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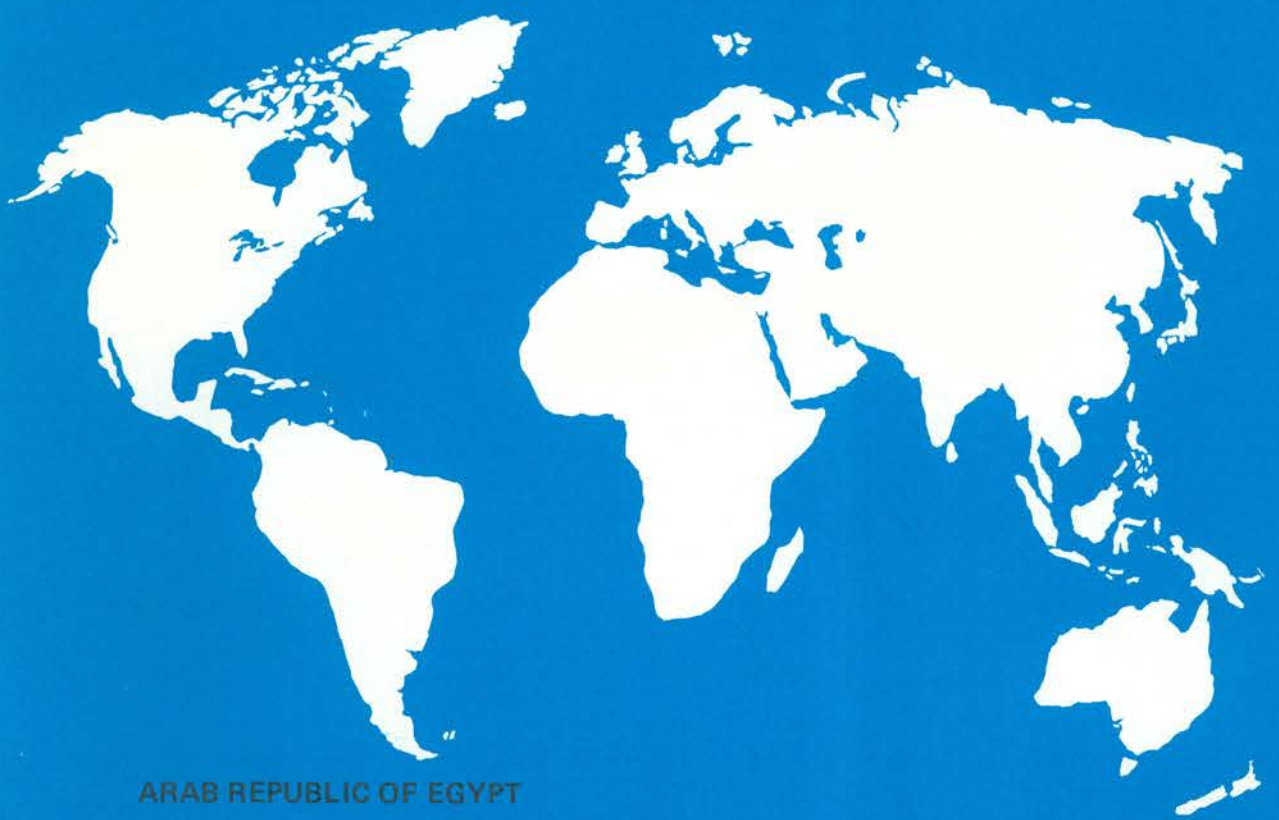
Cairo: Third World Metropolis

Part II: Transportation

by John Waterbury



ARAB REPUBLIC OF EGYPT

Cairo's transportation problems — as much drama as crisis — are not insoluble. The major obstacles may be people's habits, confused municipal jurisdictions, and the absence of overall planning and policy rather than lack of money. Meanwhile Cairo's millions — human, animal, vehicular — seem all to be on center stage.

[JW-10-'73]

Fieldstaff Reports

American Universities Field Staff

The American Universities Field Staff

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ALAN W. HORTON
Executive Director

About the writer:

JOHN WATERBURY has been a student of Arab affairs since 1959. He received a B.A. in Oriental Studies from Princeton University in 1961, and a Ph.D. in Political Science from Columbia University in 1968. He has traveled widely throughout the Middle East, with extended periods of residence in Egypt (1961-62) and Morocco (1965-68). The author of *The Commander of the Faithful: The Moroccan Political Elite*, Dr. Waterbury has also published several articles dealing with Moroccan politics and society. Between 1968 and 1971, he was an Assistant Professor of Political Science at the University of Michigan. He joined the Field Staff in July 1971 to report from the Arab world.

NORTHEAST AFRICA SERIES
Vol. XVIII No. 7
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CAIRO: THIRD WORLD METROPOLIS

Part II: Transportation

by John Waterbury

September 1973

Egypt is locked inextricably in the grips of three crises: transportation, housing, and hostilities with Israel, or so one would conclude judging by the amount of newspaper coverage given them. All that the first two share with the last is their seeming insolubility. Both transport and housing are direct reflections of rapid population growth and even more rapid urbanization in conditions of poverty. More specifically, whatever Cairo may be—quasi-urbanized village or ruralized city—it does manifest at least three characteristics of the urban environment: great physical mobility among its inhabitants, relatively vast movements of goods, and extremely high densities of population in residential districts. In this Report we shall deal with the movement of people and things in Cairo.

The city's transportation problem is as much a drama as a crisis, and Cairo's streets are the stage for a daily tragicomedy in which all Cairenes are both actors and spectators. Indeed, it is my hunch that the drama of the streets is willed, consciously or not, by the denizens of Cairo who have little else to disrupt the "grinding monotony" of their lives. In the streets they can display physical prowess—whether at the wheel of a decrepit taxi or on foot dodging it—righteous indignation, studied nonchalance, bargaining skills (particularly in talking policemen out of applying the rules), pathos, desperation, and grace. Getting from here to there is the bane of the Cairenes' existence and the spice of their lives.

Take, for instance, the bus—luckily for you figuratively and not literally. It is rumored that Cairo buses, when new, are taken at night into a huge empty lot and driven into each other until their windows are popped out, their lights smashed, and their chassis have taken on the proper shape, suggestive of a red sack of melons on wheels. New horns are installed with a husky, slightly prehistoric wheeze, the rear and front doors are wrenched away, and the whole superstructure is tilted about 45° to starboard. With this preparation the fleet is ready to take to the road and face the hordes.

Some of us a year or so ago had the rare privilege of seeing in Cairo new, two-sectioned buses, 18 meters in length, that served the long commuter lines into and out of downtown Cairo. They arrived bravely, gleaming blue and white, and while it was by no means an overnight affair, within a few months the new arrivals had been reduced to the same level as the rest of the fleet.

It is little wonder that such should be the fate of Cairo's public transport. It is a simple question of supply and demand. The supply includes some 1,300 buses, 140 trolley buses, and 230 trams for a total of about 1,800 units theoretically available to meet daily demands. In fact because of disabled equipment, particularly among buses, only about 1,100-1,200 vehicles may be operative in any one day. There to greet them are over 3.5 million passengers a day, or 1.2 billion per year.[1] Two million of these passengers daily beseige the system during the six rush hours. The most heavily traveled line from Shubra in the northern sector of the city to the heart of town handles 45,000 passengers an hour. In any given day the operative fleet covers about 400,000 kilometers or about 100 million miles a year. Half the bus fleet is over seven years old, when statutory retirement age should be after five years. Age, brutal handling and driving, overloading, inadequate maintenance, and the chronic lack of spare parts account for the rate of disabled vehicles. The only wonder is that it is not higher.[2]

Yussef Saïd, the Director of the Cairo Transport Authority, pointed out to me that while the city's

population grows at 4 per cent per annum, the number of passengers carried by the public system has been growing at 15 per cent per annum. (The size of the fleet seems to have stabilized at about 1,800 units since 1969.) With an annual budget of around LE30 million ($75 million) the Transport Authority has been running growing deficits, now at LE7 million. Fixed fares (3-5¢ depending on the line and/or first or second class), rising costs of maintenance and spare parts, and deteriorating equipment have determined this situation.

The analysts who argue that the exodus from the countryside to Cairo has led to the ruralization of the city would do well to keep one factor in mind. Something like half the city's working population is employed in locales outside the police district (*qism*) in which they reside. Unlike the village, work site and household are not in close proximity for a substantial part of Cairo's population. For the city as a whole in 1966, 48.5 per cent of the work force were employed in their district of residence, 37 per cent were employed outside their residential district and presumably might resort to public means of transport, and 15 per cent could not be accounted for. Moreover the *qism* is large enough that some residents would use public transport to commute to work within it. The great northern belt of the city, the major zone of expansion for rural migrants, is heavily involved in the movement of workers with a number of quarters exporting daily over 40 per cent of their working population to other parts of the city (see Table 1).

The long and short of it is that Cairo is a workers' and employees' city, where hundreds of thousands commute to work each day. Factory workers, mechanics, sales personnel, bureaucrats, school teachers, servants, and so on fight it out daily to leave wherever they live and get to wherever they work. Add to these hundreds of thousands more primary, secondary, and university students, vast arrays of military personnel stationed in and around Cairo, and kids who ride for kicks, and you have the full cast assembled for Cairo's daily theatrics.

A colleague recently arrived to Cairo was immediately transfixed by the marvel of Cairo's public transport and remarked in amazement, "The first free mass transit system I've ever seen." As we shall see, he was wrong, but surely the vision before his eyes warranted his conclusion.

Filling up the bus at an obligatory stop: in front of the Al-Azhar Mosque.

Table 1

Distribution of households according to place of residence and place of work: 1966. In percentages*

District (*qism*)	Within District	Outside District	Outside Cairo	Undetermined
Shubra al-Kheima	80.3	11.2	1.1	7.4
*Mataria	40.8	35.8	3.1	20.3
*Zaytun	40.6	37.5	2.6	19.3
Nuzha	.4	70.8	3.8	25.0
*Masr al-Gidida	51.1	25.3	3.4	20.2
Wayli	50.8	26.5	2.4	20.4
*Shubra	49.6	35.8	2.0	12.7
*Sahil	36.3	40.8	2.9	20.0
*Rod al-Farag	45.1	44.3	2.6	8.0
Boulaq	63.0	24.3	1.8	10.9
Ezbekia	54.3	36.5	2.3	6.9
Zahir	29.5	49.7	3.0	17.8
Bab as-Sha'ria	52.9	36.0	1.4	9.7
Gamalia	59.8	27.9	.8	11.9
Darb al-Ahmar	52.9	36.0	1.4	9.7
Mouski	63.1	77.0	1.1	8.8
Abdine	49.6	33.7	2.3	14.4
Qasr al-Nil	45.1	15.2	1.8	37.9
Sayyida Zayneb	48.1	37.8	3.1	11.0
Khalifa	48.1	40.3	1.5	10.1
Masr al-Qadima	47.9	39.7	3.5	8.9
Ma'adi	56.9	30.2	2.4	10.5
Helwan	81.0	5.0	1.7	12.3
Giza City	38.0	30.9	8.1	23.0
Total	48.5	33.4	3.0	15.1

*CAPMAS, *CAIRO: 1970*, Ref. #200/01 (January 1971), p. 60. The principal northern districts have been starred. Boulaq shows a heavy concentration of work and residence befitting the city's original industrial district, as do Shubra al-Kheima and Helwan, which have developed since World War II. The latter two have a very high proportion of workers who enter and exit every day. Qasr al-Nil is Cairo's central business district.

Many Cairo buses, between 8 A.M. and 7 P.M., are full beyond capacity. This does not simply mean that the interior of the vehicles is unbelievably crammed with humans, but the outer surface as well is liberally sprinkled, and frequently submerged with passengers. To facilitate boarding, the two right-hand doors, the right-hand windows, and the rear windows are frequently either jammed open or entirely missing. Into them disappear, and occasionally reappear, baskets, babies, and people who through a miracle of agility and tenacity find accommodation where all logic would tell us there is none. Thus loaded the bus laboriously quits the scene of an obligatory stop and begins its route.

It may not stop again before reaching the other end of its route. It will reduce its speed as it passes bus stops along the way, producing thereby the occasion for the revelation of the average Cairene's extraordinary athletic prowess. The typical civil servant on his way to work is an unprepossessing sort, shortish, plumpish, determinedly dignified as

befits an educated person. At his work undue haste or any ruffling of his composure is resolutely avoided. Yet this same creature becomes, when boarding or leaving the bus, an acrobat of great agility.

The bus generally makes no effort to swing in near the curb even when it does not intend to stop. Descending passengers must therefore practice what some of the seasoned spectators among us call the "flying dismount." This consists in our roundish civil servant wriggling his way through the dense mass of fellow passengers until reaching some sort of opening (no matter which) and then launching himself clear of the vehicle, generally spread-eagle with briefcase firmly clutched in hand, until his feet hit the ground, at which point he runs furiously to compensate for his forward momentum. But his feat is not limited to that, for having become airborne in the middle of the road with traffic coming along on the inside of the bus, he must spin, fake, and zig out like a split end, darting between cars, carts, bicycles, and the onslaught of would-be passengers that converge on the moving vehicle he has just abandoned.

They in turn, similarly determined men and occasionally women, charge after the bus, leaping and clutching at whatever they can grasp on the outside of the bus: window and door openings, dents, cracks, rips and bumpers, and other external passengers. It is said with truth that many of Cairo's bus passengers have no physical contact with the bus but only with other passengers. And here one must note the truly admirable spirit of the Cairene who, already crushed and packed in the interior of the bus or clinging precariously with all the dexterity of an alpinist to the vehicle's carapace, will nonetheless extend a hand, not to beat back the aspirant passenger sprinting after the bus, but to help him on board.

The outer cargo accounts, over time, for much of the characteristically lumpish appearance of the average bus as passengers have fashioned the necessary hand and foot holds for survival on the outside. It also accounts for the standard right-hand list of the buses, as well as for the Transport Authority's reluctance to introduce double-decker buses to Cairo for fear they would tip over. The out-riders in general have raised the art of the flying dismount to its highest level, and they will practice their art at fairly high speeds and in the densest traffic. One civil servant, honoring the canons of Cairo's street theater, dismounted a careening bus after a heavy rainstorm and found himself churning calf-deep through a curbside mud puddle. With a crowd of connoisseurs watching, he refused to acknowledge this little contretemps, and strode sedately and sloshily off to his work place. Another truly astounding dismount was witnessed on Qasr al-Nil Bridge when a brown, disheveled figure cast itself loose from the side of a speeding bus in heavy traffic, dancing his way successfully to the sidewalk. On closer inspection, this apparition turned out to be a stubble-faced, one-legged man in a tattered *galabia* who performed his act with the aid of a stout stick that served as a crutch.

The appearance of out-riders is what gives rise to the notion of a free mass transit system, and, indeed, many passengers, especially fleet-footed urchins, ride for free. But the system has another remarkable acrobat, the fare-collector, known as the *kumsary* (from the French *commissaire*).[3] At moments when no one else on the bus is able to move, this man is capable of swimming like a shark among a school of fish, collecting his tithe. His omnipresent hand will reach out a door or a window to the out-riders who then have the choice to pay up or bail out. He has also been known to refuse to make change for passengers who then may protest or fight their way slowly to the exit in order to be able to get off when they want. The *kumsary's* trade in this manner can be quite lucrative.[4] To round out the picture of inside Houdinis are the pickpockets who are happily at home in the jam. Moreover, because the transit system theoretically has its own police, the Cairo police force does not judge itself responsible for thefts that occur on buses. The pickpocket thrives in the world between conflicting jurisdictions. A favorite gambit is to pick a pocket on the bridge leading from Cairo Governorate to Giza. The theft is performed in Cairo and the criminal flees in Giza. Whose police are responsible for apprehending the felon...?

Lest the reader see in all the above the fantasizing and hyperbole of a foreign observer, let us look at one of several descriptions found in the Egyptian press:

> We cannot tell if this is a transportation crisis or a morals crisis. When the passenger is able to find a place for his feet or for his finger or toenails, he finds a strange world.

A Cairo trolley.

Freebees on the trolley—Ataba Square.

A passenger in first class insists on paying only for a second class ticket. He argues with the *kumsary* and the bus stops. The *kumsary* collars the offender and expels him. Another passenger shows a pass valid for a different line. The bus stops; the *kumsary* collars him and off he goes. A woman complains of the bad manners of a man next to her; the bus stops and another is expelled. Another passenger demands his change, and the *kumsary* claims he has none. A new argument and the bus stops once again....

The passengers are surprised by an unannounced stop of the bus and while pondering its cause they hear the driver call out the door to a cafe waiter, "Two teas, easy on the sugar, and two glasses of water." This is duly delivered and the driver and *kumsary* calmly take tea for five minutes. To the relief of the passengers the needs of the crew are satiated and the bus proceeds on...only to stop in front of a grocery store. The *kumsary* gets out, having been instructed by the driver, "Listen, a couple of fat sandwiches...and don't forget the pickle."[5]

In these circumstances the Cairene commuter has developed a stolid patience in the face of inexplicable delays and the querulous behavior of bus drivers that contrasts markedly with the alacrity displayed in catching the bus. People may be seen chasing a bus for a block just to ride it for three or four more, or going after one as if it were the last that would ever come (a perhaps logical apprehension under the circumstances). Yet many of the same passengers will sit stoically in a disabled bus for as long as it takes for the monster to continue its route.

With fares fixed and unchanged since 1953, the buses are relatively cheap, and for many, such as students or the military, even the base rate is reduced. For most of Cairo's commuters there is no alternative to taking the bus other than walking. Still the resort to other means of transport in the city is growing rapidly. Since 1966 the Transport Authority has operated eight "river buses" with fixed stops along Cairo's Nile front. The number of river buses is to be raised to 20. There is surprisingly little resort to bicycles and motorbikes. Both of these types of locomotion seem to be confined to delivery boys and are really involved in the transportation of goods rather than people. By far the

Delivering bread—Midan Talaat Harb: CBD.

most rapidly expanding means of transportation, with the exception of the private automobile, is Cairo's taxi fleet.

This phenomenon is at least superficially paradoxical in that the *metier* or taxi driver and owner is as deeply immersed in crisis as the public transportation system. In early November 1971, most of Cairo's taxi drivers went on strike, an event of some rarity in any profession in revolutionary Egypt. An alleged minority among their union members had decided upon the strike to protest the arrest of a few drivers who had refused fares. In turn the taxi strike provoked the arrest of some 200 more drivers whom the Minister of Interior depicted as having disrupted crucial communications flows in wartime—the implicit charge was sabotage whether voluntary or involuntary.

The strike, which could in no way be hidden from the populace, brought to light many of the weaknesses and strengths of this growing profession.

The basic plight of the taxi driver is, on the one hand, continually rising operating costs and, on the other, fares that have been unchanged since 1950. The base rate for all those years has been an initial six piastres (ca. 15¢) on the meter, three piastres per kilometer, and 12 piastres for each hour of use. On a typical run of one kilometer, the cabby might make 11-12 piastres (25¢). Over the same 20-year period the cost of gasoline, spare parts, and above all the purchase price of the car itself have soared. A locally manufactured Fiat 1100 carrying three passengers is worth LE2000 with meter (ca. $5000) and a five-passenger Mercedes diesel LE3500 (ca. $8500). Most cabs are driven by hired drivers who take 25 per cent of the daily income while the owner, who may own several cabs and drive occasionally himself, receives the rest and is responsible for the cab's operating expenses. Both owner and driver have a strong interest in maximizing revenues, and one way to do this is to accept only the relatively long-distance passengers and refuse those who wish to go, say, half a kilometer or less. After the strike, taxi owners and drivers were brought together by the Arab Socialist Union and they agreed to a so-called "Charter of Professional Honor" whereby they promised not to refuse fares and to make a special effort to be accommodating during rush hours, which is precisely when many cabbies like to rest their machines. The Charter quickly became and remained a dead letter.[6]

Can money be made operating a taxi in Cairo? There is no lack of passengers, probably over half a million a day for the combined fleet of Giza and Cairo, which has now reached 16,000 units. During rush hours and in the summer when droves of Arab tourists come to Cairo there is a distinct lack of taxis. But that begs the question. Some experts are convinced that owner-driver cabs are on the whole a losing proposition when depreciation of the vehicle is taken into account. For the Fiat 1100, the net annual loss might be as much as LE100.[7] However, one interested party, Adil Gazarin, Director of the Nasser Motor Company which manufactures the Fiats, claims that they should make a net profit of LE221 per year.[8]

The truth of the matter seems to be that under a certain set of conditions the operation of taxicabs becomes a relatively attractive investment, and that set of conditions is becoming applicable to a growing number of Cairenes. First we might note the striking growth in the cab fleet over the last 13 years. In 1960 there were 4,235 taxis in Cairo. That number rose slowly to 4,600 in 1965. But in the ensuing years there was a "cab explosion" so that the fleet reached 7,405 in 1969, 10,000 by 1971, and 11,303 in 1973. In addition, about a quarter of the cabs circulating in Cairo's streets are registered in Giza, and their number in 1973 stood at 4,665, up from 3,500 in 1971. The total fleet, then, is currently about 16,000 strong, and there are at least 18,000 registered drivers. This growth is surely an indication that something is going right with the taxi business.

One thing that is going right is the increased demand, which is not a simple function of the city's population growth. Rather, it reflects the growing proportion of the city's population that must move about daily, and the consequent discomfort and inadequacy of the public system. The cab can even be competitive in cost to the bus. Some commuters must change buses two or three times and pay a new fare for each change. Three people with the same destination might be able to take a cab in relative comfort for no more than their combined bus fares.

Demand is by no means the whole explanation. In 1965, after which year the cab fleet began to grow rapidly, the Egyptian economy entered into a long depression brought on by the Yemeni war, reaffirmed by the Six Day War, and in which Egypt is still plunged. Inflation, fixed wages, and eco-

nomic stagnation made it increasingly difficult for Cairenes to make ends meet. Even the relatively well-to-do felt the pinch. A common stratagem, for the educated above all, is to hold down two jobs in order to create a second source of income. But the second source might be as "fixed" as the first. In this situation investment in the purchase of a cab became relatively attractive. I met a young intern from Kasr el-Aini Hospital who, with his brothers, owns three Mercedes which they all occasionally drive after their regular working hours, and farm out to hired drivers at other times. All three brothers earn more from their cabs than from their jobs for which a university education was an initial requirement. Bigger cats with more money to invest own small fleets of cabs which are driven exclusively by hired drivers. As long as they keep their equipment new, each unit can make good profits. As a machine wears down, it can still be sold at considerable profit to the substantial number of desperate men who are willing to risk making money off a dying machine.

Good and new equipment is essential to the cost equation. One owner-driver of a Mercedes diesel, four years old, told me that he nets LE100 a month and is on the waiting list for a Fiat 1500. He drives 14 hours daily (7 A.M.-3 P.M. and 6-12 P.M.) and takes Fridays off. A general estimate in which I have some faith is that normally functioning cabs bring in on the average of LE5 per day. An owner may expect to make LE100 a month at a time when a good civil service salary would be LE30. Even hired drivers can do well in the system. If they take in LE4 in fares in one day, LE1 goes into their pocket. Several of these drivers have told me that they earn LE30 per month. The economic pinch of the last eight years has made the taxi business a relatively remunerative affair, and the fleet has consequently nearly trebled. But the new breed of owners, who are not real pros, are precisely those who husband their equipment by keeping their cabs off the streets during rush hours, or by driving them less during the summer when people want them more.

The losers in the system are the owner-drivers or hired drivers stuck with overaged machines. They are ground mercilessly by high maintenance costs, long periods of disability, and a very high initial investment. Until 1960 there was a law applied that forced the retirement of any taxis over ten years old. In that year, importations of foreign cars were severely limited so that the cab fleet could not be renewed. As a result the law was no longer applied. In 1971 Cairo's fleet of 10,000 had 2,500 cabs that were at least ten years old. The fleet included more than 34 different makes with variety and age being closely associated.

The average Cairo cab covers about 300 kilometers a day (250 kilometers a day in the summer) and the entire fleet a total of over three million kilometers a day. Again on the average, the cab is carrying passengers for only about 150 out of those 300 kilometers, cruising the streets empty for the rest of its daily rounds. This exacerbates the traffic congestion in Cairo out of all proportion to the cabs' numbers. The slow meanderings of the cruising cab, the abrupt halt in mid-traffic to pick up or disgorge passengers, and the impromptu rest and repair stops just about anywhere inevitably snarl traffic. The day of the strike in November 1971, traffic experts watched in astonishment at the uncharacteristic order and regularity that were restored to traffic flow in the city.[9]

The Cairo cabby is an understandably ornery sort, behind the wheel 14 hours a day in some of the most chaotic traffic conditions imaginable. That he in the aggregate makes a generous contribution to this chaos is of little comfort to the individual cabby who seeks to protect an enormous personal investment if the cab is his own, or to reach a certain daily revenue if he is a hired driver. In both instances the cabby may find it preferable to avoid rush hour hordes or the hottest hours of the day. With the major advent of very large numbers of Arab tourists to Cairo the problem has been further complicated. Most tourists—Kuwaitis, Saudis, Libyans—come *en famille* and for relatively long stays. Frequently they do not have private automobiles with them but are wealthy enough not to have to resort to public transport. The Arab tourist is a choice target for the taxi driver. With them he can negotiate special fares above the metered rate, or rent his vehicle by the hour. The upshot is that the cabby more than ever may be tempted to shun the local citizenry and to refuse passengers. When he feels he has earned enough or simply wishes to rest his machine he places a yellow bag over the meter on the outside of the cab, indicating that he is off duty. A recent cartoon depicted a cabby in bed, a yellow bag over his head, refusing the attentions of his wife.

Growing just as rapidly as the taxi fleet is the number of private automobiles. In 1962 there were 32,891 private cars registered in Cairo. By 1969

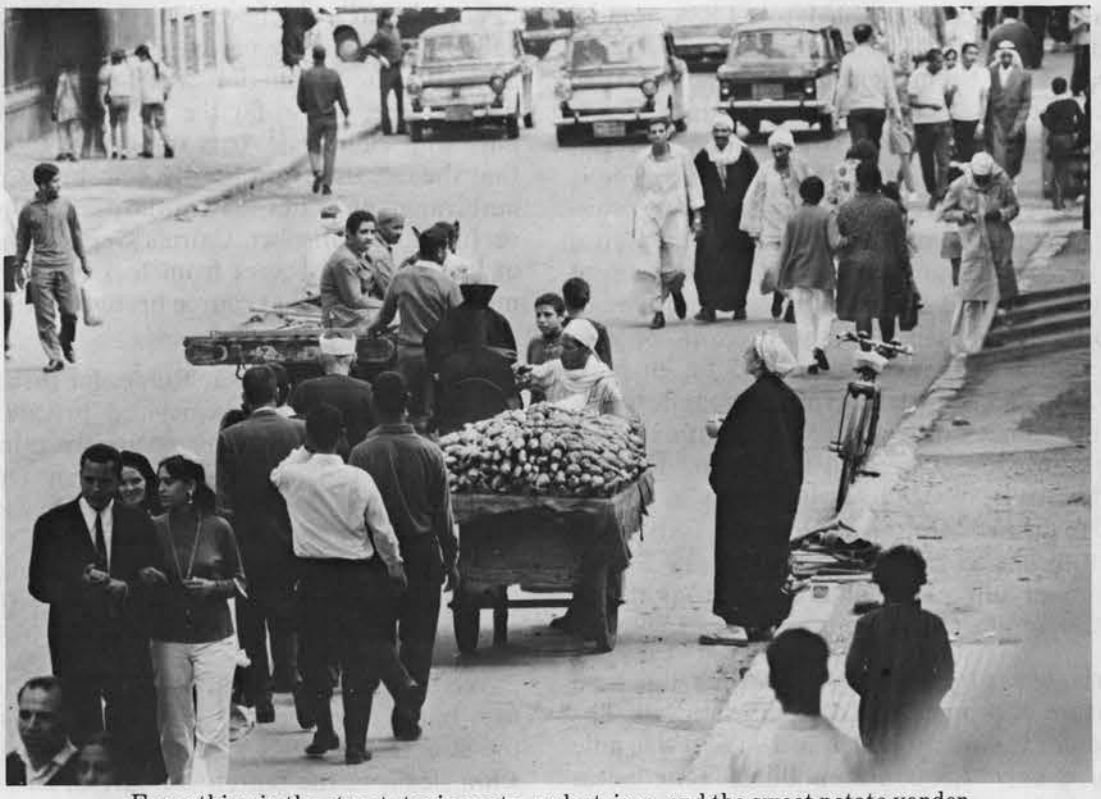
that figure had nearly doubled to 64,836, and in 1973 had shot up to 104,000. In recent years about 10,000 cars have been registered annually. These figures do not include the tens of thousands of private automobiles in Cairo's streets that are registered in Giza, Qalyub, and other provinces. It is safe to assume that during the day there are probably 200,000 private vehicles circulating in Cairo. Some of the growth can be accounted for by sales of locally manufactured Fiats, but untold numbers of automobiles have been brought in from outside through various maneuvers and paid for in hard currency. (It is said the Egyptian pound is the strongest currency in the world: an Egyptian going on a trip abroad is allowed to take with him only LE5, but when he comes back he brings in a Mercedes.) The former Minister of Economy, Abdullah Marzipan, reported that in the period 1968-1972 33,000 foreign automobiles had been brought into the country under "shady circumstances."[10]

The private car is obviously a great prestige item and measure of economic and social standing. The Nasser Motor Company, which in 1969-70 was able to produce only 2,500 automobiles, nonetheless announced plans in 1971 to start production of a "People's Car" which would cost "only" LE700 (ca. $1800). The average per capita income in Egypt is about LE76. Production was to be set at 25,000 units a year, but so far the plan does not seem to have materialized.[11] It is important to remember that the city itself can hardly help but it does have ambivalent attitudes toward the dilemma of private versus mass transport. Cairo's single largest source of local revenue comes from fees on private automobiles. In 1969 that source brought the city LE3.2 million.

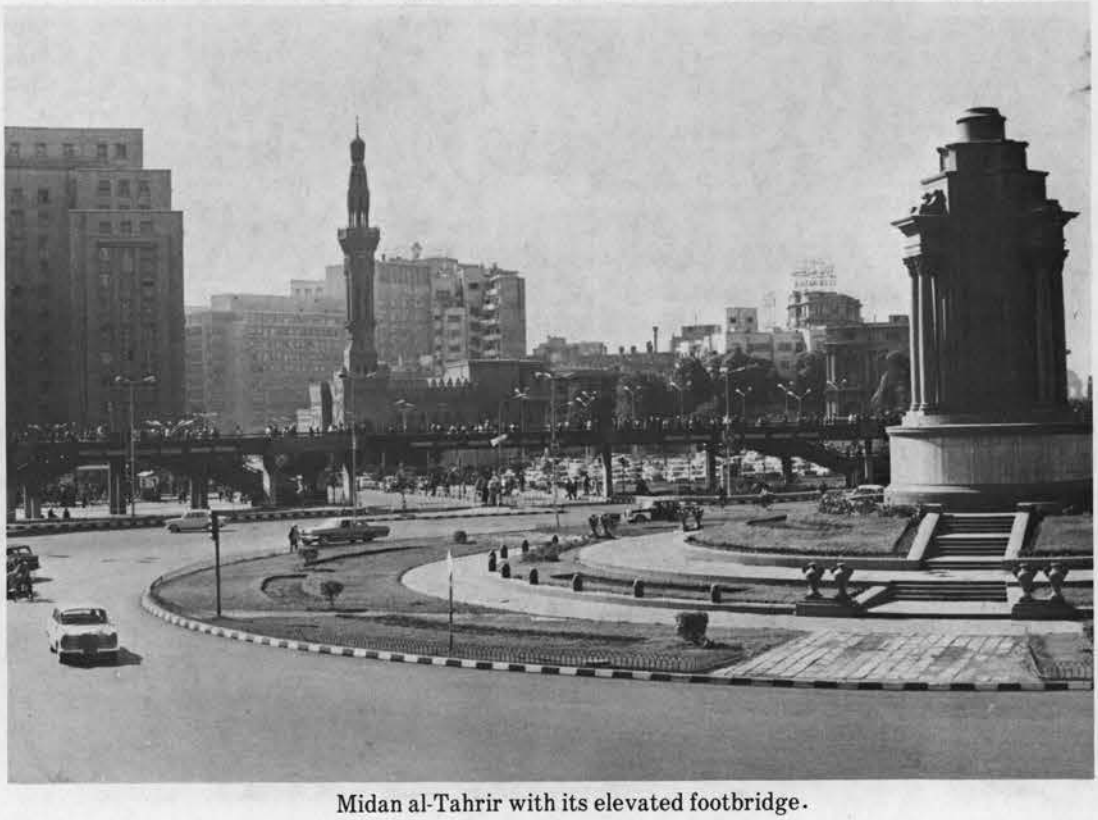
When it is realized that Rome, for instance, contains over 1.5 million registered private automobiles, Cairo's fleet seems positively miniscule in comparison. Indeed, the city's frequent traffic jams and generally slow-moving and haphazard traffic flows are not the result of the number of vehicles in the streets but of their nature and handling, the habits of pedestrians, the ignorance of the police, and the various uses of street space itself.

We have already noted a few things about street use: buses disgorge and load up in the middle of the street as do taxis which also cruise slowly and whimsically in the search for fares. Pedestrians habitually walk in the street itself although there is

A quasi-medieval traffic jam—motorized vehicles are overwhelmed by pedestrian and animal traffic.



Everything in the street: taxis, carts, pedestrians, and the sweet potato vendor.



Midan al-Tahrir with its elevated footbridge.

Street use: cars, etc., on the sidewalk, people in the street.

ample sidewalk space in the city. The problem is that sidewalks are used for anything but pedestrians: they serve as convenient car parks, space for sidewalk vendors, barbers, newspaper stalls, vegetable and fruit carts, garbage dumps, auto repair and body workshops, etc. Sidewalks are most definitely not for walking. The street is, thus further slowing the general movement of traffic by a clutter of human bodies. So serious had the problem of the intermixture of pedestrian and motorized traffic become in Cairo's main squares that a series of elevated walkways are being constructed (the first two at Tahrir and Falaki Squares) to get the people up above the traffic flow. The result is an aesthetic disaster but a definite boon to the average driver. It had been contemplated that underground walkways could have served just as well, without doing such visual violence to the city's squares. To have dug down, however, would have entailed ripping up large chunks of telephone and electricity cables, water mains, and sewage pipes that converge at these points in a nexus so complex that most municipal agencies are terrified at the thought of touching them. So the pedestrian hordes are herded aloft, frequently against their outspoken will, by determined policemen. As one pedestrian bargains (I've got to catch that bus) with the policeman, ten others slip gleefully out into the traffic. A man with a severe limp appears, his face contorted in pain, the policeman motions him up to the walkway. "Can't do it, my ankle hurts too much." The policeman relents, the man hobbles across the main thoroughfare and sprints like a rabbit after his bus.

Basic driving rules seem to be ignored equally by drivers and policemen. It is virtually impossible to predict what the Cairene behind the wheel is going to do. Making turns, parking, keeping to the right, signaling, and some uncategorizable maneuvers are matters clearly of some mystery. The average policeman, probably not being a driver himself, is not sensitized to obvious abuse of driving rules or even common sense. Moreover, the Cairene is impressed only by de facto situations. The de jure doesn't interest him. The light is red only if there are too many cars coming across with the green to allow a quick crossing of the intersection. A one-way street is one way only if a car is coming from the opposite direction. A stop sign is never a stop sign. Most police acquiesce to the *fait accompli* for they are forced to bargain to apply a rule, exchanging curses and blandishments with possible offenders, while tens of others take the opportunity to violate the rule the good officer was seeking to uphold. The policeman's pragmatic approach to his job is to try to keep traffic moving even if a few rules are violated in the process. Towards this end policemen will even help push stalled or disabled vehicles to get them going or out of the way.

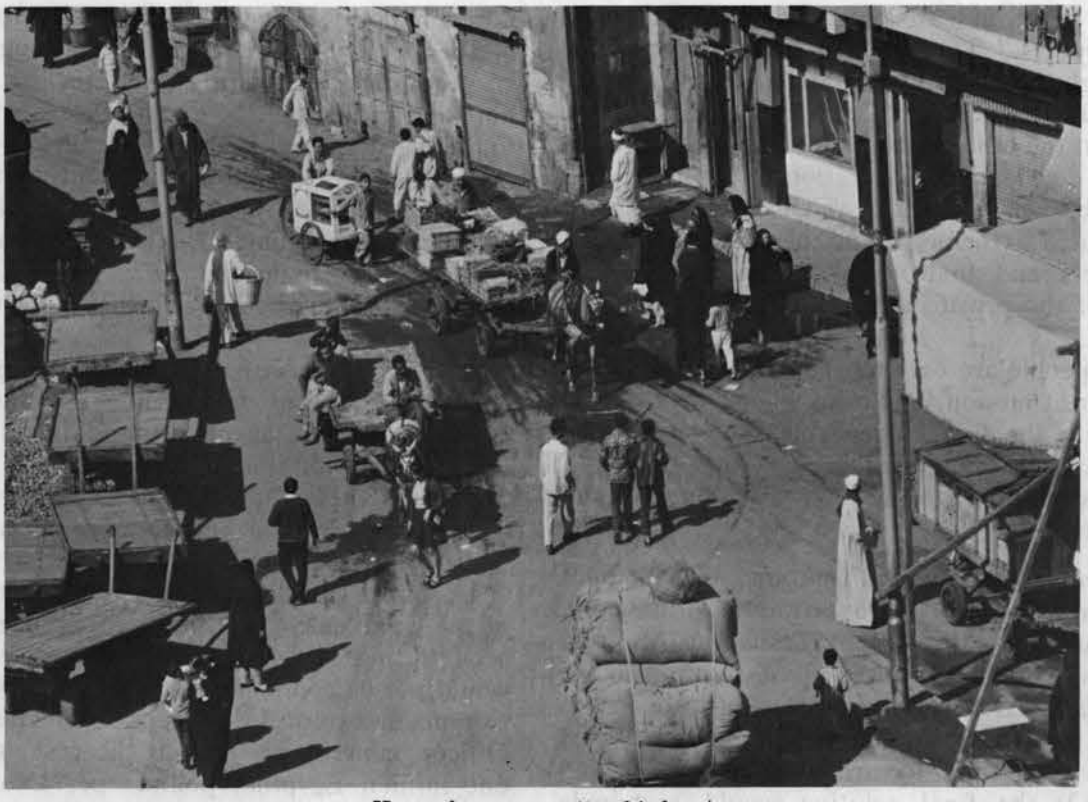
In sum, Cairo's drivers, whether at the helm of a bus, taxi, car, or army truck (with which the city is afflicted in untold numbers) are capricious and unpredictable, creating traffic problems worthy of far greater numbers. One thing is predictable, the use of the horn. Most drivers regard this as the most essential piece of equipment on their cars, and it is clear that as such it does not serve primarily as a warning device but as an identification. The Cairene's absent-minded beep-beeping acts as a

The baker's delivery van.

kind of sonar system indicating his presence and position to other similarly beeping vehicles. If a Cairene doesn't hear you, he cannot see you.

Most of the motorized equipment in Cairo, even when relatively new, functions poorly. The quality of gas, the lack of spare parts, the variety of cars and trucks, the lack of expertise among mechanics, lead to the rapid deterioration of the vehicle. Cairo's traffic moves slowly and smoggily because of low maintenance standards. This is a blessing for the pedestrian in the street who can cope with relatively slow-moving objects and who is likely to inflict as much damage upon the vehicle as himself in the event of a collision. But Cairo's streets are filled with other slow-moving vehicles whose numbers appear to be growing as fast as those of taxis and private cars: these vehicles are animal-drawn carts.

It is one of the ironies of modern, burgeoning Cairo that as this city grows and ostensibly modernizes, its traditional modes of transportation grow apace. Around 1870, a century ago, Cairo's vehicular traffic consisted of 174 water carts, 1,675 carts for goods, 400 privately owned passenger carriages, and 486 passenger carriages for hire.[12] Today in Cairo one finds 60-80,000 animal-drawn vehicles (*'arabia karo*), using horses, mules, or donkeys, and involved predominantly in the movement of goods.[13] In its various forms—flat-bed carriages, mounted bins, bakery vans, butchers' tumbrels—animal traffic is omnipresent in Cairo's streets, and this fleet probably hauls more goods daily than the 8-9,000 trucks operating in the city. The 5-6,000 tons of household garbage is collected and hauled daily by a fleet of 1,500 donkey carts, whereas the city itself commands only about 300 trucks for hauling refuse. The city's warehouses almost invariably distribute their goods—bricks, paper, cement, plaster, crated goods, beverages—on horse-drawn, flat-bed wagons. The big fruit and vegetable wholesale market at Rod al-Farag calls upon some 20,000 carts a day to haul its produce to various sectors of the city. One may add to this traditional transport the thousands of pushcarts involved in gathering, salvaging, and retailing operations of all kinds, mobile restaurants and soup kitchens, the municipal sweepers' green iron push-bins, and the old-fashioned horse and carriages (*'arabia hantour*) that still ply Cairo's streets.



Horse-drawn carts (*'arabia karo*).

Only 20,000 of these vehicles are licensed; the rest simply appear in the streets and no one challenges their right to do so. This expansion may be a reflection of the rural exodus to Cairo, representing an activity into which migrants, who would be otherwise unemployed, can integrate themselves with relative familiarity. In fact, city officials see in the strict licensing of animal-drawn vehicles and pushcarts a means to discourage migration to the city.

In the meantime such traffic, although partially zoned away from some sections of Cairo, is to be found almost everywhere. Carts clutter the streets, slow traffic, are loaded and unloaded wherever the driver judges it to be convenient. There are several proposals before the Governor for stricter zoning regulations and for discouraging the traffic altogether by moving all warehouses and wholesale markets to the outskirts of the city at distances that would make it prohibitive to use animal-drawn vehicles in hauling goods. Still, one wonders if the city can offer any feasible alternative to this crucial element in the movement of things around the city. Animals and carts cost very little in comparison to trucks, motorcycle-carts, and pickup vans that would be the only practical alternatives to the existing system. Moreover, all the essential elements in the traditional system—drivers, animals, and wagons—can be easily maintained, repaired, or replaced, in sharp contrast with any motorized vehicle.

In sum, one finds in Cairo's streets a hodgepodge of lopsided buses, meandering taxis, streams of pedestrians, over 100,000 private automobiles, plodding donkey- and horse-carts, pushcarts, mobile restaurants, trolleys, trams, garbage carts, and street sweepers. The sidewalk becomes parking lot, recreational facility, dormitory, and workshop. The result is the transportation crisis of a poor city in a poor country, with dung in the gutters and smog in the air.

Naturally, many responsible Cairenes have thought seriously about solutions to these problems, but like solutions to all of Egypt's other problems, the price appears too high. As a consequence, stopgap or utopian measures are sought. One city official pointed out to me that only 12 per cent of Cairo's surface is taken up by street and parking space "whereas it is generally acknowledged that a

city must devote at least 25 per cent of its surface to such purposes." That may be true for a country with a high standard of living and a massive private automobile fleet, but will Cairo ever attain the one or sustain the other? Should not the city move toward the development of a rational, pervasive, and dependable mass transit system that would be better suited to the needs and incomes of the city's commuters and that would spare the city the plague of the private automobile?

Some people are only too happy to endorse the mass transit motion, but from where, they rightly query, will the financing come? Once again the war, the really big crisis, overshadows the city's problems and leaves it no alternative but to hang on grimly.

For some optimists final solutions, like the light at the end of the tunnel, are constantly within sight. Five years ago, Minister of Transport Ali Zein al-Abdin announced a three-phase solution to the problem: (1) extend existing means of transport to "lance" the crisis; (2) establish within three years new electrical lines for trolley buses and rapid trams; (3) the final solution would seemingly emerge by itself but would probably include the building of Cairo's first subway.[14]

The only practical step taken at that time was to import the two-section buses for long-distance lines that can haul 200 passengers at a time. The easiest way out has remained the importation of new equipment which, in the end, simply puts more cumbersome vehicles in streets that are already too choked to permit easy passage to the existing fleet. Even extending existing tram lines or building new ones may bear a high opportunity cost for, despite their superior handling capacity (60,000 passengers per hour as opposed to 8,000 for a bus), they are slow, take up a relatively vast area, and are expensive to operate and maintain.[15] As in the past, the official response to the crisis is to import. Three hundred fifty new buses are to be in Cairo's streets by October 1973.

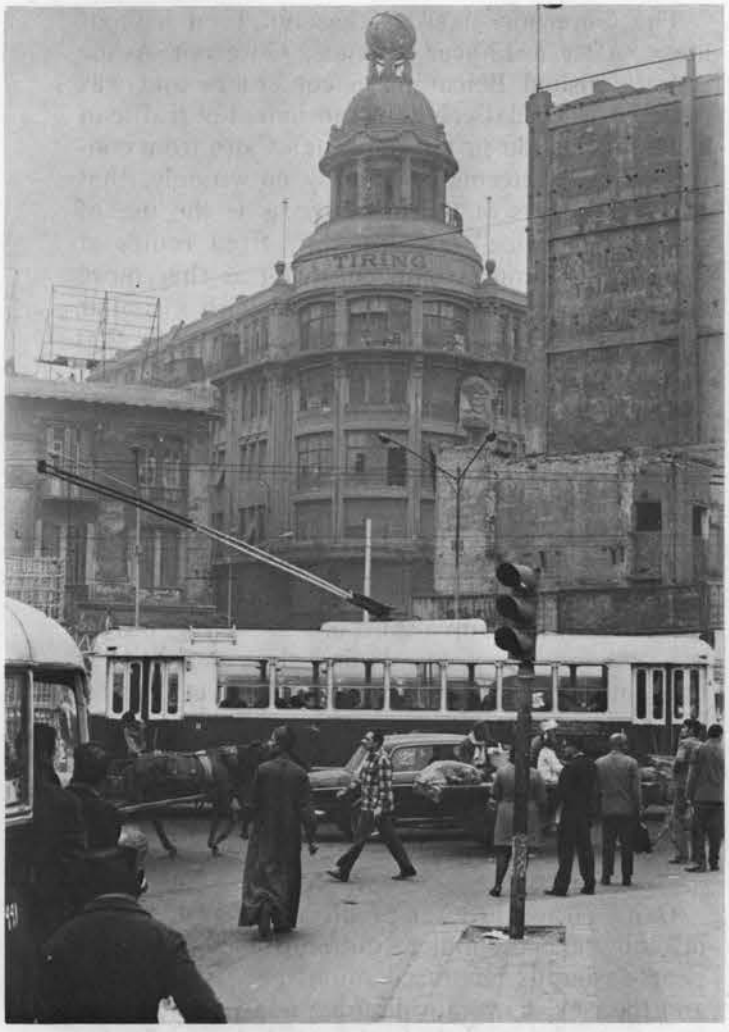
Other perennial solutions involve the reorganization of the movement of people and of traffic flows at the macrolevel. Inasmuch as these solutions usually involve large engineering projects and substantial cost outlays, they tend to be popular with concerned ministries and construction firms. We have mentioned the construction of the steel footbridges at Tahrir and Falaki Squares. At the same time a major new bridge is being built from Dokki on the west bank to the heart of Cairo on the east. Its terminal points are as yet unclear, but the notion of extending it as a sort of elevated highway to the big square in front of the railroad station is being discussed. If that is what is ultimately done, it will be dumping yet more vehicles into Cairo's most congested square. The bridge will also facilitate westward expansion in Giza, a process that city planners want to discourage rather than encourage.

A third engineering project is to extend the Helwan (southern) metro line to the "Kubry Limun," again adjacent to the main railroad station. At the same time a northern metro line from Shubra al-Kheima to Ain Shams and eventually to Kubry Limun would be developed as well.

The most grandiose engineering scheme is that of the Cairo subway. This plan has been kicking around since 1954 and if it were started today would not be completed before 1980. French consultants first studied this project soon after the Free Officers came to power, but the cost estimates—one million Egyptian pounds per kilometer for simple construction—appeared prohibitive for a project that must have seemed something of a nonessential bagatelle at the time. As the transportation crisis deepened, cost estimates grew proportionately. Another French mission returned in 1963, followed by English consultants in 1964 and then Japanese and Russian. In 1968 minimal cost estimates were LE3.5 million per kilometer.

At present the French are back on the scene through a consulting firm (SOFRITU) which has completed a feasibility study on an initial project for a north-south line, 20 kilometers long, that could be extended to 34 kilometers to cover the entire north-south axis of the city from Shubra al-Kheima to Helwan. Current cost estimates are not being published, but as long ago as 1968 the generally accepted price tag was LE200 million for construction costs and equipment. It was also estimated that the project would take eight years to complete.

Any project that big is sure to whet appetites of interested parties—such as the Ministry of Transport, public sector construction outfits, and foreign consultants—who would be likely to get a piece of the action. Likewise the Cairo Transit Authority would welcome the project because of the



The typical clutter of Cairo street traffic—Ataba Square.

subway's superior hauling capacity, as long as someone else pays for it. It has become commonplace to hear members of the city's Popular Assembly or the national parliament say that the subway is the only possible solution. Yet there may be less costly and less grandiose schemes that would be more effective in meeting the transportation problem.

Dr. Saad al-Din Ashmawi, for one, has tried to put the project into focus. First, he notes that even the project's most enthusiastic supporters do not believe its effects will be felt before 20 years. But Cairo's problems clearly cannot wait that long. Second, on the assumption that the system will include at most 40 kilometers of line, it will handle no more than one-twentieth of Cairo's daily commuter volume. (This estimate is derived from an evaluation of London's underground, one of the most developed in the world with 408 kilometers of track serving all parts of the city. Yet it handles only 675,000 passengers [presumably per day] while other means of public transport carry 3,198,000—i.e., the underground handles about 20 per cent of the load. Cairo, with 40 kilometers of subway and assuming London's ratio, would only handle about one-twentieth of the city's daily passenger load.) Given this likelihood, it seems unwarranted to invest LE200 million, much of it in hard currency, in a project that will deal with such a small part of the problem.

Ashmawi, and others, are looking for short-term, less costly alternatives. For instance, for a few million pounds Cairo's existing road system could be substantially upgraded. Sidewalks could be cleared, particularly in downtown Cairo, of auto repair shops and street vendors. No parking zones could be strictly enforced in conjunction with the construction of multitiered parking structures along the city's edges. In fact, Ashmawi was able to incite the city's authorities to enforce no-parking rules the length of Sharia al-Azhar. Thereafter transit time of this major thoroughfare was reduced from over ten minutes to under three. Another practical step would consist in the strict zoning and gradual replacement of animal-drawn vehicles as well as in a moratorium on the licensing of additional vehicles and handcarts. With pedestrians off the streets, carts out of most of them, private cars parked away from the downtown area, and street surfaces upgraded and maintained, there would be vast scope for the expansion of the bus fleet and the creation of conditions for the more efficient use of units in service now.

A factor that Ashmawi believes has greatly complicated Cairo's transportation problems has been the attempt to scatter government ministries and agencies throughout the city and in Giza, and, more important, the establishment of new government cities, especially Medinat al-Nasr. The latter was intended to be a self-contained unit with civil servants living in close proximity to their place of work. But even if the project had been adequately equipped with schools, clinics, shops, and recreational facilities—which it was not—the planners should have realized that civil servants do not select their residence with reference to their place of work. They may rather look for a fairly permanent home in a convivial residential area, or continue residence in rent-controlled apartments, logically

assuming that their place of work may change periodically during their careers.

Consequently, most of the people who work at Nasr City commute to it, and because it is far from the downtown area, they must commute a long distance. The city is faced with extending more and more public transport lines to this area. Moreover, the governmental units that have been transferred there are inevitably involved in moving personnel and correspondence back and forth between relevant ministries and agencies in the city's heart. On the strength of this experiment, careful thought should be given before any other such projects are launched.

Finally, Ashmawi suggests that if the notion of the subway cannot be done away with entirely, then the best alternative would be to develop existing above-ground metro lines and to link the southern and northern systems.[16] As we have already noted, this is precisely what the Cairo Governorate is proposing to do. In addition, the city's Governor, Hamdy Ashur, is not eager to pursue the subway project. He favors instead the construction of elevated roadways as a substitute.[17] The one factor that has not been the subject for much discussion is that the development of the subway, or of above-ground metros, or of elevated highways *along the city's north-south axis* will tend to confirm the city in its present growth patterns. Like the new bridge from western Giza to downtown Cairo, the reinforcement of transportation in the north and the south will encourage urban expansion into the agricultural zones that lie in both directions. Most everyone is agreed that this is undesirable and that the city should expand in an east-northeasterly direction into desert lands. Developing mass transit systems in that direction could have given a practical incentive to that kind of urban expansion.

Without the financial means to think big, the city ineluctably falls back on stopgap measures and on programs for which it is not likely to be responsible. The Committee for Public Services in the city's Arab Socialist Union secretariat has recommended the formation of a Transport Planning Organization for the city. It suggests that no new industrial projects be established in Cairo and that the public sector reorganize its working day to mitigate rush hour traffic problems. None of these measures, however, even if adopted, could be applied through municipal auspices.

The Governor, likewise, has not been without ideas. After a 13-year absence, Governor Ashur recently visited Beirut for a conference and was struck by the relatively sane movement of traffic in a city that should suffer more than Cairo from congestion. He determined, rightly or wrongly, that one of the keys of Beirut's success is the use of so-called "service" taxis that ply fixed routes at fixed fares filling up and emptying as they move along. Cairo is now to be endowed with a similar system. By the fall of 1973 there are to be 200 "service" cabs following ten routes throughout Cairo. The single fare is to be 12¢. The project is to be financed through private Arab capital and the taxis leased to the city.

Other measures that have been decided upon are the introduction of a single 5¢ bus fare, thereby eliminating first-class tickets. First-class space theoretically takes up a third of bus seating, but on the average the sale of first-class tickets has brought in only 9 per cent of total ticket income. The Cairo Transport Authority itself is to be divided into six units corresponding to the city's major geographical divisions and a special unit for repairs and maintenance. The rationale behind this move is not entirely clear.

Cairo's transportation problems are by no means insoluble and the major stumbling blocks may be people's habits, confused municipal jurisdictions, and the lack of overall planning and policy, rather than lack of money. Any solution that costs a lot is probably doomed to failure, but there are several intermediate measures that can be taken at relatively low cost if the necessary coordination is attained. Yet, as pointed out in Part I of this series, there is no planning agency that has binding authority over all of Greater Cairo (or even over Cairo proper), and the city's transportation crisis, like all its other problems, involves not one but three Governorates (Cairo, Giza, and Qalyub) with their separate administrations and institutional jealousies. For the foreseeable future, therefore, the growing pressure upon all means of transport will continue at a rate sufficient to offset the annual palliatives and emergency measures that the city introduces to meet the situation. Cairo's millions—animal, human, and vehicular—will be on stage, and the show will go on.

NOTES

1. In addition to buses, taxis, trams, and trolley buses, there is the Heliopolis Metro which in 1969 carried 83,479,000 passengers, and the Helwan metro which carried 56,357,000, and the Mataria Railroad that carried 35,288,000. See Central Agency for Public Mobilization and Statistics (CAPMAS) *Cairo 1970*, Reference #200/01 (January 1971), p. 58; also the first-rate study of Dr. Sa'ad al-Din Ashmawi, *The Organization of Transportation*, Dar al-Taba'a al-Haditha, Cairo, 1971 (in Arabic), p. 131.

2. Typical is the report that the Cairo Transport Authority had received authorization to utilize LE4 million to import spare parts necessary for the repair of 345 disabled buses. It would be five months before the operation could begin, *al-Ahram*, July 13, 1973. A recent report stated that the Governor of Cairo had decided to retire all those buses whose annual maintenance costs were superior to their market value.

3. As an historical note, Cairo's modern transportation system was begun after 1896 with tramlines established and run by a Belgian company. Until the revolution of 1952, and especially the nationalizations of 1961, much of the public means of transport in the city remained in foreign hands, and much of the terminology, such as *kumsary*, was adapted from foreign languages, mainly French.

4. In theory both the *kumsary* and the driver receive bonus or incentive payments if their bus exceeds a certain level of paid fares each day. However, one driver estimated that even in a new perfectly functioning bus, the most a driver could hope for in a single day would be 30 piastres (ca. 75¢). See *al-Gumhuria*, February 22, 1973, "The Bus Driver Speaks his Mind."

5. "Is there really a Transportation Crisis?" *al-Ahram*, January 8, 1972.

6. "The Taxi between the Native Son and the Tourist," *Ruz al-Yussef*, n.2353, July 16, 1973.

7. See Dr. Mohammed Abdelwahab Ismail, "Taxis," *al-Ahram al-Iqtisadi*, May 1, 1969.

8. Dr. Aadil Gazarin, "Reply," *al-Ahram al-Iqtisadi*, May 15, 1969.

9. *Al-Ahram*, December 20, 1971.

10. Raymond Anderson, *New York Times*, February 10, 1972.

11. See *al-Ahram al-Iqtisadi*, n.390, November 15, 1971.

12. See Janet Abu-Lughod, *Cairo 1001 Years of the City Victorious*, Princeton University Press, 1971, p. 110.

13. See Dr. Sa'ad al-Din Ashmawi "An End to Light Transport in Cairo," *al-Ahram al-Iqtisadi*, December 1, 1972.

14. "When will the Plan to Solve the Transportation Crisis be Completed?" *al-Musawwar*, n.2304, December 6, 1968.

15. One of the most persistent and well-informed critics of existing transportation policies is Dr. Sa'ad al-Din Ashmawi. See his "The Organization of Transportation," *op. cit.*, and "Rational Organization and the Transportation Problem," special supplement to *al-Ahram al-Iqtisadi*, January 15, 1969.

16. Ashmawi, "The Organization of Transportation," *op. cit.*, pp. 123-33.

17. *al-Ahram*, July 18, 1973.

American Universities Field Staff, Inc.
3 Lebanon Street, Hanover, New Hampshire 03755
545 Fifth Avenue, New York, New York 10017