

Mapping the Fluid

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06:00

PLEDGE

This paper is an attempt to construct an assignment or research project within the electronic apparatus. The goal is the creation of an experiment to learn from the city. Venice provides the site of investigation and the base material for the inquiry. Heuristics contributes the organizing mechanism. “[H]euretics is a cognitive practice coming into formation as an alternative to (not opposed to, but supplementing) hermeneutics and critique. The term, related to ‘Eureka! I found it!’ is synonymous with thinking as discovery rather than interpretation.”¹ Its development is concurrent with the emerging digital — electronic — culture that is re-negotiating the relationship between oral and print cultures. Heuristics has much to offer architectural education and practice as we participate in this bargaining as well. It is from this landscape that the principle question explored here, with heuristics in Venice, is developed; how to construct an experiment to learn from a city with the space between the objects it contains?

07:00

LOTTERY

Sixteenth century Venice, from his monastic cell Fra Mauro³ set out to map the world with the stories of visiting travelers. Through the course of his work he began to question the legitimacy and bounds of his description. The stories seemed to weave an impossible thread. Exploring the nature of his mapping, he began to suggest alternative aims.

[This] led me to the idea of fashioning a map that would defy every category and genre. It would be a map that would contain them all; a map hard to define, yet because of this lack of definition, a map that would begin to define itself more precisely. Nor would it be one designed to espouse any particular policy or persuasion. Rather, I wanted my map to show the earth in the sky, and the sky on earth; a map that would act as the prototype for all maps scattered in space and in time. It would be a device by which the world could surrender itself in fragments to the open, inquisitive gaze of everyone. I fondly hoped that such a map would preside over the birth of another map, and then another.³

08:00

LOAN

Bassanio and Antonio negotiate with Shylock, the Jew.
3000 ducats for 3 months, bonded by one pound of Antonio’s fair flesh.⁴

0 cm

SEA LEVEL

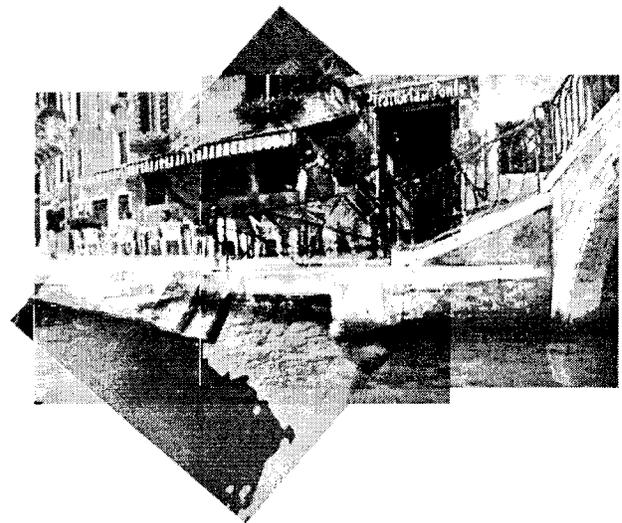


Fig. 1.

I too, have entered this bond. Borrowing heuristics, a method of research, from Gregory Ulmer.⁵ A principle question driving much of Ulmer’s work is what does it mean to conduct academic research within the electronic apparatus?⁶ This paper attempts to draw that question into the domain of architectural practice in general and the relationship between an observer and the city in particular. Modeled after “The Euretics of Alice’s Valise,” the purpose of this paper is to demonstrate a heuristic model of architectural research and to assist in the organization of an experiment — *mapping the fluid* — in Venice, Italy.

The point to emphasize here is that the text that follows is an experiment: it is offered not as a proof or assertion of truth but as a trial or test. I offer it as a version of a practice whose value will be determined by those who choose to try it.⁷

The model of investigation being developed here is transportable beyond the physicality of Venice. It will have failed if it ends as one among many relics that adorn the history of this great city. This paper should be read as a guide, not issuing particular instructions or recipes, but assisting in the orientation of a work. Venice and its fluid are my areas of study; you may apply your areas of inquiry and take up the project as your own.

The principle-organizing device of heuristics is the CATTt, an acronym “naming the operations carried out by every treatise on method authored in the Western tradition.”⁸ The operations of the CATTt are:



Fig. 2.

- C = Contrast (opposition, inversion, differentiation)
 A = Analogy (figuration, displacement)
 T = Theory (repetition, literalization)
 T = Target (application, purpose)
 t = Tale (secondary elaboration, representability)⁹

My CATTt, the dog, contains the following elements: *Contrast* = mapping the city from above — Architecture of the Grand Narrative; *Analogy* = gettare; *Theory* = formless; *Target* = mapping the city from within — architecture of minute particulars; *tale* = theatrical remake. As a tool, the CATTt is not engaged to argue a point but to organize sets of information. "Each item of the set will be described in an order created not by a goal (for that is unknown) but by associations, which is to say that the final principle of classification is not argumentative or expository, but poetic."¹⁰ I will not argue this point, but I will attempt to show it.

09:00

+ 65 cm

PLEADING

Portia rescues a pound of the Merchant's flesh by describing the fluid within it. She uses the fluid to reveal a solid. This experiment is lead by clues found within *The Merchant of Venice*.¹¹ Portia's distinction becomes the basis for the search — to map the fluid space of the ghettos of Venice. The *Merchant* casts the structure of the theatrical remake.¹²

The term ghetto originated in Italian, from *gettare* — to cast.¹³ Among the multiple theories regarding its origin, the most widely held links it to the creation of the first Venetian ghetto — Ghetto Nuovo — on the site of a dis-used foundry in Cannaregio. The particulars of this site led to its choice as a container for the Jews. It is a definable object, an island within the city; as such it was isolate-able, securable, and guard-able. Self-interest and profit motivated the Venetian Republic's handling of the Jews. The creation of the ghetto proposed a "resolution" to the "problem" without expelling

the Jews and thereby their capital. Interestingly, the seat of the Catholic Church was held at a similar distance within the Republic. San Pietro di Castello was located on an island on the outskirts of town as well, far away from the center of power and control.

Exploring Venice by looking at its ghettos is directed by a desire to focus on the background of the city rather than on its monuments or landmarks, to conduct urban analysis with peripheral vision rather than monocular focus. The interest here is to position the inquiry within that which is common and all around, rather than seeking to discover what has been yet unseen. It is a method of looking and learning we are after, not the buried jewel we may stumble across.

10:00

+ 73 cm

DEPARTURE

To describe the space between, the cast space of Venice, is to focus on volume, on the slippery relationship of one volume to the next and on the continuity that links the spatial volume (public and private) of the city. In Venice one moves through a continuum of smooth space, the envelope of perception molded, cast, from one configuration to the next. Heuretics engages the CATTt through conduction,¹⁴ an electronic supplement to the established modes of reasoning. It "concerns a logic of invention or of making," of reasoning directly from "thing to thing." To think conduction architecturally is to reason directly from space to space, or volume to volume.

You work from an esthetic, not a rational standpoint. Those scanners you constructed. You try to fill. Complete the pattern. Anticipate where it goes if extended one more point. That's not rational; not an intellectual process. That's how — well, vasmakers work.¹⁵

To think architectural research within the electronic apparatus is to engage conduction across the spectrum of available media; collecting information digitally from the envelope of perception, from the cast space of the city, from the fluid space between. What does it mean to describe the fluid space of Venice within the electronic apparatus? To place the work, the map, between oral and print culture as a tool of discovery for the practice of architecture.

With digitalization all of the media become translatable into each other. Computer bits migrate merrily, and they escape from their traditional means of transmission. A movie, phone call, letter, or magazine article may be sent digitally via phone line, coax-cable, fiber optic cable, microwave, satellite, the broadcast air, or a physical storage medium such as tape or disk. If that's not revolution enough consider this: with digitalization the content becomes totally plastic—any message, sound, or image may be edited from anything to anything else.¹⁶

11:00

+ 68 cm

CASKET OF GOLD

Who chooseth me shall gain what many men desire.¹⁷

The origins of modern science, cosmological and theological, sought to maintain an over-riding system of understanding and explanation for our existence in the world. The goal of the logic of modern science is the production of objective results and the removal of variables or subjective interpretation. It operates through a reliance on proof over discovery. The unequivocal strength of this mode of reasoning has encountered criticism in recent times. In 1984, Jean-Francois Lyotard¹⁸ issued his critique of the Grand Narrative of modern science. Gregory Ulmer speaks of the Modernist tendency towards separation, and frames the issue in terms of "totalization."

People have become concerned about "totalization" in all of

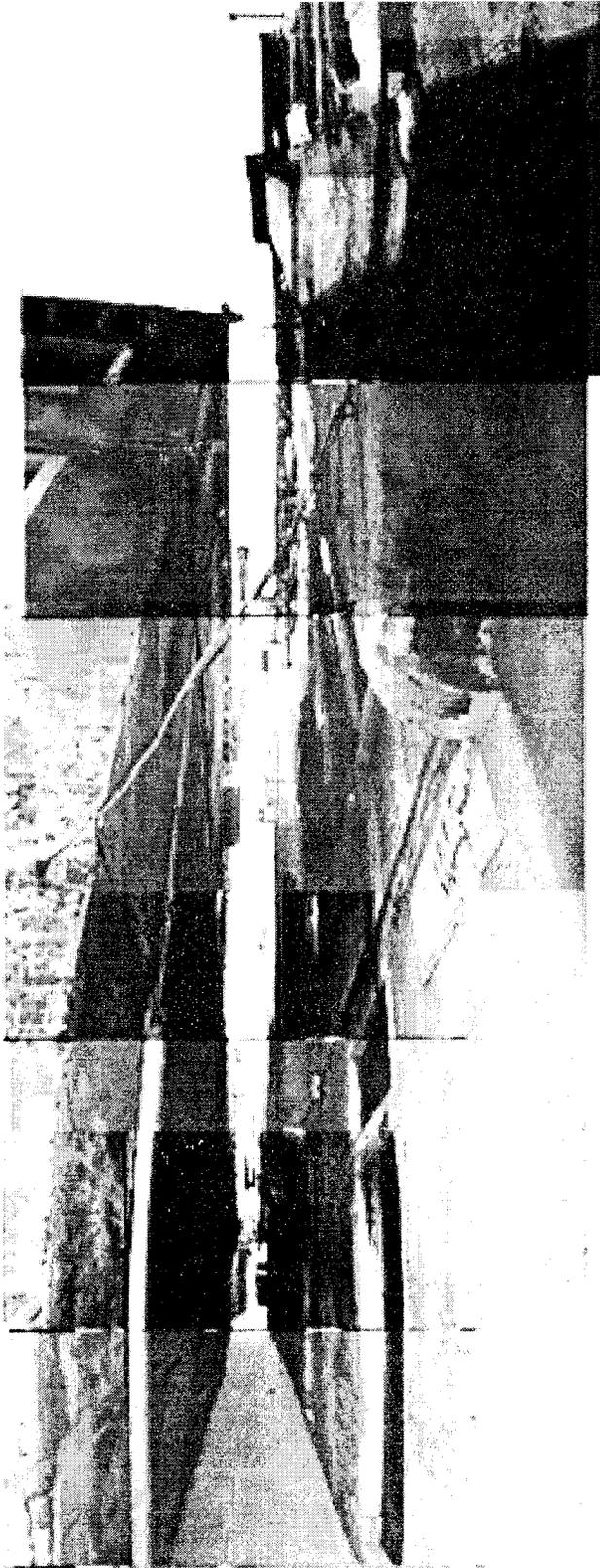


Fig. 3.

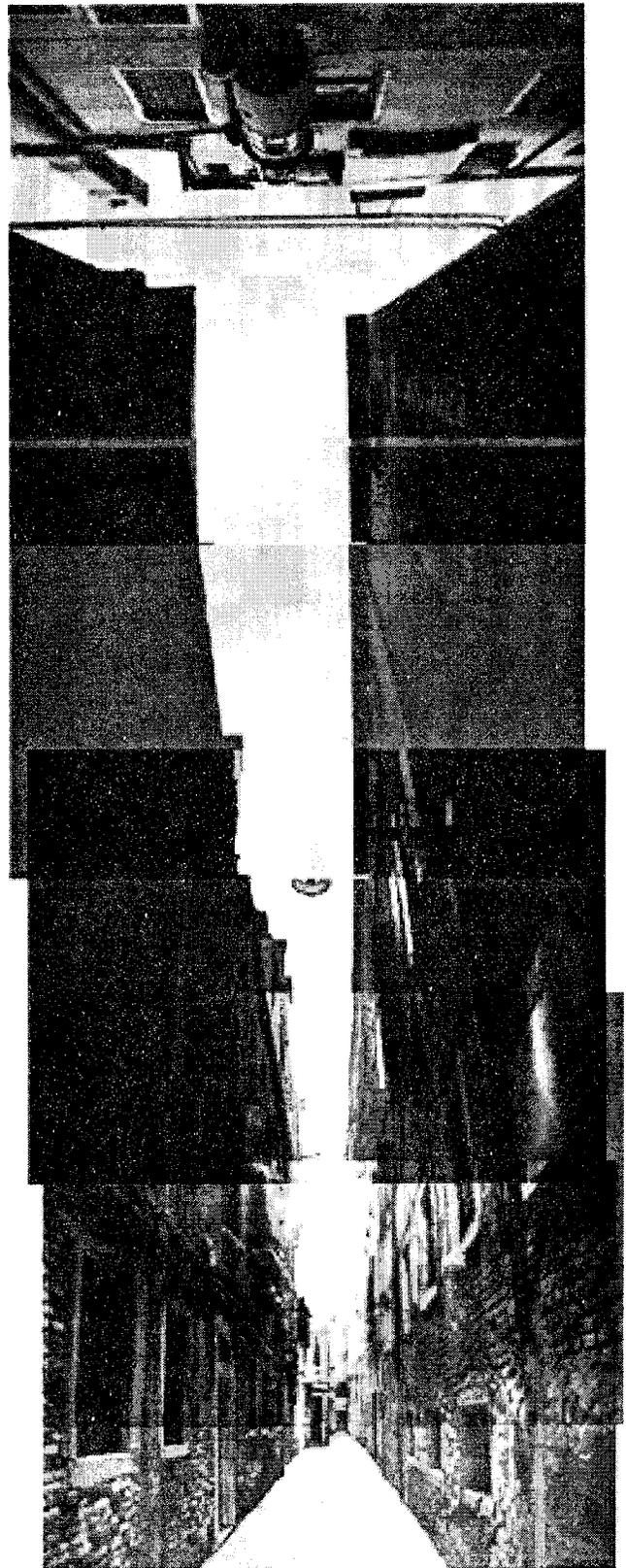


Fig. 4.

its forms, one of which is explanation. Explanation, perhaps because it shares so many features with narrative (teleology, closure, the truth effect), has become suspect. It is little more than 'secondary elaboration,' suturing the gaps of ignorance, reasoning by enthymemes, imposing a causality that derives more from syntax than from the object of study. Explanations lend a false sense of unity, homogeneity, universality, to a heterogeneous body of materials, ignoring or sublating real differences in the interest of an artificial verisimilitude of plausibility.¹⁹

The historic developments of modern architectural theory do not escape this totalitarian desire of explanation. Alberto Perez-Gomez, among others, has chronicled the developments of architectural theory parallel to the creation of modern science.²⁰ He argues against the simplified standard of "applicability" that scientific logic brings to bear on the complexities of architectural production. In contrast to "instrumental discourses" he proposes a re-investment in the poetic register as a vehicle for architectural theory.²¹

All that glitters is not gold;²²

The woodcut by Jacopo de' Barbari in 1500 presents an image of Venice that contained "countless geographical distortions," "omissions," and other "deliberately inaccurate," "incomplete or contradictory data." Yet it acted "as a kind of 'filter' for all later views of the city."²³ Barbari's view is both an accurate and fictive record of the city. While astonishingly researched and diligently thorough, down to the windows of particular buildings, Barbari's mission was to convey a sense of the whole, the island, the formal integrity of the Republic. His devotion to detail allowed him to bring into the 'picture' much of the peripheral and ephemeral workings of the city. Boat and material yards, sea-going vessels of all kinds, and the contents of open space are all described with the same rigor as the structural form of the city. In this effort he captures the happenings of the day as a glimpse into the makeup of life within the form he has projected. Both the Grand Narrative and the many small ones exist in his work. This line of thinking can be followed forward through time to the making of the aerial photo-map contained in *Atlante di Venezia*.²⁴

After de' Barbari and until the fall of the Republic, the perspective view of the city — city as image — dominated. After the fall, the city's new rulers, with the aid of scientific — verifiable — techniques of measurement, became more interested in documenting the territorial limits of their new jewel. A succession of planimetric maps follows through the 17th, 18th, and 19th centuries and describes the formal undulations of the city's growth. These maps²⁵ by their nature tend to be objectively descriptive aligning themselves with the limits of property and ownership. No longer interested in the daily gossip of the city and its subjects. The darkness of the calli are bathed in the dawn of our early modern search light. The *Atlante di Venezia* marks a return from this progression of objective description and scientific measurement. With aerial photo techniques and the assistance of computer rectification, we are able to again see a frozen moment in time within the history of the Serenissima. This technique allows description of both the overall formal characteristics of the city as well as the particulars of its inner workings — from gondola to vaporetto to the industrial shipyards and the Trocetto. It offers more than just the objective information of where things sit in the world; we can begin to see the vector of their occupation. One can read the wet stains on the pavement of Campo Santa Margherita left by the freshly departed fish market.

In the history of formal mapping, the *Atlante* presents a position more a kin to de' Barbari's. However, a shared trait with the entire lineage is the position of the point of view. Technically Barbari's vantage-point was atop the campanile of S. Giorgio Maggiore, but in the final representation it hovers out over the Lido. His view is

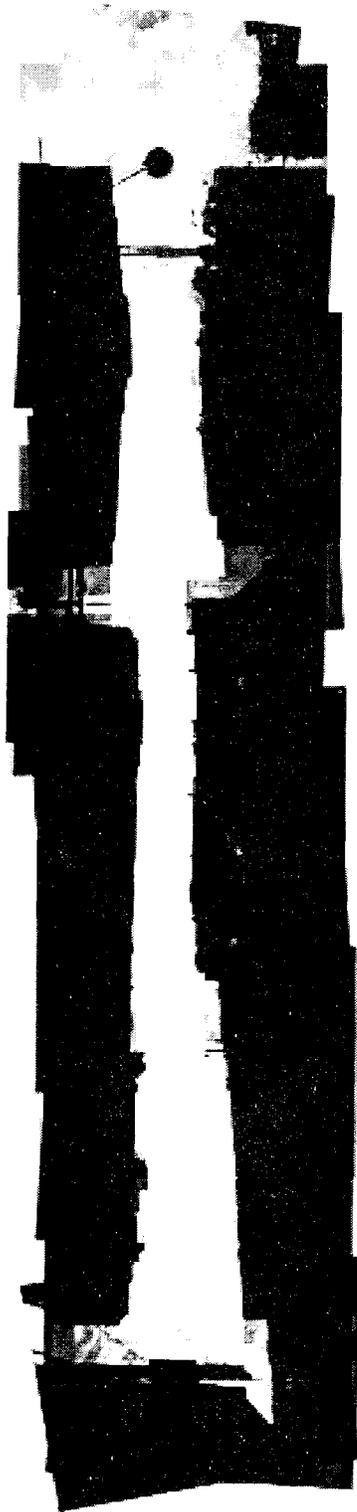


Fig. 5.

perspectival, yet from the air. The point of view of the photo-plan, as all other planimetric maps, rotates skyward and extends continuously across the horizon. It adopts the omnipresent position of scientific reason — that nothing escapes its view. This aim can be described as analogous to Montaigne's as he encounters a new city.

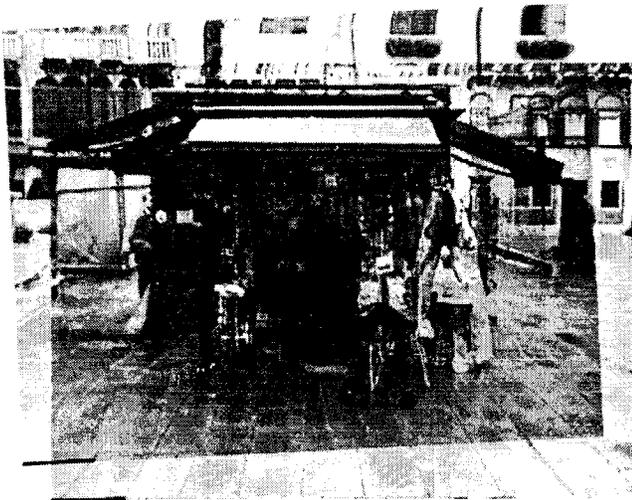


Fig. 6.

When I arrive in a city, I always go up onto the highest steeple or the highest tower in order to see the entire ensemble, before seeing the parts; and upon leaving the city, I do the same in order to fix down my ideas.²⁶

To map the fluid space of Venice the vantage-point must be set not above, but within the city. In contrast to Architecture of the Grand Narrative, the proposal calls for developing architecture of minute particulars. One must enter the city.

12:00

+ 53 cm

GOSSIP

Throughout the city, at the confluences of major streets, or in the corners of the busiest squares, were small neatly constructed kiosks or shacks which by day were draped with newspapers and magazines in many languages, and with tiers of postcards showing famous views, children, animals and women who smiled when the card was titled.

Inside the kiosk sat the vendor, barely visible through the tiny hatch, and in virtual darkness. It was possible to buy cigarettes here and not know whether it was a man or a woman who sold them. The customer saw only the native deep brown eyes, a pale hand, and heard a muttered thanks. The kiosks were centers of neighborhood intrigue and gossip; messages and parcels were left here. But tourists asking for directions were answered with a diffident gesture towards the display of maps, easily missed between the ranks of lurid magazine covers.²⁷

13:00

+ 30 cm

CASKET OF SILVER

Who chooseth me shall get as much as he deserves.²⁸

In *FORMLESS: A User's Guide*,²⁹ Yve Alain Bois and Rosalind Krauss identify four operations of the *informe*³⁰ in an attempt to put Bataille's theory to work in the organization of an exhibit of modern art. The principle strategy of their process is to use theory generatively, to see what can be made of it. The operations outlined in the *User's Guide* will serve to orient Georges Bataille's theory of the *informe*, it occupies the "theory" register of my CATTt. Bois and Krauss discover in these operations the mark of the *informe* and that they stand in contrast to the foundational myths of modernism. They

define the operations as "horizontalism," "base materialism," "pulse," and "entropy."³¹ Heuristics differs slightly from the exercise put forth in the *User's Guide*. Rather than using a theory to guide a practice, it aims to move to a theory with a practice. Ulmer defines this process through "chorography" as "a kind of slide rule of intuition" tuning "writing to the materiality of language and the human subject." "This 'rule' is what I seek; it turns the law of the square into a tool — like the measuring device used by carpenters or joiners."³²

jig (jĭg) noun

1. a. Any of various lively **dances** in triple time. b. The music for such a dance. Also called **gigue**.
2. A joke or **trick**.
3. A typically metal fishing **lure** with one or more hooks, usually deployed with a jiggling motion on or near the bottom.
4. An apparatus for cleaning or separating crushed ore by agitation in **water**.
5. A device for guiding a **tool** or for holding machine work in place.

[Origin unknown.]³³

A jig rather than a square or slide rule guides my CATTt, the dog. The jig helps tune the elements, the sets of information within the CATTt. The operations of the formless will assist in working the jig, in *mapping the fluid*.

Venice is a city of impossible foundations. Built of water and mud it is in constant flux, moving and shifting with time. It is a city that lives in its decay — always struggling to stay a float. This continual decay lends a sense of the erotic, the continual flux in and out of life and death. This precarious mix maintains the lifeblood of the city. "Entropy" is defined in the *User's Guide* as a temporal phenomenon, a disturbance of the figureground relationship, and as non-elastic — liquid.³⁴ The buildings of Venice have the advantage of being in a constant state of tearing themselves apart and being put back together again. This layering over time, out of direct need or expedience, defies the distanced notion of a complete whole. Be it iron cross ties that stitch through a building or masonry compression elements that extend from one to the next, the shifting foundations support a slipperiness of spatial boundaries within the city. But this slipperiness is more than the age and mud of the Venetian lagoon; it can be seen as a vestige of its medieval past, as a moment of frozen time that has been superceded in other cities. For the most part, with the exception of the monuments, Venice is a city that was built before it was drawn. As with other Italian hill towns the city grew over time without a clear or pre-defined plan. Buildings were laid out by following the natural lines of the landscape — the lagoon — staying on the higher ground and out of the deeper — traverse-able — canals. This aspect of medieval urban development holds some clues into the fluid space of the city.

Perhaps the first evidence we have of this change — of the city evolving from a fluid assembly of legally defined groups or orders into a composition of well-defined spaces — is the appearance in the 11th Century in one northern European town after another of a recognizable, permanent marketplace.³⁵

J.B. Jackson described the medieval city as a fluid assembly. He spoke of the importance of the definition of a group of people over a territory. Blind alleys and crooked lanes were the space between relatively temporary dwellings. It wasn't until the formalization of the street that the continuity of those spaces were considered 'objectively.' For the most part this formalization was somehow eluded in Venice and vestiges of the clusters remain. The pre-formalized fabric creates a fertile ground for reading the continuous and fluid space of the city. Once the formalization of the street occurs³⁶ the fluid space is modulated by the clear definition of the objects which line its path. "Entropy" provides a tool for working with this

temporal reversal of the figure ground. For thinking the city — *mapping the fluid* — in this pre-formalized manner warrants an investigation of the relationships between “things,” groups of people, and how these relationships came to shape a territory. The proposal developing here, in the form of an assignment or research experiment, asks for the construction of a map that follows the lead of Venice, being built before it is drawn, and entropy, a non-elastic — liquid — disturbance of the figure-ground.

... and if you ask him the way somewhere, through the tangled wilderness of the Venetian back-streets, he will summon a wise and helpful look, consider the situation carefully, take you kindly by the arm and usher you to the nearest vantage-point; and pointing a finger through the labyrinth of medieval lanes that lies before you, entangled in canals, archways, dead ends, unexpected squares and delusive passages, ‘Sempre diretto!’ he will say courteously—‘Straight ahead!’³⁷

19 August 1998, a person jogs across Campo S. Bartolomeo in the early morning light. The Campo is open and quiet; usually it is the overstuffed volume opposite the Rialto. The jogger, a man in yellow running shorts (probably an American), jogs with map in hand. He takes three steps and snitches a glance at the map, three more paces and another glance. He heads towards Strada Nuova.

14:00 + 7 cm
GOSSIP

Marco Polo describes a bridge, stone by stone.
“But which is the stone that supports the bridge?”
Kublai Khan asks.
“The bridge is not supported by one stone or another,”
Marco answers, “but by the line of the arch that they form.”
Kublai Khan remains silent, reflecting. Then he adds:
“Why do you speak to me of the stones? It is only the arch that matters to me.”
Polo answers: “Without stones there is no arch.”³⁸

15:00 - 10 cm
CASKET OF LEAD

Who chooseth me must give and hazard all he hath.³⁹

Not far from Marco Polo’s House there is an island bounded by the Rio del Piombo, the river of lead. Self-contained within the city, this island could have been the first Ghetto. However, I think the problem was it is too close to Marco Polo’s house and that could have posed problems for the tourists and Venetians alike, we must not mix our mythologies — accidentally that is. In the center of the island is Campo S. Marina named after a church that no longer exists. Like many other in the city, this campo contains a news kiosk.

You that choose not by the view
Chance as fair, and choose as true.⁴⁰

16:00 - 23 cm
BOND

In order to construct the map we must not forget the bond with the dog, the Jew.

Constructed space now occurs within an electronic topology, where the framing of the point of view and the scan lines of digital images give new form to the practice of urban mapping.⁴¹

The operation of “horizontal” is defined by the *User’s Guide* as

the lowering of the vertical, the visual field (the vertical picture plane of the purely visual), into the horizontal, the (carnal) space of our bodies.⁴² The horizontal, horizon line, is very important. It signals gravity. It is a marker of our perception. It is where the water stops and the sky begins. To map the fluid of Venice the vantage-point must be located within the landscape of the sea and the lagoon, projecting the sky onto the ground and the ground onto the sky.

17:00 - 18 cm
DECEIT

Never, never tell a lie, but the truth not to everyone.⁴³

18:00 - 7 cm
JUSTICE

gettare : cast : found : ghetto

found (found) verb, transitive

1. To melt (metal) and pour into a mold.

2. To make (objects) by pouring molten material into a mold.

[Middle English *founden*, from Old French *fondre*, from Latin *fundere*.]⁴⁴

The *User’s Guide* defines the operation of “base materialism” in terms of scission — considering the two (high and low) uses for all things. The operation is not an attempt not to reconcile the definitions as a dialectic, but to allow both to exist, oscillating heterogeneously between the two poles.⁴⁵ Bataille worked at every level to bring things down in the world, to work in the realm of the low, the base material. This operation directs *mapping the fluid* to the cracks and underbelly of the city, the space between the monuments. Also to its base material components: mud, water, air, sent (slippery things), and stone, brick, wood (solid things). It orients the map towards visceral experience within the base material of the city. And locates the site of the map in the found ghetto of Isola del Piombo.

19:00 + 12 cm
RETURN

The *User’s Guide* defines “pulse” as a rhythm of the senses, a movement up from the low, as a destabilizing beat.⁴⁶ The operation of “pulse” to be engaged in tuning the jig is the rhythmic experience of the city. For *mapping the fluid*, “pulse” is organized with tides,⁴⁷ tourists, and traghetos. It presents a way of dealing with place as fluid rather than static, complete, and isolate-able. The constructed ground of Venice moves and shifts with the rise and fall of water.

20:00 + 32 cm
RING

The history of writing shows that print favored a style of logical representation that finally replaced and exceeded the hermetic tradition of the memory theater — the mnemonics of places and active (strong) images derived from ancient rhetoric. What began in ancient oratorical training as a method for memorizing quantities of information by associating it in the imagination with a series of striking images distributed through the rooms of one’s home, or along the street of one’s community, had evolved by the time of the Renaissance into a theater, a building, designed as an encyclopedia of total knowledge. Such was the Memory Theater of Giulio Camillo, of which one model was actually built. It was made of wood, large enough for two people to enter, and “marked with many images, and full of little boxes.”⁴⁸

The Memory Theater provides a container, a model of external

storage, and a combinatorial system for *mapping the fluid*. The problem now is to organize the map as a Memory Theater, set within the city, within the Isola del Piombo, as a news kiosk in Campo S. Marina. The goal of *mapping the fluid* differs from that of the Memory Theater of the Renaissance. Having found the Casket of Gold empty we cannot turn to Architecture of the Grand Narrative for guidance. We cannot seek to convey our story solely with the loading of strong images. Instead the other registers of the CATTt provide orientation; the jig points the way. Rather than attempting to describe and contain "all" the knowledge and information of a place, *mapping the fluid* seeks to document the minute particulars, the little bits, describing one story of the fluid space between the elements of the city. This is the basis of our theatrical remake — the form of our map.

21:00

+ 54 cm

REDEMPTION

The theory suggests a different response, less hermeneutic, more heuritic: something other, something to do, not something to know or to say.⁴⁹

redemption (rĭ-dĕmp'shen) noun

1. The act of redeeming or the condition of having been redeemed.
2. **Recovery of something pawned or mortgaged.**
3. The payment of an obligation, as a government's payment of the value of its bonds.
4. Deliverance upon payment of ransom; rescue.
5. Theology. Salvation from sin through Jesus's sacrifice. [Middle English redempcioun, from Old French redemption, from Latin red'mptio, red'mption-, from red'mptus, past participle of redimere, to redeem. See redeem.]⁵⁰

To redeem the bond of the dog, the Jew, is not to offer or demand the salvation bestowed upon Shylock. It is to recover something pawned or mortgaged, placed into hock by the weight of scientific reason. It is to construct the map of the fluid, to carry out the experiment. Heuritics leads the way to conducting architectural research within the electronic apparatus, to thinking as discovery and invention rather than interpretation. It demonstrates that interpreting the historical or archeological aspects of this story is not all that is required, other scenarios may well be revealed. The obligation it has placed is how a study of the physical condition of Venice may generate (eureka) a method of *mapping the fluid* — of learning from a city with the space between the objects it contains.

Kublai: Perhaps this dialogue of ours is taking place between two beggars nicknamed Kublai Khan and Marco Polo; as they sift through a rubbish heap, piling up rusted flotsam, scraps of cloth, wastepaper, while drunk on the few sips of bad wine, they see all the treasure of the East shine around them.⁵¹

NOTES

- ¹ Gregory Ulmer, "The Euretics of Alice's Valise," *Journal of Architectural Education* 45/1 (November 1991), p. 4.
- ² James Cowan, *A Mapmaker's Dream: The Meditations of Fra Mauro, Cartographer to the Court of Venice* (New York: Warner Books, 1996).
- ³ Cowan, *A Mapmaker's Dream*, p. 60.
- ⁴ William Shakespeare, "The Merchant of Venice," *The Pelican Shakespeare*, Ed. Brents Stirling, (New York: Pelican Books, 1959, 1970, 1987), pp. 38-44.
- ⁵ See Gregory L. Ulmer; *Teletheory: Grammatology in the Age of Video* (New York: Routledge, 1989), "The Euretics of Alice's Valise," *Journal of Architectural Education* 45/1 (November 1991), pp. 3-10, *Heuritics: The Logic of Invention* (Baltimore:

Johns Hopkins University Press, 1994), "One Video Theory," *Critical Issues in Electronic Media*, Ed. Simon Penny (Buffalo: State University of New York Press, 1995), pp. 253-274.

- ⁶ "My goal has been to find forms appropriate for conducting cultural studies research in relation to the electronic media. Logically, the electronic apparatus does not come "after" print but "between" print and oral "literacy," making technically possible a greater ease of circulation of knowledge through the different institutions of culture. One of the responsibilities of Discipline discourse now is to invent the representational means and the institutional cooperation for this circulation." *Heuritics*, p. xi.
- ⁷ Ulmer, *Heuritics*, pp. 38-39.
- ⁸ Ulmer, "The Euretics of Alice's Valise," p. 8.
- ⁹ Ulmer, *Heuritics*, p. 8.
- ¹⁰ Ulmer, "One Video Theory," p. 253.
- ¹¹ William Shakespeare, "The Merchant of Venice," *The Pelican Shakespeare*, Ed. Brents Stirling, (New York: Pelican Books, 1959, 1970, 1987).
- ¹² A diagram of the Merchant of Venice has been used to define the section divisions within this paper.
- ¹³ Richard Sennett, *Flesh and Stone: The Body and the City in Western Civilization* (W.W. Norton & Company, 1994), p. 231. **gett' talre** vt throw; (scagliare) fling; (emettere) spout; Techn, **fig cast**; ~re via throw away. ~rsi vr throw oneself; ~rsi in (fiume:) flow into. ~ta nf throw; Techn casting. *The Oxford Italian Minidictionary*, Second Edition, (Oxford: Oxford University Press, 1997), p. 115.
- ¹⁴ Ulmer, "One Video Theory," p. 268. "If the circuit of reasoning moves from things to rules by means of abduction, from rules to cases by deduction, and cases to things by induction (see Eco and Sebeok), then reasoning moves directly from thing to thing in the real by means of conduction." See also *Teletheory and Heuritics*.
- ¹⁵ Phillip K Dick, *Time out of Joint* (Location: Publisher, 1959), pp. 41-42.
- ¹⁶ Stewart Brand, *The Media Lab*, p.18. In Ulmer, *One Video Theory*, pp. 269-270.
- ¹⁷ Shakespeare, "The Merchant of Venice," p. 61.
- ¹⁸ Jean-Francois Lyotard, *The Postmodern Condition: A Report on Knowledge*, Trans. Geoff Bennington and Brian Massumi, (Minneapolis: University of Minnesota Press, 1984).
- ¹⁹ Ulmer, "One Video Theory," p. 253.
- ²⁰ Alberto Perez-Gomez, *Architecture and the Crisis of Modern Science* (Cambridge: MIT Press, 1983).
- ²¹ Perez-Gomez, Alberto, "Hermeneutics as Architectural Discourse," *International Journal for Theory of Architecture* "Cloud-Cuckoo-Land," Vol. 2, No. 2, November 1997. >http://www.theo.tu-cottbus.de/Wolke/eng/Subjects/subject972.html< See also *Architecture and the Crisis of Modern Science*, and *Polyphilo*, or, *The Dark Forest Revisited: An Erotic Epiphany of Architecture*.
- ²² Shakespeare, "The Merchant of Venice," p. 63.
- ²³ Donatella Calabi, "Images of a City 'In the Middle' of Salt Water," *Atlante di Venezia Ed. Edoardo Salzano* (Venezia: Marsilio Editori, 1989, 1990), p. 406.
- ²⁴ *Atlante di Venezia: La forma della citta in scala 1:1000 nel fotopiano e nella carta numerica*, Ed. Edoardo Salzano (Venezia: Marsilio Editori, 1989, 1990).
- ²⁵ The primary references are: Ludovico Ughi, *Iconografica rappresentazione dell'inclita citta di Venezia*, 1729; Catasto napoleonico, *Mappa della citta di Venezia*, 1808; Berando e Gaetano Combatti, *Nuova planimetria della R. citta di Venezia*, 1846-1856. For a more complete index of cartography of Venice refer to Giorgio Bellavitis and Giandomenico Romanelli, *Venezia: Le citta nella storia d'Italia* (Rome-Bari: Gius, Laterza & Figli, 1985).
- ²⁶ Georges Van de Abbeele, *Travel as Metaphor: From Montaigne*

- to *Rousseau* (Minneapolis: University of Minnesota Press, 1992), p. 66.
- ²⁷ Ian McEwan, *The Comfort of Strangers* (New York: Vintage International, 1994), p. 19.
- ²⁸ Shakespeare, "The Merchant of Venice," p. 61.
- ²⁹ Yve Alain Bois and Rosalind E. Krauss, *FORMLESS: A User's Guide* (Cambridge: MIT Press, 1997).
- ³⁰ Referenced in *FORMLESS*. Georges Bataille, *Visions of Excess: Selected Writings, 1927-1939*, Ed. and trans. Allan Stoekl (Minneapolis: University of Minnesota Press, 1985), p. 31.
- ³¹ Bois and Krauss, *FORMLESS*, p. 21.
- ³² Ulmer, *Heuretics*, p. 206.
- ³³ *The American Heritage Dictionary of the English Language*, Third Edition. Electronic version, (Houghton Mifflin Company, 1992).
- ³⁴ Bois and Krauss, *FORMLESS*, pp. 34-38, 73-78, 129.
- ³⁵ John Brinckerhoff Jackson, "The Discovery of the Street," *The Necessity for Ruins and Other Topics* (Amherst: The University of Massachusetts Press, 1980), p. 58.
- ³⁶ Strada Nuova is an example of this practice occurring within Venice.
- ³⁷ Jan Morris, *The World of Venice* (San Diego: Harcourt Brace & Company, 1960, 1974, 1993), p. 50.
- ³⁸ Cast as the Merchant of our theatrical remake will be Calvino's Marco Polo. Italo Calvino, *Invisible Cities*, Trans. William Weaver, (San Diego: Harcourt Brace & Company, 1972, 1974), p. 82.
- ³⁹ Shakespeare, "The Merchant of Venice," p. 61.
- ⁴⁰ Shakespeare, "The Merchant of Venice," p. 78.
- ⁴¹ Ulmer, "One Video Theory," p. 260.
- ⁴² Bois and Krauss, *FORMLESS*, pp. 26-27, 93-103, 126.
- ⁴³ Morris, *The World of Venice*, p. 50. Quote from Paolo Sarpi - 1600.
- ⁴⁴ *The American Heritage Dictionary of the English Language*.
- ⁴⁵ Bois and Krauss, *FORMLESS*, pp. 29-31, 47, 67-69, 71.
- ⁴⁶ Bois and Krauss, *FORMLESS*, pp. 31-32, 135, 161-165.
- ⁴⁷ The section divisions of this paper are indexed with times and predicted tide values for 05 October 1998 taken from: *Previsioni: delle altezze di marea per il bacino di San Marco e delle velocità di corrente per il Canal Porto di Lideo — Laguna di Venezia, Valori Astronomici 1998*, (Roma: Istituto Poligrafico dello Stato Libreria, 1998).
- ⁴⁸ Ulmer, "One Video Theory," p. 270.
- ⁴⁹ Ulmer, "One Video Theory," p. 274.
- ⁵⁰ *The American Heritage Dictionary of the English Language*.
- ⁵¹ Calvino, *Invisible Cities*, p. 104.