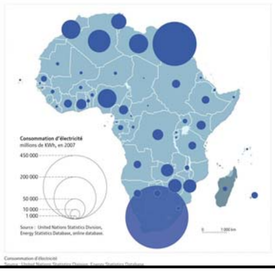
N'Djamena - Tchad

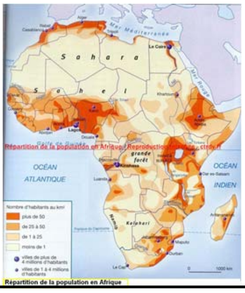
Abjdian

Rabat

N'Djamena - Tchad

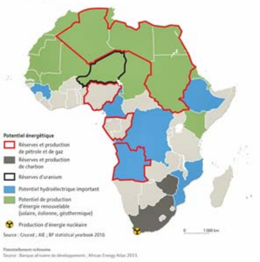
Accès aux services de base


Consommation d'électricité
millions de KWh, en 2007
450 000
200 000
50 000
10 000
1 000
Source : United Nations Statistics Division, Energy Statistics Database, online database.
0
1 000 km
Consommation d'électricité


Alger
Rabat
Casablanca
Tripoli
Mer Méditerranée
Le Caire
Sahara
Sahel
Mer Rouge
Khartoum
Kano
Lagos
Abidjan
Douala
Addis Abeba
Répartition de la population en Afrique
grande forêt
Kinshasa
OCÉAN ATLANTIQUE
OCÉAN INDIEN
Luanda
Dar es-Salaam
Nombre d'habitants au km²
plus de 50
de 25 à 50
de 1 à 25
moins de 1
villes de plus de 4 millions d'habitants
villes de 1 à 4 millions d'habitants
Namib
Kalahari
Antananarivo
Johannesburg
Maputo
Durban
Le Cap
0
1000 km

Répartition de la population en Afrique

Énergie


Potentiel énergétique
Réserves et production de pétrole et de gaz
Réserves et production de charbon
Réserves d'uranium
Potentiel hydroélectrique important
Potentiel de production d'énergie renouvelable (solaire, éolienne, géothermique)
Production d'énergie nucléaire
Source : Cnuced ; AIE ; BP statistical yearbook 2010.
0
1 000 km

Allagamenti a Taranto

Allagamenti a Taranto

Frane e allagamenti a Viareggio

Abidjan

Bangkok