

INTERNATIONAL FUND FOR MONUMENTS  
SANSONI EDITORE



# VENICE IN PERIL





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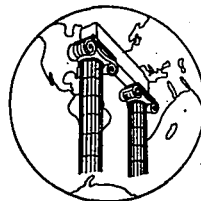
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September 30, 1970

Dear Friend of Venice,

The tragedy of Venice is a drama not only of a city, but of a civilization - a civilization which has given so much to our culture.

Herein we portray that drama, reproducing the striking photos of TIME, Inc. photographer Aldo Durazzi, while the indisputably qualified Indro Montanelli and Giuseppe Samonà take us behind the idyllic and romantic facade of the lovely city to reveal a grave urban crisis and the deterioration of its irreplaceable art.

These distinguished gentlemen are introduced by our informed executive director, James A. Gray who gives us an accurate and unbiased report on what is being done.

Each of us - every civilized being must feel morally bound to helping save Venice and its artistic patrimony, the loss of which would be serious, indeed, for this and future generations.

We and our Venice Committee are engaged in an ambitious program of restoration and preservation in Venice. What we will be able to accomplish will depend upon the support we get from people like you.

You have already helped by purchasing this book. If you feel that you can do more, please send us your (U.S. tax-deductible) contribution.

We will put it to good use in Venice.

Sincerely yours,

*Charles M. Grace*

Charles M. Grace  
Chairman of the Board

# WHAT IS BEING DONE

*James A. Gray*

The alarming revelations in the accompanying articles by Indro Montanelli and Giuseppe Samonà conveyed the right sense of urgency in the widely-read Italian version.

We decided to reprint herein English translations in their entirety, not only because of their dramatic presentation of the serious problems in Venice, but also because they reflect the aroused concern of many responsible, opinion-making Italians whom the Italian Government cannot afford to ignore.

But lest we too hastily accept at face value the criticisms levelled at the Italian authorities by these two distinguished gentlemen, let us consider the magnitude of the task and the costs which are so staggering as to be beyond the capability of Italy, alone, to assume.

Can we place upon the shoulders of the host nation the entire burden of saving this gem of western culture? Are we prepared to stand before the bar of future generations and explain why we, too, sat idly by while this treasure perished?

Obviously not, and fortunately we may not have to.

With all the talent and know-how being brought to bear, the problem of the high waters will be resolved before it becomes terminal. Our principal concern now should be to ensure that enough of this lovely city remains to make it worth saving.

Most important is the art and the many, many beautiful palazzi, churches and other irreplaceable architectural treasures. Accurate surveys reveal that each year between 4 and 6 percent of the works of art are being lost or damaged beyond repair. Unless substantial rescue work is done at once, more than one third of Venice's incomparable treasures will have been lost within ten years.

The methods for saving it are there. Modern restoration techniques work wonders and can often undo much old damage to paintings and sculptures. Roofs, walls and foundations can be strengthened, repaired or replaced. Newly developed chemical formulas protect marble and other stone permanently against erosion.

And fortunately, as often happens during times of crisis, strong leadership has emerged in Venice in the persons of Professor Francesco Valcanover, Superintendent of Galleries and Works of Art, Architect Renato Padoan, Superintendent of Monuments, and Professor Roberto Frassetto, Director of the National Research Council's Laboratory for the Study of the Dynamics of Large Masses. These three individuals head the agencies most directly

concerned with the problems of Venice. All three are extremely capable, dedicated, dynamic men of action and there could have been no better combination of circumstances — the right men, in the right place, at the right time.

Architect Padoan works literally around the clock and accomplishes miracles with woefully inadequate funds but with a wealth of determination and ingenuity.

As Superintendent of Galleries, Professor Valcanover is responsible for an enormous wealth of art and feels this responsibility very keenly. The disastrous flood waters of November 1966 had hardly run off before a Valcanover work crew was feverishly converting the former church of San Gregorio into the urgently needed laboratory capable of handling such enormous paintings as the threatened 58-foot high Tintoretto's of Madonna dell'Orto. By sheer force of character and determination Valcanover wheedled, begged and borrowed funds and equipment to create in San Giorgio, and an adjacent building, a modern and efficient laboratory staffed by highly competent technicians who have restored more than 2,500 square yards of frescos and 3,000 square yards of other paintings.

Professor Frassetto, former officer of the Italian Navy and member of its famed underwater demolition team, became a U.S. citizen following WW II and taught oceanography in American universities. His selection to head the newly created "Laboratory" in Venice was a wise one. He persuaded MIT and IBM to join forces with him in the research that will provide the solutions to the high-water problem. Dr. Frassetto declares 'I will make Venice dry, and I mean soon, not eventually'.

Given the means these capable individuals will save Venice and its cultural patrimony. It is our aim to do all possible to provide them the wherewithal.

And we are not alone!

Foremost is the support given by the Italian Government which, in addition to the vast sums which it must spend on engineering and research into the problem, has been allocating sizable sums for restoration and repairs to monuments and works of art in Venice. It has recently budgeted the equivalent of 100 million dollars for a ten-year program of restoration in Venice — this in addition to its recurring annual expenditures for the activities of the two superintendencies, and for the entire overhead of the laboratory at San Gregorio.

The Italian Government is also taking drastic measures to minimize man-made damage to Venice. To bring abundant water from the north, a large aqueduct is being rushed to completion whereupon the 15,000 wells in the area will be capped. This action, together with the ban against pumping of natural gas is arresting the sinking of the land. And a law passed in December 1969 is doing much to eliminate the corrosive smog. Despite the widely-held belief that this came from the industrial complex, it has been established that the culprits are the local heating plants. It is now illegal for the stoves and furnaces of Venice to burn the crude oil which had been generating the stone-killing smog.

Another Italian effort is represented in the activities of the Comitato Italiano per Venezia, recently organized by Countess Anna Maria Cicogna and Countess Ida Borletti Noble, headed by Olivetti Corporation, President Bruno Visentini, with a membership that includes some of the most affluent and influential persons in Italy. Besides the strong moral impact that this group will have upon the actions of the Italian Government in helping Venice, the Comitato itself has assumed responsibility for the restoration



of several monuments including the churches of Santo Stefano and San Giorgio degli Schiavoni.

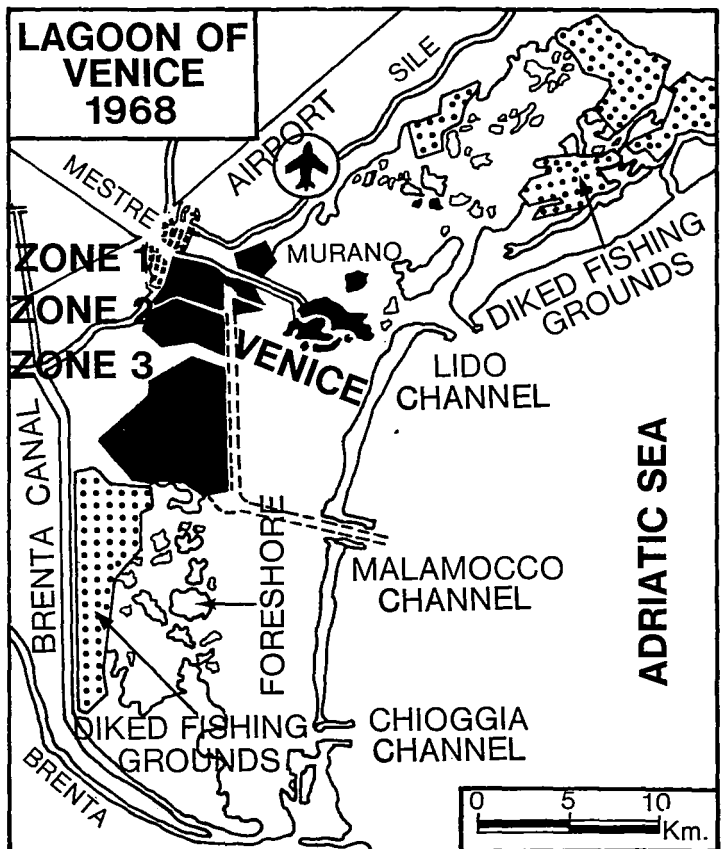
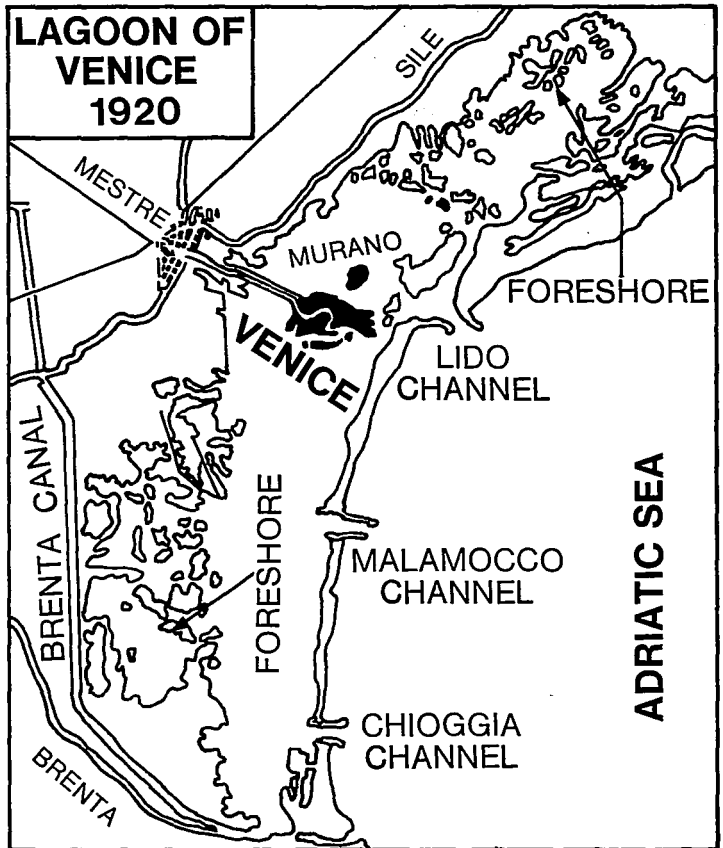
Probably the most refreshing development has been the spontaneous response to an appeal by the Turin newspaper "La Stampa" whose Italian readers contributed more than \$ 225,000 to restore the Basilica of San Marco and save its famous bronze horses.

Committees in other countries are being formed or already in operation. Notably the Comité Français pour la Sauvegarde de Venise which has adopted as its project the restoration of the famed Santa Maria della Salute.

In the United States the Venice Committee of the International Fund For Monuments, Inc., formed early in 1969, raised more than a half million dollars the first year and is engaged in an ever-expanding program of restoration projects, the best known of which is the restoration of the Scuola di San Rocco's 38 Tintoretos which were in an alarming state of deterioration. Chapters of the Venice Committee in various cities of the U.S. have selected separate restoration projects as their individual responsibility to finance.

The response internationally has been generous and encouraging. Venice can be saved and I hope that you will help us make this possible.

Before letting you pass to the distressing articles which follow, may I quote from a letter written by Venice Committee co-chairman, John McAndrew to Holiday Magazine: 'What a relief to read your strong and accurate article *Must Venice Die!* (April 1970) after having read laments about the city as though it were a grand old lady with an incurable disease. She can never be a fresh young beauty again but she can and will be cured if she gets help now. . . we do not want to hear funeral orations but, rather, progress reports'.



# FOR VENICE

*Indro Montanelli*

This 'report' on Venice is written not to reveal anything new — anything, that is, that the so-called experts don't already know — but rather to make the general public finally conscious of the essential of this anguishing problem. There are, in fact, still other aspects that must yet be fully considered.

We prefer to limit ourselves to the basic problem, that which conditions all the others: the disturbed balance of the Lagoon. And while avoiding apocalyptic undertones, we are compelled to reveal the drama of a situation which will allow no further delay. For Venice, the count-down has begun. Either we save it now (and it can be saved), or we will lose it forever. Rivers of ink have flowed writing about the impending ruin and dissolution of this most beautiful city in the world. But I still fear that many readers have not been fully aware of the situation. At least I hope so, because how else could one justify the lack of government action and expression of public interest and concern. This is why we humbly but earnestly return to the subject. The time has come for the problem to leave the closed circle of the experts, who until now, have contradicted each other and shifted the responsibilities to one another. It is time for the Nation to awaken. Only the Nation can, if it wishes, break through this barrier of inertia. First of all, let's examine fully the 'high waters' phenomenon, which is usually taken for granted with an explanation of its mechanics. From the map reproduced here one can see that the Lagoon communicates with the sea by means of three openings or ports: Chioggia, Malamocco, and Lido. This means that every day the Lagoon, like the sea, has two high and two low tides. At low tide the water level goes about a half meter below the average level, and at high tide, normally rises just as much above the average level.

That is the Lagoon's physiology. The trouble begins when the water, instead of stopping at a half meter, rises more than one meter, or, as in the frightening autumn of 1966, rises even two meters. It's easy to understand the flooding and devastation that take place in the city, constructed as it is within a hair's breadth of the water.

Venice has had to be on the alert for this insidious danger from the moment it was born. But in the past the danger loomed up rarely, on an average of once every fifteen or twenty years, and never in catastrophic proportions. Only in the last forty years has the phenomenon become more pressing and abnormal to the point of becoming an autumnal rule. Why this increased frequency? The experts say that at the base of the problem there is first of all a circumstance of general order to which there is no remedy. The volume of water in all oceans is increasing due to the slow thawing of the polar ice



caps, because of the melting of the ice in the Arctic and the Antarctic seas. The rise in the level is calculated at about one and a half millimeters a year. But along the Adriatic coast another factor comes into play: the so-called 'subsidence', or the sinking of the ground.

This second phenomenon is brought about, or at least accelerated, by the industrialization of the coastal areas, such as Mestre-Marghera. The factories and the houses that grow up around them, need fresh water. This must be pumped up from underground, and, as the springs or water-bearing strata become dried up, the ground sinks to fill in the void.

According to the most commonly accepted data, the subsidence is two millimeters a year. But, as far as I can tell, it is nearer five millimeters. But let us limit ourselves to the established data. In the last fifty years, thanks above all to the pumping of fresh water in the coastal areas, Venice has sunk fifteen centimeters. What would happen if they should also begin to draw out the methane gas? I've been told that soundings are being carried out precisely in the upper Adriatic. The extraction of methane has caused subsidence of as much as a meter in the territory around Rovigo. A meter of sinkage would mean sure death for Venice. Has that been considered? Is it being considered?

The frenzied pressures of the high waters is, however, at present due to other circumstances, and a brief introduction is appropriate. The Lagoon — any lagoon, not only that of Venice — is an expanse of fresh and salt water mixed, fed by the estuaries of a few rivers imprisoned between the land and the sea, from which they are partially separated by a few strips of ground called 'lidi'. This can be seen on the map. Thus, a lagoon is the result of an equilibrium between land and sea, an equilibrium which cannot last long if abandoned to itself. Either the sea at some point gets the upper hand and destroys the barriers formed by the 'lidi', taking over the lagoon and absorbing it; or else the land pours its sediment into the lagoon by means of the rivers which empty into it, filling it up and appropriating it, like at Ravenna, once an amphibious city and now an inland one.

The Republic of Venice refused both of these destinies. It wanted to save the Lagoon because the Lagoon had always saved and continued to save Venice. Made impregnable by land thanks to that sheet of water, the Serenissima (the Republic of Venice) was able to use its fleets to build an empire which extended as far as the Aegean and the Black Sea.

Saving the Lagoon meant permanently stabilizing that precarious equilibrium between the sea and the land. This was the task of the 'Water Magistrates' who were invested with almost absolute powers, but also with equally absolute responsibility. All of them proved to be expert technicians, competent and resolute, especially between the sixteenth and seventeenth centuries when a fearsome decision had to be made. The Lagoon was in grave peril: the three rivers which emptied into it (the Piave, the Brenta, and the Sile) were slowly but inexorably filling it up with silt. Venice seemed to be headed toward Ravenna's fate. The Magistrates said there was only one way out: divert the rivers and make them flow directly into the sea.

Discussions and arguments went on for decades. Many thought the project could not be realized, given the means of the times. And they weren't far from wrong; it was an undertaking of a magnitude equal to the excavation of the Panama Canal. But the Magistrates held firm and, assuming full responsibility, gave the go-ahead. I don't know how many billions and how many human lives it cost. But I do know that the miracle done was due in equal part to the self-denial of the people, the wisdom of their government, and the conscientiousness of a bureaucracy which out of duty was willing to risk not only positions but also lives (the Venetians of



those times were serious and quick to resort to the gallows). Saved from the menace of the land, the Lagoon still had to be saved from the sea. A radical and definitive solution would have been, and is still possible, to close the three openings which connect it to the sea. But this would condemn Venice to unending pollution. The city has no sewers; its refuse can only go into the canals, and the flushing is left to the Adriatic which, with its tides that enter through those three openings into the Lagoon, sweeps it clean and changes its water. It is a public service that the city cannot do without. Venice is, therefore, forced to remain tied to the sea. But it cannot let the tie become one of suffocation and floods.

The Venetians of the Serenissima solved the problem by means of various contrivances. First they constructed a series of defenses in the sea, everything from pilings to sea walls, to impede the sea from opening other entrances and overcoming the natural barriers of the 'lidi', which are not very substantial, and lie between the Chioggia channel and the Lido one. The sea walls were not simple dikes put up only to protect the 'lidi' from being overrun by the water. They were built like stairs whose bottom steps were many meters out into the sea so that the waves broke on them, losing their strength before they hit the upper part of the sea walls.

Second, they left the entrances to the sea open, but only just enough to permit the ebb and flow of the tides. Each of these ports was the starting point of a network of small, shallow canals — not a single, wide, deep one — so that it was difficult for the sea to make its way in. Even ships had difficulty getting in. In fact, warships unloaded their cannons at Pola, and merchant ships their cargoes at Lido, precisely to reduce their weights and lower their water lines. But even so, they needed expert pilots who knew and could follow the movements of the water that flowed into the Lagoon from the sea through the myriad small capillary canals, purposely made to dull the violence of the sea.

Venice spared neither expense nor grave punishment in the maintenance of this delicate equilibrium. Whoever put even a pole in the Lagoon, without authorization, went directly to prison, because, so the Venetians said, you need only one pole to make a small swamp. And a Senate decree of 1505 threatened a fine of 100 ducats (a colossal amount in those days) for anyone, other than the experts, who concerned himself with the Lagoon. In short, it was forbidden even to talk about the Lagoon because even chatter makes a swamp.

These were the Serenissima's criteria for as long as it was independent and free to live together peacefully with its Lagoon. The results were excellent. True, even then occasionally it swelled excessively under pressure of the tide, with the resulting 'high waters' phenomenon. But this happened rarely. Now it happens every year, and often two or three times a year, always in more serious measure. What has altered the old lagunar regime?

There is, as I said, a rise in the volume of all the seas due to the thawing of the polar icecaps. But it is an imperceptible rise: one and a half millimeters a year. Secondly, there is the subsidence of the ground due to the ever more intensive pumping of fresh water in the coastal areas which are undergoing rapid industrial development: another five millimeters. Yes, all this would explain deterioration of the situation, but a slow, regular deterioration. But we find ourselves faced with an acute crisis, which has arisen almost without warning in the last thirty years and which is on a course, so precipitous in fact, that if it continues at its current rate Venice's years are numbered. What has caused this sudden disaster?

The first reason (which jeopardized the life of the city on November 4,



1966) is the abandonment of the sea defenses. The sea walls ('murazzi') still exist, reinforcing the weak 'lidi' between the ports of Chioggia and Lido, but they are practically dismantled. The breaches and crevices that the sea has dug in them are one problem, but most important is the fact that they have lost their extensions of underwater rock. It was this submerged part of the sea walls that the Serenissima reinforced continually with rock so that the waves would break on them. Now these masses of rocks have been all sucked away by the currents. No one has replaced them, and the sea walls, reduced to a smooth vertical section, have not held up against the action of the waves which strike with all their fury. There is no need for expertise and special studies to understand this. It can be seen clearly by anyone. It can be felt with the hands. And yet, nothing positive is done. Action is limited to patching up here and filling in there, without facing the essential problem of providing the necessary reinforcement of the underwater extensions of the sea walls. I've heard that after the events of November 4th, Marshal Tito offered, free, large quantities of Istrian stone which is the most appropriate material for the reinforcement because it holds up against the salt water. Who knows where the stone ended up?

Not in Venice, certainly.

But that's not the worst of it. If you look at map No. 1, you can see that the Lagoon is composed of two parts. The entirely white part, always submerged, has various black dots marking the little islands that stand out of the water. The other part is marked by the presence of a vague and capricious lace-like network indicating something intermediate between the land and the water. At one time, in fact, at least half of the Lagoon consisted of this neutral element which was water at high tide and land at low tide. It was supplied by the vales, or mouths of the rivers Brenta and Sile before they were deviated, and by areas of tideland which were the continuation of this amphibious element into the heart of the Lagoon.

Just after the World War I, some certainly well intentioned man thought of establishing industries to assure Venice's economic future. The city was no longer, as it had been, the capital of a great maritime empire. It was merely another Italian province reduced to living almost exclusively on tourism and artisanship. It needed another source of work: factories. In order to have them nearby, it was decided to establish the factories on a stretch of reclaimed tideland. Thus Marghera, the first of the industrial zones, was born, five or six kilometers as the crow flies from Venice, and this brought about the turbulent (and ill-advised) urban development of Mestre. In the brief turn of a few years a second industrial zone was added, a larger one. And now they are finishing a third, still larger. The cost? The tideland, which is now in total liquidation, as can be seen on map No. 2. To what degree has all this altered the lagunar regime, and does it have anything to do with the terrible increase and aggravation of the high waters?

The various answers have been extremely contrasting. Each has the backing of highly qualified hydraulic experts, whom we don't feel qualified to dispute. But we cannot overlook two considerations, imposed on us by common sense — which, I think Capponi said, is unfortunately the least common thing in the world. The first is a coincidence of timing. Statistics allow no doubt that the rhythm of the high waters has accelerated in perfect synchronism with the extension of the industrial zone. This is fact, not hypothesis. There is a second fact, which seems equally incontestable: the area occupied by the industrial zone is all space taken from the Lagoon. Look at the two maps. Once, entering through the three openings, the high tide could release itself onto the foreshore, submerging it. Today, instead, it

meets with embankments which hold it back. Is this why it rises higher than normal?

Some say that Law of Communicating Basins renders unplausible this answer. If I take a receptacle connected to another receptacle and I pour a liquid into one, the liquid will reach the same level in both containers no matter what the dimensions of the two may be. Therefore, if the sea is at level 5, the water of the Lagoon, which communicates with the sea, will be at level 5, whether the Lagoon is of volume 8 or volume 4.

That makes sense. But some disagree, for example Count Marcello, a real connoisseur of these problems, and the architect Rosa Salva, who spends all his time in the Lagoon, like a duck, studying its whims and curiosities, reply: 'That's true in laboratory experiments, but let's look at reality. There's no doubt that, thanks to the law of communicating basins, the level of the Lagoon tends to be the same as the level of the sea. However, we mustn't forget that the high tide lasts only six hours. In those six hours the water of the Lagoon when it could spill over onto the tideland, didn't have time to reach the same level as the water in the sea before the ebb tide began. It does have time now that the Lagoon's area has been reduced. And this is the cause of not only the more frequent high waters but also the increased violence of their eddies, pushed back in confusion by the obstacle of the reclaimed ground'.

But dissent doesn't end here. It touches on another problem: the port openings and the canals. As I have already said, the Serenissima didn't keep these openings either totally closed or wide open. They were kept ajar, so to speak, allowing the tide to enter into the Lagoon and fulfill its function but regulating its volume and flow. This system was obviously incompatible with the development of Marghera which has become an industrial center precisely because it is a port. Ships must go through the Lagoon to get there. They are, however, modern colossi, usually with a full hold, not the small galleys of the Serenissima. They pass through the wide open Lido port and along a greatly widened and deepened canal cutting right across the city. Since many are tankers which, should they catch fire along this route, would cause a catastrophe, a new route has been planned: a wider and deeper canal, dug clear of the city but still in the Lagoon, is to be opened and connected to the sea any day now.

The opinions are discordant and the controversies bitter on this point, too. Some maintain that widening the port openings and deepening the canals is even more fatal to the lagunar equilibrium than the reclamation of the tideland. The tidal waters enter more easily and more forcefully than when they were obliged to pass through smaller openings and then go along the network of narrow, shallow, curving canals. The Rotary Club of Venice solicited the advice of three Dutch technicians, the Dutch being, of course, the best experts in the world for problems of this type. They came and studied the situation, but left without making any specific recommendations on what should be done. They promised to return, however, and pleaded that in the meantime no new work be undertaken and that what had already begun be stopped until the possible consequences could be studied with care.

Instead, the work already begun was continued, both the digging of canals and the reclamation of areas of tideland. As for investigations and experiments — well, the most recent study done on the Lagoon dates back to 1932. (Times have changed since the Serenissima took the Lagoon's pulse daily). Meanwhile, Venice seems to be condemned to die in just a few years' time.

In the last seventeen years' the population of Venice has fallen from

192,000 to 131,000 inhabitants. That's a clear-cut loss of more than sixty thousand people. Why have they left the city?

At first, so it was said, they left to find work. Venice didn't have enough for everyone. If this had been true, it might have been a sort of beneficial bleeding. But the fact is that that wasn't the main reason. There are about twelve thousand Venetians who now commute daily from the mainland, where they live, to Venice, where they work. The mainland isn't where they have their work; it's where they have their homes, modern homes that are dry and have proper bathrooms and electric household appliances, even if the walls are paper-thin. And they can have automobiles, too. Like everyone else, the Venetians want to enjoy the luxuries of the consumer society. Venice couldn't offer any of this. The buildings left behind were hardly habitable. They were crumbling, uncomfortable, suffocating holes-in-the-wall. Three thousand of these are still unrented. Now who will fix the roofs and patch up the floors and the walls? And in a few years the tides will have swallowed them up. Venice's drama isn't limited to crumbling marble, or cracking mosaics, or fading paintings. The degradation and destruction involve the whole urban structure of the city. The inhabitants are fleeing and their flight accelerates the rhythm of the decline. It's a vicious circle.

What can be done?

First of all, the accounts don't balance. It wasn't a bad idea to provide for Venice's future by creating an industrial zone on a nearby piece of the mainland. Marghera had a port which made it a good location for developing industries, and its proximity to the regional capital automatically made it a 'dependence' of Venice. To make this relationship administratively secure, the Comune of Venice was restructured to include Marghera and also Mestre, Favaro Veneto, Chirignago and Selarino. This extension onto the mainland was to be Venice's lung, its industrial outskirts.

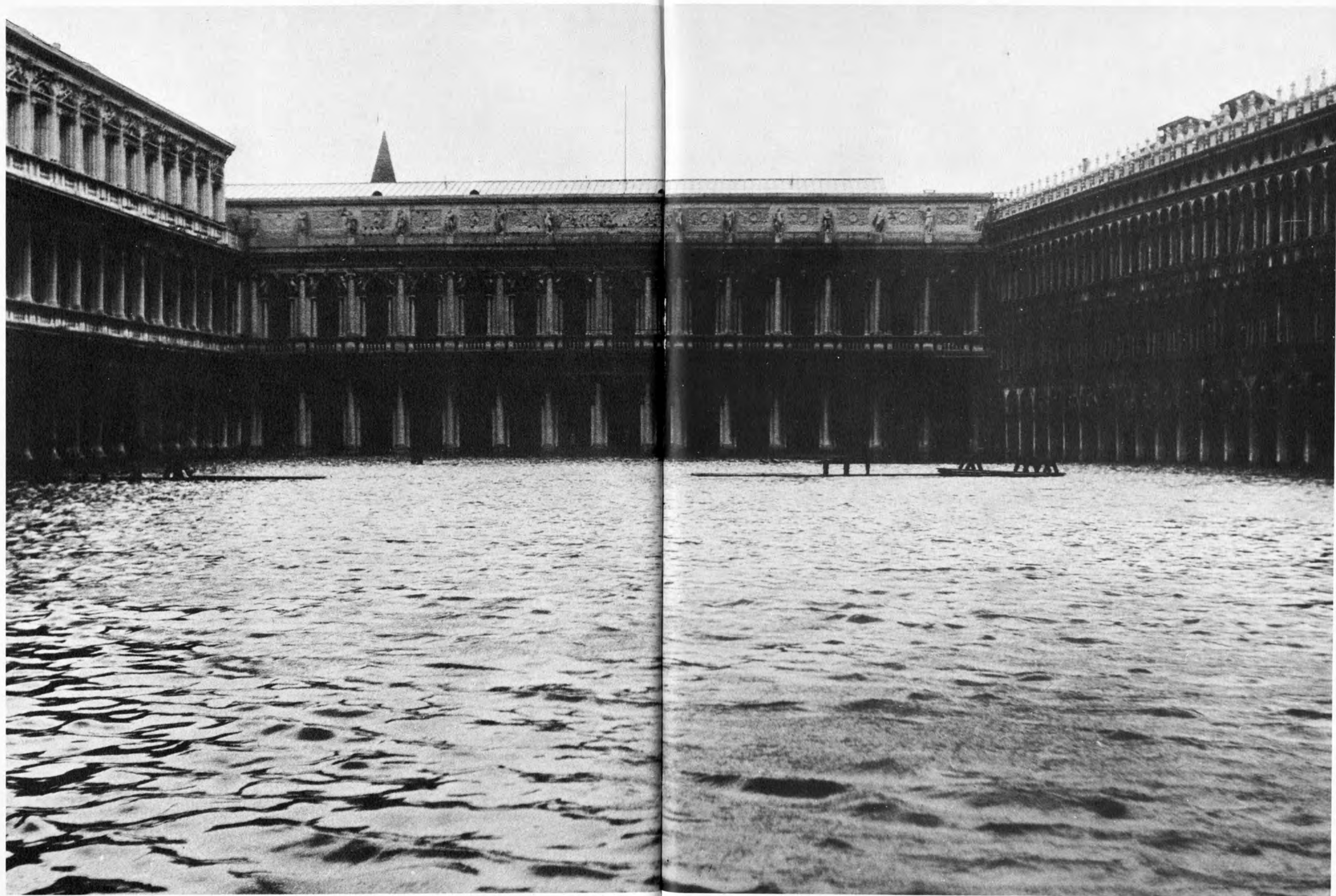
Instead, things took a different, and unforeseeable, turn. The industrialization of this area has been disorderly and has upset the old equilibrium. Venice's population is now noticeably smaller than that of its mainland 'dependences'. Marghera is becoming Mestre's industrial outskirt, and Mestre the residential quarter of Marghera. Briefly, the colonies have become more powerful and important than the fatherland, and they are competing with it.

Take tourism as an example. This is Venice's basic resource. Who would have ever thought that Mestre could give Venice competition? Mestre, with its factories and smog. Mestre, which has no artistic treasures and no panoramic attractions. But Mestre is close to Venice and it has numerous hotels, ugly but functional and cheap with a trip to San Marco and a picnic lunch included in the price.

The fact is that there is nothing Venetian left in this industrial zone. The labor comes from the surrounding countryside, not from Venice. The capital comes from Turin and Milan, where the firms have their main offices. Even the directors and technicians come from those cities, and they don't even transfer their legal residence, so the Comune of Venice can't make them pay taxes. Venice's supposed lung has become an outpost of the Lombard-Piedmontese economy, compressing and crushing Venice. It was with all this that the disaster really began.

Outside capital (public and private, mind you) is attracted by — and it's logical — efficiency, productivity, and profit. Here, to be assured of vital space, it has massacred the shore by reinforcing it and wresting land from the waters. Pumping, to supply fresh water, is causing subsidence. Canals have been dug, to guarantee communication with the sea, disrupting the regime of the Lagoon. The aim is to make Marghera into a Rotterdam.





But making a Rotterdam means bringing the sea to Marghera, and that means letting the sea take over the Lagoon. The result would be the death of Venice. No one, to be fair intends this criminal oversight. No one wants it. But the weight of the interests involved leads precisely there.

With things as they are, there is no time to lose. First of all some sort of high commission should be set up to cut short the red tape of bureaucracy. Venice needs a special statute because it is a special city with special problems which require very particular competence and extremely urgent decisions. For example, here, as elsewhere in Italy, the law which exempts new constructions from taxation for 25 years is valid and it has spurred the erection of buildings which disfigure the city. Whoever repairs his historical 'palazzo' is taxed for the improvement. This explains, and provokes, the abandonment of the houses by the old, wealthy Venetian families. In sum, everything seems to be the contrary of what it should be.

But our object is not to give advice: nor are we qualified to do so. The constitution of an organization with wide powers is not, however, advice. It is an inescapable necessity, and the hour is late. Since the safeguarding of Venice is doubtlessly a gigantic operation, which goes beyond our powers and our sole interests, perhaps the organization should be anchored to some supranational authority. There is nothing extraordinary in the suggestion. After all, Venice is the birthright of the civilized world, not of Italy alone. The world would help us if we showed that we wanted help and knew how to help ourselves.

In any case, look at the example of the Serenissima which knew how to save Venice from the double danger of the sea and the land for seven centuries, with the poor means of those times. The Serenissima's high commissioner, the 'Water Magistrate', was the second most important person of the Republic, and his word was law regarding anything concerning the Lagoon, Venice's life blood. However, at the time of his investiture, the doge presented him to the people with these words: 'Weigh him, pay him, and, if he makes a mistake, hang him'.

The doges are no more, and no one expects to have the gallows called back into service, but the need for people who will assume decisive responsibility is greater than ever. And I believe these people could be found, if only they would be given the necessary powers. Let's hope that our representatives in Rome will find time to consider the problem between party congress and rivalries. This is the moment of truth. For Venice, it's now or never.

# NOTES ON VENICE'S URBAN PROBLEMS

*Giuseppe Samonà*

In these last few years the fame of Venice, already admired the world over, has been sadly increased by the singular and dramatic events which menace death to the entire insular nucleus to which it belongs. This nucleus is undergoing the ever more impressive buffeting of geophysical phenomena.

In 1956, following the alarm raised by the noticeable worsening of these phenomena, the Italian Parliament passed a special law for Venice: three billion lire (about \$ 4,800,000) were appropriated to be paid out over a ten year period for the immediate consolidation of buildings of historic interest. But only in 1962, thanks to the congress organized by the Comune and the Cini foundation in Venice, was the public informed of the gravity of the situation. The various talks given at the congress illustrated many aspects, not already clearly individualized, of the phenomena which were and are leading to the future ruin of the city, and pointed out the gravity of the situation. Since then the alarm has spread, particularly due to the extraordinary and continually higher tides, which are one of the most dangerous and disturbing of the phenomena currently involving Venice's Lagoon area.

It was not until 1966, after the terrible events of November 4th, that the alarm reached its height causing state of panic among parts of the population. On that day, while the Arno was ruining the art works of Florence, the exceptional rise of the waters in Venice (1.9 meters above the average level) not only caused extensive damage to the older structures of the city but severely ruptured the sea walls (those sea walls which had held for centuries against the onslaught of the waters). It was a near catastrophe. Had the high tide been prolonged and the sea defenses more seriously damaged, the consequences would have been incalculable.

The events of that day revealed the dramatic situation of the most singular and famous city of Europe to an audience no longer restricted to scientists and specialists. Thus, in the last four years the menacing aspects of the situation have gone from being all but unknown to becoming the basic elements of passionate discussion of Venice's future.

Everyone knows by now what these phenomena are: those most particular to the situation are the geophysical ones which are causing the continuous sinking of the ground in the Lagoon area and the increase in the volume of the waters and the frequency of the extraordinarily high tides. The subsidence is related to the nature of the subsoil, whose natural equilibrium has been upset by the increased surface load and the excess pumping of fresh water for general, above all industrial, use. The increase in the volume and frequent rise of the sea waters are connected with the subsidence and with

the general rise in the sea level the world over, estimated at 1.2 millimeters per year.

In the short run these geophysical phenomena cause serious damage to the foundations of the buildings, compromising their entire structures, and in the long run they tend to cause the extremely serious subsidence which could lead to the disappearance of Venice's entire urban complex into the water which surrounds it. Less apparent, but nonetheless insidious, is the double phenomenon whose negative consequences, once little known, are now on the lips of all: water and air pollution. The first, due to the discharge of industrial waste into the Lagoon, is so serious that it is upsetting the ecologic balance, causing the death of all the forms of floral and faunal life in the Lagoon. The second, due to the industry's combustion gases and, to those of the central-heating systems, acts chemically on marble and stone, irreparably damaging the sculptures on many Venetian monuments.

Minds everywhere are searching for remedies to halt this course of events and to find financial help proportional to the need. In one way or another the whole world is trying to contribute toward saving Venice from sure annihilation and its environment from death.

However, despite the drama of the situation, despite the growing menace of catastrophe, the various interests at play here in Venice have created profound discord regarding the criteria and methods for combatting the city's ills. I think this is in large part due to a lack of organization. On reflection, it seems that we are witnessing a blow-up in slowmotion of the senseless hurry without direction that overcomes people in the moments of panic after a catastrophe — one of those catastrophes which gradually paralyzes the rational initiative, coherence and order needed for reconstruction and at the same time brings out the binding complications of contrasting interests.

In Venice the situation is turned around: it isn't a question of acting to repair, but, rather, to prevent the catastrophe itself. Thus, not panic, but the clash of all the interests alive in the city impedes and at times even prevents the realization of work necessary for reducing the problems and keeping the existing situation from getting worse.

Internal tensions arise due to contrasting ideas and divergent interests. On one side there are the political and scientific indications with their wide cultural implications; on the other are the various and sundry private activities. Both are ready to fight to maintain certain existing situations and initiatives already in progress. A sort of trench divides public opinion and shapes the behavior of those working to save Venice. Everyone deludes himself that he has the clearest ideas on how to save the city, no matter which side he is on. Some underline the necessity of actively promoting the already initiated industrial complexes, considered both necessary for the life of the city and also compatible with the efforts to save it from catastrophe. Others violently and intransigently emphasize the need to conserve the lagunar environment and the city's old urban center. The latter are held to ignore the economic considerations so important to the first group.

Basically, this is the problem typical of so many Italian cities, divided internally politically and culturally, due to differing evaluations of those facts related to the future of the old historical city centers. Progress has been made in clearly establishing the idea that the historical centers must be preserved, but contrasts arise precisely on the meaning to be given to the specific proposals and to preservation in general. The interpretations vary from the extremely conservative ones of certain cultural groups, like 'Italia Nostra', to the completely opposite ones which favor sacrificing much of the ancient for the practical requirements of life today.

A compromise, middle of the road position, however, would be wrong. And Venice's situation clearly demonstrates this, although not because it weighs all the right of either extreme. Rather, it compels us to consider the problem of the 'historical' city and its milieu in a totally different light. Safeguards against the problems and phenomena currently assailing Venice do exist, and they allow no hurried alternatives of the type which instigate clashes among the uncontrolled socio-economic interests. The idea of establishing systematic criteria for judging the various proposals related to Venice's future development may prevail, including safeguards for the conservation of the Lagoon and the 'historical' city center. A law based on this general idea is in fact about to be proposed, assuring a balanced and impersonal evaluation of all the ideas advanced to decide whether or not they are in contrast with the requisites for saving the city.

Will the law really be effective, and will it be passed? This is a difficult question, but the proposal of such a law is in itself significant. The historical urban nucleus has its particular problems and realities and must be respected and protected. The new areas, on the other hand, should have development programs which fit in with their needs and which are consequently less restrictive. It is a question of combining protection of the historic-monument area with the promotion and development of the industrial zones which are the basis of the community's future.

The two programs may overlap and even infringe on one another, but the proximity and interdependence of the two areas render the principle of co-existence extremely important. Nonetheless, the weight of special treatment or advantages must fall on the side of the historic urban nucleus. The areas of new development must not be allowed to carry out programs which will compromise the survival of the protected area, whereas the protected area, to assure its own survival, should be able to compel the other zone to conform to certain restrictive regulations.

Unfortunately, all this will not be possible, even though the circumstances are such that drastic measures are necessary for combatting the geophysical phenomena and the decay of the urban structures.

We must recognize the activity, albeit slow and intermittent of the government committee which is studying provisions for the defense of Venice, its character and monuments. The committee, set up in June of 1966, is divided into six working groups presided over by the engineer who is the President of the Superior Council for Public Works. 880 million lire (approximately \$ 1,415,000) has already been completely committed. The various groups deal with: construction and town-planning; biology and hygiene; geophysics; zoology; the Lagoon, marine surveys, etc.; meteorology and oceanography; and legal and administrative problems.

In a certain sense, although its activity has been slow and even discordant, this is the only official organ not involved in the fray; it tries to settle the various disagreements by referring them all to a single group, the construction and town-planning one. This group was chosen for the task because Venice's most virulent problems come under its jurisdiction. Even the divergences arising from consideration of the purely scientific or technical problems automatically belong in this category; pollution, the new canal for tankers, etc.

It is opportune at this point to note that the menace to the Lagoon's and the city's destiny has given strength to the conservative interests and has, albeit temporarily, stopped the programmed industrial expansion in the area. The idea of resolving the problems of the area by means of an all-inclusive plan has matured.

It is generally accepted that Venice's historic center must be both protected from further damage and also considered a substantial unit of its own which, while being productive and functional also retains its characteristics of historic and cultural value. Of course, this is only one of the numerous problems of the whole region and it must be solved together with the others: the organization of the entire lagunar area; the problem of Porto Marghera in relation to the possible development of heavy industry; Mestre's problem of urban development and its relationship to Venice; etc. I have merely taken advantage of the possibility of singling out one aspect of Venice's general problem for particular emphasis.

I wish also to say something about the organization of a program related to Venice's future, while the experts solve the problem of preventing a catastrophe. First of all, Venice needs a realistic urban reconstruction program which will allow restoration of the smaller historic buildings making them functional, habitable places of residence. The majority of these smaller buildings were originally habitations, so this should be a feasible objective, the main considerations being the reinforcement of the foundations and the necessary internal repairs. Then the larger buildings with their great halls could be restored and destined for use in some way which would both be fitting of their original monumental character and take advantages of their particular internal architecture. Thus, both practical considerations and, nonetheless important, cultural ones are included in the reconstruction program.

The restoration and repair of those buildings (90% of the total) destined as part of a residential program is an immediate, short-range problem, whereas the restoration of the larger, monumental buildings is a medium- and long-range consideration.

This kind of program requires a general study of the situation with the subsequent establishment of criteria and priorities for a successful and unified urban reconstruction project. There will be problems, but they are not insurmountable. Some tax facilitation and the gradual relocation, with city or state help for the less wealthy, of families now living on the mainland will be necessary. And here I wish to underline the necessity that Venice become once again a Venetian city with a balanced population composed of all the social classes, not a city inhabited by foreigners and or wealthy Italians alone. This is the only basis for a successful urban revival. And this revival and reconstruction will better enable Venice to participate fully in the development and future of the region to which it has given its name.

These reflections lead to the conclusion that Venice can serve as an example to all Italian cities faced with the problem of revitalizing their historic centers without destroying their cultural value. They are visible examples of the development and growth of cities from their historic centers outward, and they remind us of the changes that have taken place — political, social, economic — over the centuries. Certainly, the ancient city was coherent in its structures; it was harmonious and stable in its forms; the spatial relationships of the buildings and open areas had meaning and sense.

It is a shame to let these old urban nuclei go to ruin. They are part of our history and our culture, and as such they should be preserved. One should consider their artistic value, their significance as expressions of civil and political traditions. The conservation of culture must be detached from ordinary social and economic values. Culture has values of its own outside the normal parameters of welfare. The reconstruction of these centers can be a stimulus to the revitalization of the life of the cities concerned, so there is really no 'practical' reason for permitting further decay and eventual destruction.



# VENICE IN PERIL



1

1 - The basin of San Marco with the mouth of the Grand Canal and at upper left, the Giudecca Canal.





2



3



2-3 - (Left) The San Niccolò breakwater and its south lighthouse. This is a defense of the Lido channel, the northernmost access to the Lagoon, and is reinforced with enormous cement tetrahedrons which break the waves and diminishing their destructive force.



4

4-5 - (Right, top) The Fort of Sant'Andrea, constructed by Michele Sanmicheli and Francesco Malacrida (1544-1571) on Vignole Island at the Lido entrance. (Bottom) The violence of the sea has seriously damaged the structures of the Fort, causing the collapse of some of its bastions.



5









7

6 - Air view of the tidelands which are submerged during high tide, and have always served as a regulating reservoir, absorbing the excess water. Their projected reclamation to gain space for the industrial zone is considered by many specialists the worst threat to Venice.

7 - A cargo ship passing through the basin of San Marco. The picture gives a good idea of the disproportion between modern ships and the size of the city.





8

9





8-11 - Ships at Venice. (Left, top) The tanker Romance, in tow, passes behind San Giorgio island to enter Giudecca Canal. (Bottom) The Mar Tirreno. (Right, top) The Cristoforo Colombo, in Giudecca Canal, ready to weigh anchor. (Bottom) The Little Rock, flagship of the US. Sixth Fleet.



10



11





12

12-13 - High waters. The water begins to rise and invade the Piazza. Within a few hours Piazza San Marco will be completely submerged. This phenomenon, which occurred only at long intervals in the past, has become ever more frequent in the last few years.

14 - High waters. By now the Lagoon and the Piazza are one, as if the sinking of Venice into the sea had begun. On the left, the Palazzo Ducale, whose columns are already partially under water. On the right, the column with the lion of Saint Mark.

13











15 - High waters. The basilica of San Marco is reflected in the water which has invaded the piazza. Pictures like this, poetic and even fascinating, reveal a dramatic situation the repetition of which is one of the gravest threats to Venice.

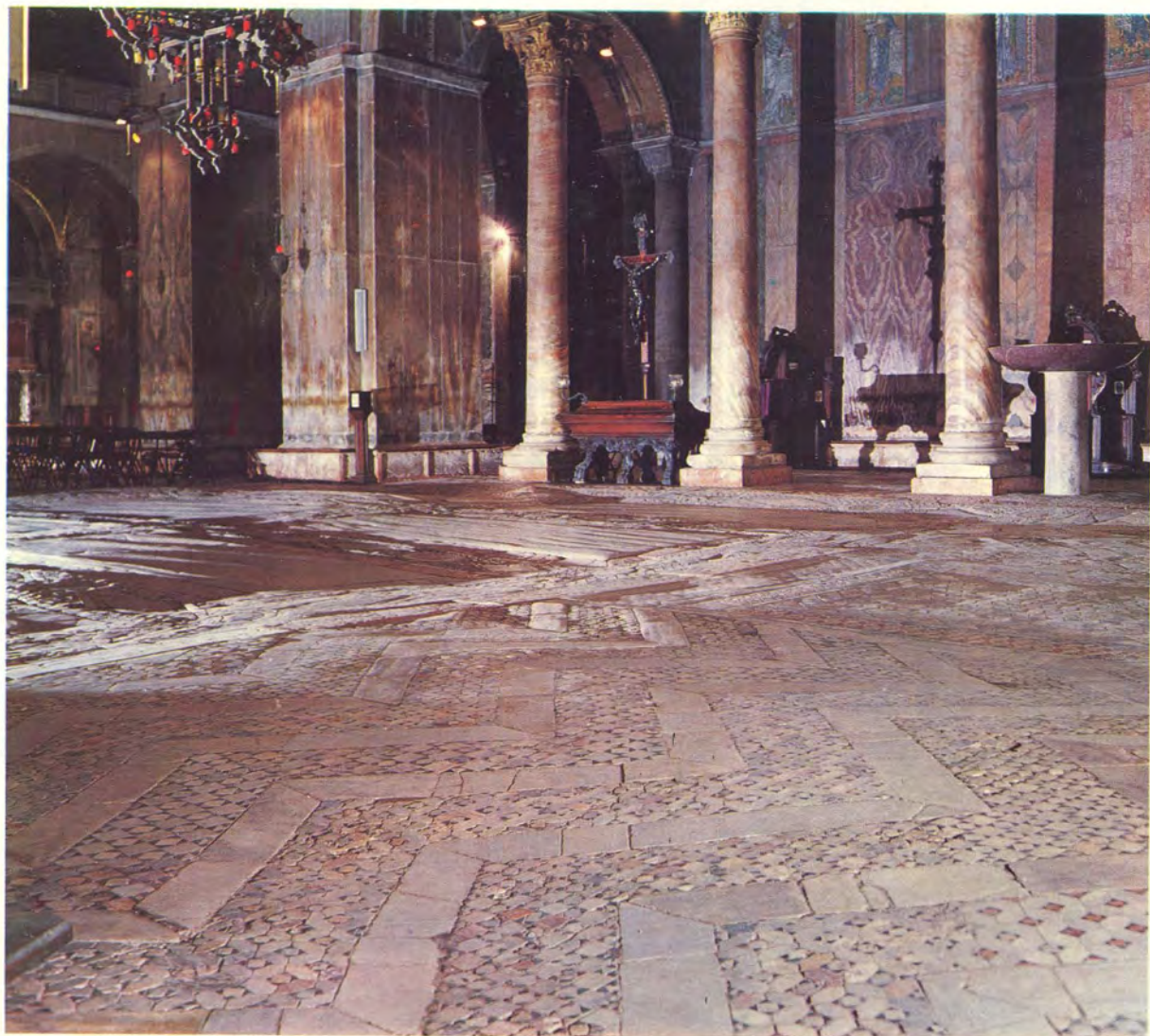




16

16 - High waters. Elevated wooden walks permit the crossing of flooded Piazza San Marco (here we see the side of the basilica facing the Palazzo Ducale). The waterland symbiosis, the city's permanent condition and its *raison d'être*, has become pathological.





17



18



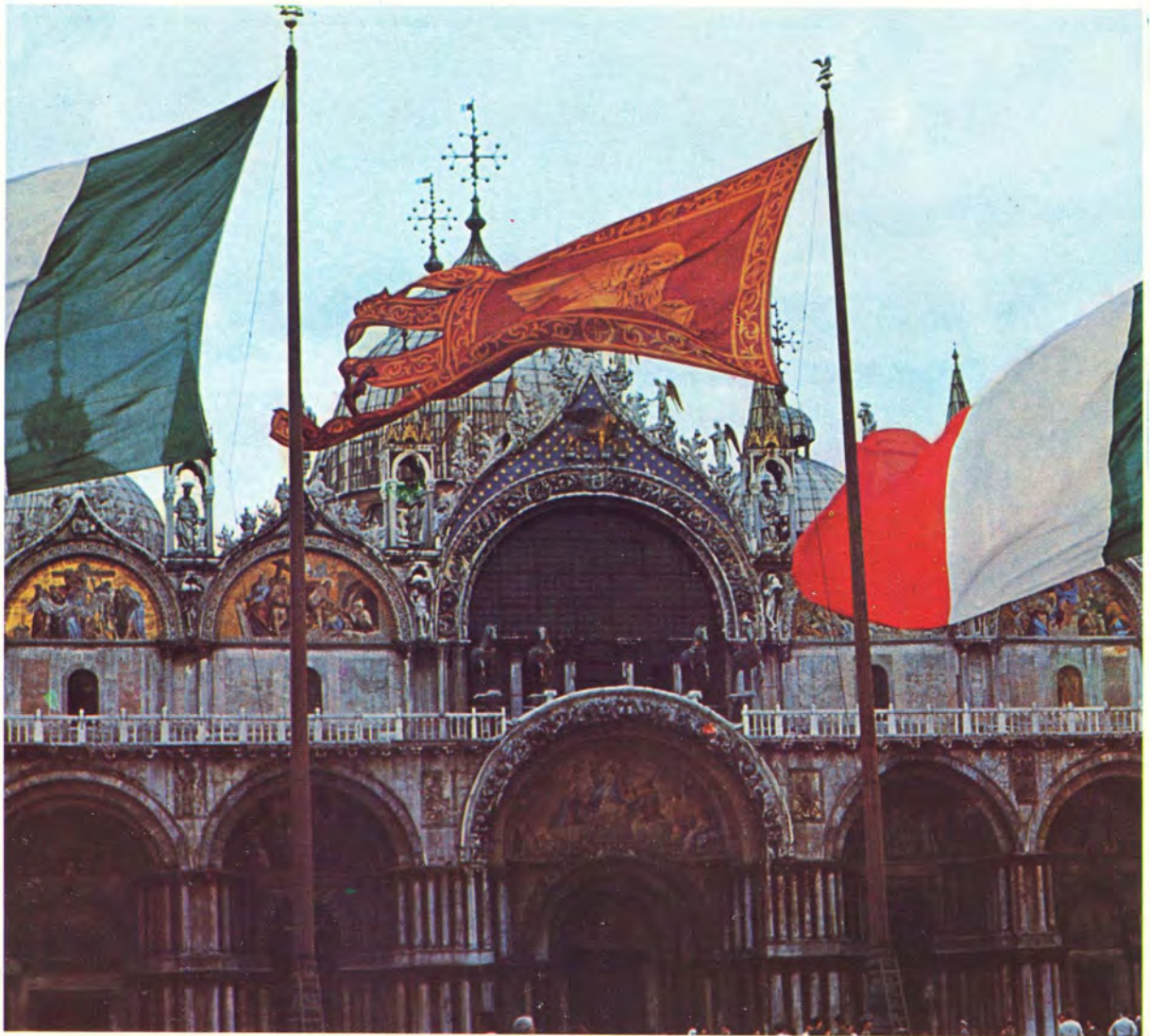


19

17-18 - (Left) Two extremely significant pictures of the floor of the central nave of the basilica of San Marco. The marble slabs and the beautiful polychrome mosaics look as if they have been shaken by an earthquake. Actually, the pavement began to settle centuries ago, but the rhythm has undergone noticeable acceleration in the last few decades. Note the whitened areas of the lower portions of the columns and walls — evidence of destructive build-up of salt crystals from repeated wettings and evaporations and reducing the marble to a damp-sugar consistency.

19 - Even the four bronze horses of San Marco, looted from Constantinople by Enrico Dandolo, show signs of age and of corrosion





20

20 - *Flags billowing in front of the basilica of San Marco. In the center, the banner of the Serenissima.*



21

21 - *Detail of the facade of the basilica of San Marco. Here, too, the damage caused by atmospheric corrosion is evident.*



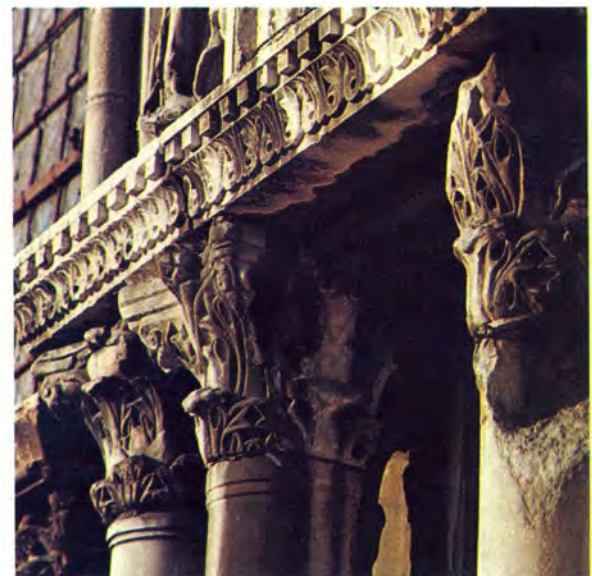
22-24 - The facade of the basilica of San Marco: details of the central arch with its 14th century sculptures and of the Loggia dei Cavalli. The pictures witness the dramatic condition to which the marble and stone have been reduced by the corrosion due to age, sea air, and smog. The deterioration, hidden by the general splendor of the facade, is only too obvious in detailed view.



22



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28

25-28 - Facade of the basilica of San Marco: details of the sculptures. Pigeon droppings cause damage as serious as that caused by the atmospheric elements (the marble crumbles at the touch).





29

29 - Basilica of San Marco, detail of the crypt with its cross vaults supported by the external walls and fifty columns of Greek marble, was done at the time of the reconstruction of the basilica, begun in 1073 by the Doge Domenico Contarini. Behind the altar, on which there is a marble altar-piece done in 1494, the coffin containing Saint Mark's bones was discovered in 1811. The vaults are noticeably darkened from the infiltrations of water from the floor of the presbitery, above, which is apt to be flooded during the high waters.







30 - (Left) Grand Canal with the U.S. Consulate and the Palazzo Guggenheim the first two buildings at left. The wake of fast motorboats adds to the damage of the foundations, principally because the waves accelerate the frequency of wettings and evaporation.

31-33 - Traffic on the Grand Canal. Gondoliers struggle to keep their gondolas steady in water disturbed by motorboats. The difficulty of survival of the Lagoon's traditional means of transport is even more clearly shown in the bottom picture.



31



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34-35 - More traffic on the Grand Canal. The continuous waves caused by the motor-boats are detrimental to the foundations of the buildings along the canals.





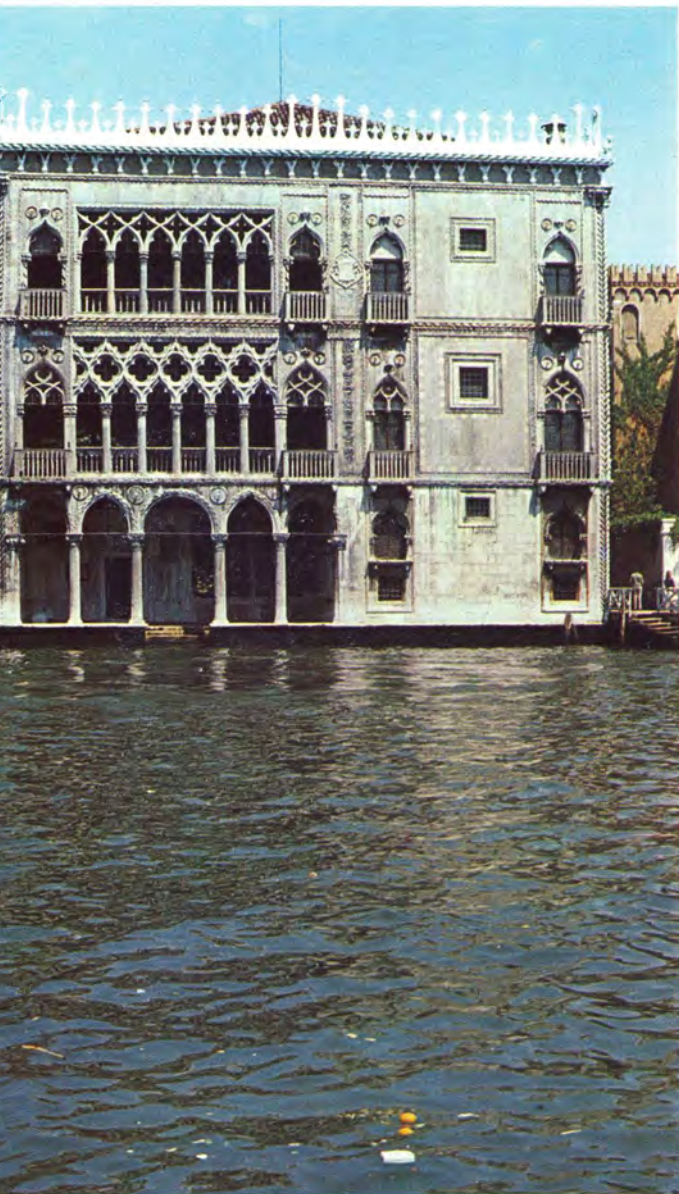
36



37

36-37 - Two pictures which call to mind other historic cities, like Rome, Florence or Naples, whose streets are constantly congested with traffic. Motor-boats of all kinds create chaos in the midst of which the gondolier is a pathetic figure.





38

38-39 - (Left and top right) The Ca' d'Oro. Constructed between 1421 and 1440 by Matteo Raverti and Giovanni and Bartolomeo Bon for Marino Contarini, this is one of Venice's most noteworthy and typical monuments. During high tide the water covers the ground floor, invading the five-arched loggia.



39



40

40 - (Bottom right) Palazzo Giusti next to the Ca' d'Oro. The facade, constructed in 1776 by Antonio Vicentini, dramatically scarred by corrosion due to sea air, smog, and expanding salt crystals.





41

41-42 - Two close-ups of the facade of Palazzo Giusti. Bases, columns, and statues literally crumble to the touch. It is probable that within a few years nothing will remain of many sculptural works because of the continually accelerated process of decay.



42





43



44



43-46 - Traffic on the canals. Merchandise is transported along the waterways — logical in a city like Venice. The hurried rhythm of production and consumption creates traffic and parking problems.



45



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50

47-49 - Traditional Venice. (Top left) A gondola in the Grand Canal. The gondola's structure, with its characteristic curve that compensates the gondolier's exertion on the oar on the right, is unique and constitutes one of the most perfect examples of formal beauty and functional design. (Left, center and bottom) Gondolas departing on a 'serenata'. In the background are the Tron bridge and the Orseolo basin. As always the gondolas must make their way between other boats of all sizes.



51

50-51 - Traditional Venice. Tourists in gondolas: the pictures were taken in Rio del Gambero near the Pignatte bridge. The gondola has become more a thing of local color and folklore, like horse-drawn carriages in Florence, than a habitual means of transportation.





52-53 - Traditional Venice.  
*'Gondola garage' in Orseolo basin, with Tron bridge in the background. Orseolo basin is notorious to Venetians and tourists for its stagnant water (caused by a change in the currents) and the consequent putrefaction of sewage and garbage which collects there.*

54 - (Right) Many monuments of historic interest are in a serious state of abandon. Here are Palazzo Amai and the supposed home of Marco Polo (the house with the 'eyes' on either side of the doorway).

52



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63

55-63 - The degree of damage caused by the sinking of the land and the corresponding rise in the water level, and at the same time the discomfort and inconvenience of life in Venice (where the ground floors have been practically abandoned), can be seen in the symptomatic condition of the stairs to the canals, the crumbling doorways, and the broken-in or barred doors. (Left page, top to bottom) The doorway of Palazzo Tron at low tide; one can see that the door has been raised about half a meter from its original position, but the water has risen beyond the new threshold. The doorway of Palazzetto Tron: the doors are seriously damaged. The gate of Palazzo Contarini dei Cavalli: there is water constantly in the entrance hall. The doorway of Palazzo Barbarigo alla Maddalena. Two doorways, in serious condition, of Palazzo Giustiniani on the Grand Canal. (This page, top) The doorway of the 15th century Gothic Palazzo Garzoni on the Grand Canal. The proprietors have had to move up to the third floor, the ground and second floors being uninhabitable. At high tide the water completely takes over the ground floor, causing irreparable damage. (Center) The same doorway at high tide; the five steps are submerged and the water has entered the hall. (Bottom) Another doorway along the Grand Canal: the signs left by the high tides are clearly visible.





64

64 - The two fifteenth century 'palazzi' Barbaro Wolkoff-Celli and Dario on the Grand Canal. Palazzo Dario, constructed by the Lombardo family in 1478, with a facade rich in polychrome marble, leans visibly.

65 - (Right page) Palazzo Erizzo Boldri on the Grand Canal. Note the damage to the facade, in addition to the usual water damage at ground level.









66 - Palazzo Giustinian on the Grand Canal. These twin buildings date back to the 15th century; Wagner composed part of *Tristan and Isolde* in the one to the left. The entranceways are seriously damaged and unusable. Note the sickly green hue of the turbid water which until a relatively few years ago was rich with marine life. Now with the introduction of industrial wastes and the disturbed flushing cycle of the Lagoon, the tides are unable to properly carry away the sewage and wastes of the city.

67 - (Right page) Venice in winter. View from the Piazza toward the Salute. The worst threat is during the months from November to March, when the high waters, once very rare, are now frequent due to a combination of natural and man-made causes.









68-69 - Mario Cagnatel, one of the oldest gondoliers (his nickname is 'Acquastanca', which means tired water), passes by the Palazzo Erizzo Boldri on the Grand Canal.

70 - (Right) The Church of Santa Maria dei Miracoli, constructed between 1481 and 1489 by Pietro Lombardo, is undoubtedly one of the masterpieces of the Venetian Renaissance. The sea air and the smog are irreparably corroding the splendid marble facings.

68



69









71

71-72 - (Top)  
*Santa Maria dei  
 Miracoli. Detail  
 of the corroded  
 marble on the  
 facade. (Bottom)  
 German specialists  
 doing restoration  
 work inside the  
 church where  
 water infiltrations  
 have caused  
 serious damage.*

73-74 - *Sculptures  
 on the facade of  
 the Church of the  
 Scalzi.  
 Notwithstanding  
 the protective  
 wire to exclude  
 them the pigeons  
 make their nests  
 among the statues  
 and cause  
 irreparable  
 damage.*



72





73



74









76

75 - (Left) Palazzo Priuli-Ruzzini, also called Palazzo dei Leoni. The lion heads which gave the name to the building are now at water level; the steps have been submerged and the water has reached the ground floor.

76 - Palazzo Mastelli or del Cammello, begun in the 12th century and modified in the 15th and 16th centuries. Remains of the original Byzantine structure can be seen at the bottom part of the building. The name derives from the bas-relief of a camel on the right side of the facade. The building is in disastrous condition, but restoration works has just begun.





77 - Palazzo Barbarigo alla Maddalena, erected in the second half of 16th century. The faded remains of the decorative paintings done by Camillo Ballini can be seen on the facade. Atmospheric elements have almost entirely destroyed the frescoes which once decorated the facades of many Venetian palazzi.

78 - (Top right) The Grand Canal with, left to right, Palazzo Contarini dei Cavalli, Palazzetto Tron and Palazzo Tron. The water has left its mark on the facades; the gates and doors have been seriously damaged by the tides (see also figures 55-57).

79 - (Bottom right) Under the Rialto bridge at sunset. The gondolas, taking tourists on an evening ride on the Grand Canal, try to make their way among the motorboats.





78



79





80-81 - Upper photo. Refuse in front of Palazzo Grassi, one of the most glamorous points along the Grand Canal, provides an unsightly reminder of the inability of the tides to properly carry away the wastes of the city and its nearby industrial complex.

Lower photo. Accumulation of refuse in a canal near the church of Misericordia adds to the dismal appearance of the crumbling architecture.

82 - (Right) The Cloister of Santi Cosma e Damiano at the Giudecca. For about a hundred years the church, convent and cloister have been deconsecrated and used as habitations and storerooms. The campanile is badly in need of repair.

80



81









83

83 - (Above) The cloister of the Convent of Santa Teresa, constructed in the 18th century by Andrea Cominelli. The lovely Roman arches have been walled in and further deformed by windows. The restoration of Santa Teresa is one of the projects being considered by the Venice Committee of the International Fund for Monuments, Inc.

84 - (Right) Detail of an altar in the Church of Santa Teresa. This Annunciation scene is done in polychrome marble of which the crumbling is particularly evident in the lower left portion of the frame.









85

85 - Part of the restoration laboratory which the Superintendent of Galleries of Venice created in the former church of San Gregorio, staffed by a highly qualified group of art restorers and capable of handling the largest paintings. Here shown are two restorers at work on a canvas of Francesco Fontebasso (left) and on Tintoretto's Apparitions of the Cross of Saint Peter, behind which is seen the Tintoretto canvas Universal Judgement — so large that it is being restored lying on its side.





86

86 - Two restorers at work on Tintoretto's Last Judgement in the restoration laboratory at San Gregorio. The Superintendence for the Galleries in Venice is responsible for an artistic patrimony of enormous importance, the conservation of which requires constant attention.









88

87 - (Left) Church of Santa Maria della Pietà. The Triumph of Faith, painted by Tiepolo in 1754, is cracked in various places due to age and the elements. Its restoration is being undertaken by our Venice Committee utilizing funds from the Samuel H. Kress Foundation.

88 - Scuola Grande di San Rocco. Tintoretto's Resurrection. This detail shows the very visible cracks on the canvas. Thanks to a generous contribution from the Edgard J. Kaufmann Charitable Trust of Pittsburgh, our Venice Committee has installed a self-sustaining restoration laboratory in the ground floor of the Scuola di San Rocco and, in a three year program will restore the entire cycle of 38 canvases of Tintoretto found within the Scuola.



89-90 - (Left, top and center) Church of San Sebastiano. Paolo Veronese's frescoes of Saints Matthew and Andrew in the side chapels. This church is decorated with numerous Veronese frescoes which have been restored many times over the centuries. The last restoration, done in 1964, was to have been definitive, but the terrible flood in 1966 seriously compromised its results, as can be seen in these pictures.



89

91 - (Left, bottom) Church of Santa Eufemia at the Giudecca. This detail shows the precarious condition of the fresco, The Story of Santa Eufemia, done by Giovan Battista Canal in 1764.



90

92 - (Right) Agostino di Duccio's statue of Sant'Alvise after its restoration. Unfortunately, this statue (from the Church of Sant'Alvise) was irreparably damaged and cannot be better restored.



91









93-94 - The restoration laboratory at San Gregorio. One of Tullio Lombardo's four Angels, from the Church of San Martino, is being immersed for washing before restoration.

95 - (Right) A 13th century Byzantine palazzo on the Rio Nuovo — a rare example of the earliest Venetian architecture. The top part is a later addition in Gothic style. The very evident deterioration of this lovely palazzo is a typical example of the damage being wrought to the irreplaceable architectural splendor of Venice.

93



94







96-98 - *The Scuola Nuova di Santa Maria Valverde della Misericordia, begun by Iacopo Sansovino around 1534. The inside was completed in 1583 but the outside is unfinished. The great hall on the ground floor has been turned into a gymnasium used for basketball and boxing. (Below) A detail of the frescoes by the school of Veronese which cover the walls.*



96



97



98





99

99 - Sala Grande of the Scuola Nuova di Santa Maria Valverde della Misericordia with its priceless frescoes of the school of Veronese. While not condoning its use as a basketball court, it must be noted that far greater damage would result if the building were left closed and at the mercy of the ever present humidity.







100 - (Left)  
*Venice from the  
 air. This shows  
 a traditional,  
 idyllic and even  
 romantic, aspect  
 of the city, hiding  
 the signs of its  
 sickness. We  
 must do all that  
 we can to save it.*

101-102 - Two  
 views of Murano.  
 (Top) The  
 Murano-Colonna  
 wharf. (Bottom)  
 The 14th century  
 Gothic Casa degli  
 Obizi e dei  
 Sodeci. Murano  
 also shows signs  
 of Venice's  
 illness.



101



102









104

103 - (Left) Aerial view of Marghera's industrial zone, which was to have assisted the economy of Venice. Unfortunately, it has had the opposite effect on the economy and has contributed to the acceleration of the erosion and decay of the artistic patrimony of the lovely city.

104 - A dramatic view of Venice (in the foreground) besieged by the industries of Marghera. This picture was taken at sunset, thus emphasizing the pall of smoke which rise from the factories. Fortunately, the prevailing winds blow from Venice towards the industrial complex and only rarely towards the city.



105-107 - Three views of Venice with Marghera in the background. (Top) The campanile of Santo Stefano (on the left we see the metal structures of the Maritime Station). (Center) The campanile of the Madonna del Carmine, overwhelmed by the enormous cement silo of the Maritime Station. (Bottom) The campanile of the Frari.



105



106



107





108

108-110 - Two aerial views of Marghera (top and center) and one of Venice (bottom) with the industrial zone in the background. No words are necessary to describe the unhappy contrast between the historic city and the aggressive expansion of the factories and other structures of the industrial complex.



109



110







The tragedy of Venice  
is a drama not only of a city,  
but of a civilization - to which our  
western culture owes so much.  
Herein we portray that drama  
with striking photographs and vivid,  
behind-the-scene revelations of its  
alarming deterioration and  
what is being done to save this  
lovely Queen of the Adriatic.