distinct. Decrements in a scuba diver's performance which result from these distortions, however, may be considerably lessened by adaptation to the underwater environment. Our involvement stems from a need to improve the visual performance of divers. But in the course of this work we have become increasingly aware of another great opportunity that the underwater world provides: It is a unique laboratory for the investigation of countless perceptual problems which bear on the most fundamental theories of perception.

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The Experience of Living in Cities

Adaptations to urban overload create characteristic qualities of city life that can be measured.

Stanley Milgram

"When I first came to New York it seemed like a nightmare. As soon as I got off the train at Grand Central I was caught up in pushing, shoving crowds on 42nd Street. Sometimes people bumped into me without apology; what really frightened me was to see two people literally engaged in combat for possession of a cab. Why were they so rushed? Even drunks on the street were bypassed without a glance. People didn't seem to care about each other at all."

This statement represents a common reaction to a great city, but it does not tell the whole story. Obviously cities have great appeal because of their variety, eventfulness, possibility of choice, and the stimulation of an intense atmosphere that many individuals find a desirable background to their lives. Where face-to-face contacts are important, the city offers unparalleled possibilities. It has been calculated by the Regional Plan Association (*1*) that in Nassau County, a suburb of New York City, an individual can meet 11,000 others within a 10-minute radius of his office by foot or car. In Newark, a moderate-sized city, he can meet more than 20,000 persons within this radius. But in midtown Manhattan he can meet fully 220,000. So there is an order-of-magnitude increment in the communication possibilities offered by a great city. That is one of the bases of its appeal and, indeed, of its functional necessity. The city provides options that no other social arrangement permits. But there is a negative side also, as we shall see.

Granted that cities are indispensable in complex society, we may still ask what contribution psychology can make to understanding the experience of living in them. What theories are relevant? How can we extend our knowledge of the psychological aspects of life in cities through empirical inquiry? If empirical inquiry is possible, along what lines should it proceed? In short, where do we start in constructing urban theory and in laying out lines of research?

Observation is the indispensable starting point. Any observer in the streets of midtown Manhattan will see (i) large numbers of people, (ii) a high population density, and (iii) heterogeneity of population. These three factors need to be at the root of any sociopsychological theory of city life, for they condition all aspects of our experience in the metropolis. Louis Wirth (*2*), if not the first to point to these factors, is nonetheless the sociologist who relied most heavily on them in his analysis of the city. Yet, for a psychologist, there

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is something unsatisfactory about Wirth's theoretical variables. Numbers, density, and heterogeneity are demographic facts but they are not yet psychological facts. They are external to the individual. Psychology needs an idea that links the individual's *experience* to the demographic circumstances of urban life.

One link is provided by the concept of overload. This term, drawn from systems analysis, refers to a system's inability to process inputs from the environment because there are too many inputs for the system to cope with, or because successive inputs come so fast that input *A* cannot be processed when input *B* is presented. When overload is present, adaptations occur. The system must set priorities and make choices. *A* may be processed first while *B* is kept in abeyance, or one input may be sacrificed altogether. City life, as we experience it, constitutes a continuous set of encounters with overload, and of resultant adaptations. Overload characteristically deforms daily life on several levels, impinging on role performance, the evolution of social norms, cognitive functioning, and the use of facilities.

The concept has been implicit in several theories of urban experience. In 1903 George Simmel (*3*) pointed out that, since urban dwellers come into contact with vast numbers of people each day, they conserve psychic energy by becoming acquainted with a far smaller proportion of people than their rural counterparts do, and by maintaining more superficial relationships even with these acquaintances. Wirth (*2*) points specifically to "the superficiality, the anonymity, and the transitory character of urban social relations."

One adaptive response to overload, therefore, is the allocation of less time to each input. A second adaptive mechanism is disregard of low-priority inputs. Principles of selectivity are formulated such that investment of time and energy are reserved for carefully defined inputs (the urbanite disregards the drunk sick on the street as he purposefully navigates through the crowd). Third, boundaries are redrawn in certain social transactions so that the overloaded system can shift the burden to the other party in the exchange; thus, harried New York bus drivers once made change for customers, but now this responsibility has been shifted to the client, who must have the exact fare ready. Fourth, reception is blocked off prior to entrance into a system; city dwellers increasingly use unlisted telephone numbers to prevent individuals from calling them, and a small but growing number resort to keeping the telephone off the hook to prevent incoming calls. More subtly, a city dweller blocks inputs by assuming an unfriendly countenance, which discourages others from initiating contact. Additionally, social screening devices are interposed between the individual and environmental inputs (in a town of 5000 anyone can drop in to chat with the mayor, but in the metropolis organizational screening devices deflect inputs to other destinations). Fifth, the intensity of inputs is diminished by filtering devices, so that only weak and relatively superficial forms of involvement with others are allowed. Sixth, specialized institutions are created to absorb inputs that would otherwise swamp the individual (welfare departments handle the financial needs of a million individuals in New York City, who would otherwise create an army of mendicants continuously importuning the pedestrian). The interposition of institutions between the individual and the social world, a characteristic of all modern society, and most notably of the large metropolis, has its negative side. It deprives the individual of a sense of direct contact and spontaneous integration in the life around him. It simultaneously protects and estranges the individual from his social environment.

Many of these adaptive mechanisms apply not only to individuals but to institutional systems as well, as Meier (*4*) has so brilliantly shown in connection with the library and the stock exchange.

In sum, the observed behavior of the urbanite in a wide range of situations appears to be determined largely by a variety of adaptations to overload. I now deal with several specific consequences of responses to overload, which make for differences in the tone of city and town.

Social Responsibility

The principal point of interest for a social psychology of the city is that moral and social involvement with individuals is necessarily restricted. This is a direct and necessary function of excess of input over capacity to process. Such restriction of involvement runs a broad spectrum from refusal to become involved in the needs of another person, even when the person desperately needs assistance, through refusal to do favors, to the simple withdrawal of courtesies (such as offering a lady a seat, or saying "sorry" when a pedestrian collision occurs). In any transaction more and more details need to be dropped as the total number of units to be processed increases and assaults an instrument of limited processing capacity.

The ultimate adaptation to an overloaded social environment is to totally disregard the needs, interests, and demands of those whom one does not define as relevant to the satisfaction of personal needs, and to develop highly efficient perceptual means of determining whether an individual falls into the category of friend or stranger. The disparity in the treatment of friends and strangers ought to be greater in cities than in towns; the time allotment and willingness to become involved with those who have no personal claim on one's time is likely to be less in cities than in towns.

Bystander intervention in crises. The most striking deficiencies in social responsibility in cities occur in crisis situations, such as the Genovese murder in Queens. In 1964, Catherine Genovese, coming home from a night job in the early hours of an April morning, was stabbed repeatedly, over an extended period of time. Thirty-eight residents of a respectable New York City neighborhood admit to having witnessed at least a part of the attack, but none went to her aid or called the police until after she was dead. Milgram and Hollander, writing in *The Nation* (*5*), analyzed the event in these terms:

> Urban friendships and associations are not primarily formed on the basis of physical proximity. A person with numerous close friends in different parts of the city may not know the occupant of an adjacent apartment. This does not mean that a city dweller has fewer friends than does a villager, or knows fewer persons who will come to his aid; however, it does mean that his allies are not constantly at hand. Miss Genovese required immediate aid from those physically present. There is no evidence that the city had deprived Miss Genovese of human associations, but the friends who might have rushed to her side were miles from the scene of her tragedy.
>
> Further, it is known that her cries for help were not directed to a specific person; they were general. But only individuals can act, and as the cries were not specifically directed, no particular person felt a special responsibility. The crime and the failure of community response seem absurd to us. At the time, it may well have seemed equally absurd to the Kew Gardens residents that not one of the neighbors would have called the police. A collective paralysis may have developed from the belief of each of the witnesses that someone else must surely have taken that obvious step.

Latané and Darley (*6*) have reported laboratory approaches to the study of bystander intervention and have established experimentally the following principle: the larger the number of bystanders, the less the likelihood that any one of them will intervene in an emergency. Gaertner and Bickman (*7*) of The City University of New York have extended the bystander studies to an examination of help across ethnic lines. Blacks and whites, with clearly identifiable accents, called strangers (through what the caller represented as an error in telephone dialing), gave them a plausible story of being stranded on an outlying highway without more dimes, and asked the stranger to call a garage. The experimenters found that the white callers had a significantly better chance of obtaining assistance than the black callers. This suggests that ethnic allegiance may well be another means of coping with overload: the city dweller can reduce excessive demands and screen out urban heterogeneity by responding along ethnic lines; overload is made more manageable by limiting the "span of sympathy."

In any quantitative characterization of the social texture of city life, a necessary first step is the application of such experimental methods as these to field situations in large cities and small towns. Theorists argue that the indifference shown in the Genovese case would not be found in a small town, but in the absence of solid experimental evidence the question remains an open one.

More than just callousness prevents bystanders from participating in altercations between people. A rule of urban life is respect for other people's emotional and social privacy, perhaps because physical privacy is so hard to achieve. And in situations for which the standards are heterogeneous, it is much harder to know whether taking an active role is unwarranted meddling or an appropriate response to a critical situation. If a husband and wife are quarreling in public, at what point should a bystander step in? On the one hand, the heterogeneity of the city produces substantially greater tolerance about behavior, dress, and codes of ethics than is generally found in the small town, but this diversity also encourages people to withhold aid for fear of antagonizing the participants or crossing an inappropriate and difficult-to-define line.

Moreover, the frequency of demands present in the city gives rise to norms of noninvolvement. There are practical limitations to the Samaritan impulse in a major city. If a citizen attended to every needy person, if he were sensitive to and acted on every altruistic impulse that was evoked in the city, he could scarcely keep his own affairs in order.

Table 1. Percentage of entries achieved by investigators for city and town dwellings (see text).

Experimenter	Entries achieved (%)	
	City*	Small town†
Male		
No. 1	16	40
No. 2	12	60
Female		
No. 3	40	87
No. 4	40	100

* Number of requests for entry, 100. † Number of requests for entry, 60.

Willingness to trust and assist strangers. We now move away from crisis situations to less urgent examples of social responsibility. For it is not only in situations of dramatic need but in the ordinary, everyday willingness to lend a hand that the city dweller is said to be deficient relative to his small-town cousin. The comparative method must be used in any empirical examination of this question. A commonplace social situation is staged in an urban setting and in a small town—a situation to which a subject can respond by either extending help or withholding it. The responses in town and city are compared.

One factor in the purported unwillingness of urbanites to be helpful to strangers may well be their heightened sense of physical (and emotional) vulnerability—a feeling that is supported by urban crime statistics. A key test for distinguishing between city and town behavior, therefore, is determining how city dwellers compare with town dwellers in offering aid that increases their personal vulnerability and requires some trust of strangers. Altman, Levine, Nadien, and Villena (*8*) of The City University of New York devised a study to compare the behaviors of city and town dwellers in this respect. The criterion used in this study was the willingness of householders to allow strangers to enter their home to use the telephone. The student investigators individually rang doorbells, explained that they had misplaced the address of a friend nearby, and asked to use the phone. The investigators (two males and two females) made 100 requests for entry into homes in the city and 60 requests in the small towns. The results for middle-income housing developments in Manhattan were compared with data for several small towns (Stony Point, Spring Valley, Ramapo, Nyack, New City, and West Clarkstown) in Rockland County, outside of New York City. As Table 1 shows, in all cases there was a sharp increase in the proportion of entries achieved by an experimenter when he moved from the city to a small town. In the most extreme case the experimenter was five times as likely to gain admission to homes in a small town as to homes in Manhattan. Although the female experimenters had notably greater success both in cities and in towns than the male experimenters had, each of the four students did at least twice as well in towns as in cities. This suggests that the city-town distinction overrides even the predictably greater fear of male strangers than of female ones.

The lower level of helpfulness by city dwellers seems due in part to recognition of the dangers of living in Manhattan, rather than to mere indifference or coldness. It is significant that 75 percent of all the city respondents received and answered messages by shouting through closed doors and by peering out through peepholes; in the towns, by contrast, about 75 percent of the respondents opened the door.

Supporting the experimenters' quantitative results was their general observation that the town dwellers were noticeably more friendly and less suspicious than the city dwellers. In seeking to explain the reasons for the greater sense of psychological vulnerability city dwellers feel, above and beyond the differences in crime statistics, Villena (*8*) points out that, if a crime is committed in a village, a resident of a neighboring village may not perceive the crime as personally relevant, though the geographic distance may be small, whereas a criminal act committed anywhere in the city, though miles from the city-dweller's home is still verbally located within the city; thus, Villena says, "the inhabitant of the city possesses a larger vulnerable space."

Civilities. Even at the most superficial level of involvement—the exercise of everyday civilities—urbanites are reputedly deficient. People bump into each other and often do not apologize. They knock over another person's packages and, as often as not, proceed on their way with a grumpy exclamation instead of an offer of assistance. Such behavior, which many visitors to great cities find distasteful, is less common, we are told, in smaller communities, where traditional courtesies are more likely to be observed.

In some instances it is not simply that, in the city, traditional courtesies are violated; rather, the cities develop

new norms of noninvolvement. These are so well defined and so deeply a part of city life that *they* constitute the norms people are reluctant to violate. Men are actually embarrassed to give up a seat on the subway to an old woman; they mumble "I was getting off anyway," instead of making the gesture in a straightforward and gracious way. These norms develop because everyone realizes that, in situations of high population density, people cannot implicate themselves in each others' affairs, for to do so would create conditions of continual distraction which would frustrate purposeful action.

In discussing the effects of overload I do not imply that at every instant the city dweller is bombarded with an unmanageable number of inputs, and that his responses are determined by the excess of input at any given instant. Rather, adaptation occurs in the form of gradual evolution of norms of behavior. Norms are evolved in response to frequent discrete experiences of overload; they persist and become generalized modes of responding.

Overload on cognitive capacities: anonymity. That we respond differently toward those whom we know and those who are strangers to us is a truism. An eager patron aggressively cuts in front of someone in a long movie line to save time only to confront a friend; he then behaves sheepishly. A man is involved in an automobile accident caused by another driver, emerges from his car shouting in rage, then moderates his behavior on discovering a friend driving the other car. The city dweller, when walking through the midtown streets, is in a state of continual anonymity vis-à-vis the other pedestrians.

Anonymity is part of a continuous spectrum ranging from total anonymity to full acquaintance, and it may well be that measurement of the precise degrees of anonymity in cities and towns would help to explain important distinctions between the quality of life in each. Conditions of full acquaintance, for example, offer security and familiarity, but they may also be stifling, because the individual is caught in a web of established relationships. Conditions of complete anonymity, by contrast, provide freedom from routinized social ties, but they may also create feelings of alienation and detachment.

Empirically one could investigate the proportion of activities in which the city dweller or the town dweller is known by others at given times in his daily life, and the proportion of activities in the course of which he interacts with individuals who know him. At his job, for instance, the city dweller may be known to as many people as his rural counterpart. However, when he is not fulfilling his occupational role—say, when merely traveling about the city—the urbanite is doubtless more anonymous than his rural counterpart.

Limited empirical work on anonymity has begun. Zimbardo (*9*) has tested whether the social anonymity and impersonality of the big city encourage greater vandalism than do small towns. Zimbardo arranged for one automobile to be left for 64 hours near the Bronx campus of New York University and for a counterpart to be left for the same number of hours near Stanford University in Palo Alto. The license plates on the two cars were removed and the hoods were opened, to provide "releaser cues" for potential vandals. The New York car was stripped of all movable parts within the first 24 hours, and by the end of 3 days was only a hunk of metal rubble. Unexpectedly, however, most of the destruction occurred during daylight hours, usually under the scrutiny of observers, and the leaders in the vandalism were well-dressed, white adults. The Palo Alto car was left untouched.

Zimbardo attributes the difference in the treatment accorded the two cars to the "acquired feelings of social anonymity provided by life in a city like New York," and he supports his conclusions with several other anecdotes illustrating casual, wanton vandalism in the city. In any comparative study of the effects of anonymity in city and town, however, there must be satisfactory control for other confounding factors: the large number of drug addicts in a city like New York; the higher proportion of slum-dwellers in the city; and so on.

Another direction for empirical study is investigation of the beneficial effects of anonymity. The impersonality of city life breeds its own tolerance for the private lives of the inhabitants. Individuality and even eccentricity, we may assume, can flourish more readily in the metropolis than in the small town. Stigmatized persons may find it easier to lead comfortable lives in the city, free of the constant scrutiny of neighbors. To what degree can this assumed difference between city and town be shown empirically? Judith Waters (*10*), at The City University of New York, hypothesized that avowed homosexuals would be more likely to be accepted as tenants in a large city than in small towns, and she dispatched letters from homosexuals and from normal individuals to real estate agents in cities and towns across the country. The results of her study were inconclusive. But the general idea of examining the protective benefits of city life to the stigmatized ought to be pursued.

Role behavior in cities and towns. Another product of urban overload is the adjustment in roles made by urbanites in daily interactions. As Wirth has said (*2*): "Urbanites meet one another in highly segmental roles. . . . They are less dependent upon particular persons, and their dependence upon others is confined to a highly fractionalized aspect of the other's round of activity." This tendency is particularly noticeable in transactions between customers and individuals offering professional or sales services. The owner of a country store has time to become well acquainted with his dozen-or-so daily customers, but the girl at the checkout counter of a busy A & P, serving hundreds of customers a day, barely has time to toss the green stamps into one customer's shopping bag before the next customer confronts her with his pile of groceries.

Meier, in his stimulating analysis of the city (*4*), discusses several adaptations a system may make when confronted by inputs that exceed its capacity to process them. Meier argues that, according to the principle of competition for scarce resources, the scope and time of the transaction shrink as customer volume and daily turnover rise. This, in fact, is what is meant by the "brusque" quality of city life. New standards have developed in cities concerning what levels of services are appropriate in business transactions (see Fig. 1).

McKenna and Morgenthau (*11*), in a seminar at The City University of New York, devised a study (i) to compare the willingness of city dwellers and small-town dwellers to do favors for strangers that entailed expenditure of a small amount of time and slight inconvenience but no personal vulnerability, and (ii) to determine whether the more compartmentalized, transitory relationships of the city would make urban salesgirls less likely than small-town salesgirls to carry out, for strangers, tasks not related to their customary roles.

To test for differences between city dwellers and small-town dwellers, a simple experiment was devised in which persons from both settings were asked (by telephone) to perform increasingly

onerous favors for anonymous strangers.

Within the cities (Chicago, New York, and Philadelphia), half the calls were to housewives and the other half to salesgirls in women's apparel shops; the division was the same for the 37 small towns of the study, which were in the same states as the cities. Each experimenter represented herself as a long-distance caller who had, through error, been connected with the respondent by the operator. The experimenter began by asking for simple information about the weather for purposes of travel. Next the experimenter excused herself on some pretext (asking the respondent to "please hold on"), put the phone down for almost a full minute, and then picked it up again and asked the respondent to provide the phone number of a hotel or motel in her vicinity at which the experimenter might stay during a forthcoming visit. Scores were assigned the subjects on the basis of how helpful they had been. McKenna summarizes her results in this manner:

> People in the city, whether they are engaged in a specific job or not, are less helpful and informative than people in small towns; . . . People at home, regardless of where they live, are less helpful and informative than people working in shops.

However, the absolute level of cooperativeness for urban subjects was found to be quite high, and does not accord with the stereotype of the urbanite as aloof, self-centered, and unwilling to help strangers. The quantitative differences obtained by McKenna and Morgenthau are less great than one might have expected. This again points up the need for extensive empirical research in rural-urban differences, research that goes far beyond that provided in the few illustrative pilot studies presented here. At this point we have very limited objective evidence on differences in the quality of social encounters in city and small town.

But the research needs to be guided by unifying theoretical concepts. As I have tried to demonstrate, the concept of overload helps to explain a wide variety of contrasts between city behavior and town behavior: (i) the differences in role enactment (the tendency of urban dwellers to deal with one another in highly segmented, functional terms, and of urban sales personnel to devote limited time and attention to their customers); (ii) the evolution of urban norms quite different from traditional town values (such as the acceptance of noninvolvement, impersonality, and aloofness in urban life); (iii) the adaptation of the urban dweller's cognitive processes (his inability to identify most of the people he sees daily, his screening of sensory stimuli, his development of blasé attitudes toward deviant or bizarre behavior, and his selectivity in responding to human demands); and (iv) the competition for scarce facilities in the city (the subway rush; the fight for taxis; traffic jams; standing in line to await services). I suggest that contrasts between city and rural behavior probably reflect the responses of similar people to very different situations, rather than intrinsic differences in the personalities of rural and city dwellers. The city is a situation to which individuals respond adaptively.

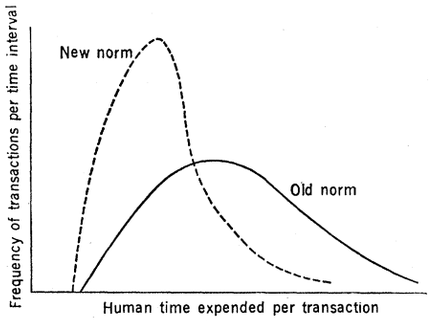

Fig. 1. Changes in the demand for time for a given task when the overall transaction frequency increases in a social system. [Reprinted with permission from R. L. Meier, *A Communications Theory of Urban Growth*, 1962. Copyrighted by M.I.T. Press, 1962]

Further Aspects of Urban Experience

Some features of urban experience do not fit neatly into the system of analysis presented thus far. They are no less important for that reason. The issues raised next are difficult to treat in quantitative fashion. Yet I prefer discussing them in a loose way to excluding them because appropriate language and data have not yet been developed. My aim is to suggest how phenomena such as "urban atmosphere" can be pinned down through techniques of measurement.

The "atmosphere" of great cities. The contrast in the behavior of city and town dwellers has been a natural starting point for urban social scientists. But even among great cities there are marked differences in "atmosphere." The tone, pacing, and texture of social encounters are different in London and New York, and many persons willingly make financial sacrifices for the privilege of living within a specific urban atmosphere which they find pleasing or stimulating. A second perspective in the study of cities, therefore, is to define exactly what is meant by the atmosphere of a city and to pinpoint the factors that give rise to it. It may seem that urban atmosphere is too evanescent a quality to be reduced to a set of measurable variables, but I do not believe the matter can be judged before substantial effort has been made in this direction. It is obvious that any such approach must be comparative. It makes no sense at all to say that New York is "vibrant" and "frenetic" unless one has some specific city in mind as a basis of comparison.

In an undergraduate tutorial that I conducted at Harvard University some years ago, New York, London, and Paris were selected as reference points for attempts to measure urban atmosphere. We began with a simple question: Does any consensus exist about the qualities that typify given cities? To answer this question one could undertake a content analysis of travel-book, literary, and journalistic accounts of cities. A second approach, which we adopted, is to ask people to characterize (with descriptive terms and accounts of typical experiences) cities they have lived in or visited. In advertisements placed in the *New York Times* and the *Harvard Crimson* we asked people to give us accounts of specific incidents in London, Paris, or New York that best illuminated the character of that particular city. Questionnaires were then developed, and administered to persons who were familiar with at least two of the three cities.

Some distinctive patterns emerged (*12*). The distinguishing themes concerning New York, for example, dealt with its diversity, its great size, its pace and level of activity, its cultural and entertainment opportunities, and the heterogeneity and segmentation ("ghettoization") of its population. New York elicited more descriptions in terms of physical qualities, pace, and emotional impact than Paris or London did, a fact which suggests that these are particularly important aspects of New York's ambiance.

A contrasting profile emerges for London; in this case respondents placed far greater emphasis on their interactions with the inhabitants than on physical surroundings. There was near unanimity on certain themes: those dealing

with the tolerance and courtesy of London's inhabitants. One respondent said:

> When I was 12, my grandfather took me to the British Museum . . . one day by tube and recited the *Aeneid* in Latin for my benefit. . . . He is rather deaf, speaks very loudly and it embarrassed the hell out of me, until I realized that nobody was paying any attention. Londoners are extremely worldly and tolerant.

In contrast, respondents who described New Yorkers as aloof, cold, and rude referred to such incidents as the following:

> I saw a boy of 19 passing out anti-war leaflets to passersby. When he stopped at a corner, a man dressed in a business suit walked by him at a brisk pace, hit the boy's arm, and scattered the leaflets all over the street. The man kept walking at the same pace down the block.

We need to obtain many more such descriptions of incidents, using careful methods of sampling. By the application of factor-analytic techniques, relevant dimensions for each city can be discerned.

The responses for Paris were about equally divided between responses concerning its inhabitants and those regarding its physical and sensory attributes. Cafés and parks were often mentioned as contributing to the sense that Paris is a city of amenities, but many respondents complained that Parisians were inhospitable, nasty, and cold.

We cannot be certain, of course, to what degree these statements reflect actual characteristics of the cities in question and to what degree they simply tap the respondents' knowledge of widely held preconceptions. Indeed, one may point to three factors, apart from the actual atmospheres of the cities, that determine the subjects' responses.

1) A person's impression of a given city depends on his implicit standard of comparison. A New Yorker who visits Paris may well describe that city as "leisurely," whereas a compatriot from Richmond, Virginia, may consider Paris too "hectic." Obtaining reciprocal judgment, in which New Yorkers judge Londoners, and Londoners judge New Yorkers, seems a useful way to take into account not only the city being judged but also the home city that serves as the visitor's base line.

2) Perceptions of a city are also affected by whether the observer is a tourist, a newcomer, or a longer-term resident. First, a tourist will be exposed to features of the city different from those familiar to a long-time resident. Second, a prerequisite for adapting to continuing life in a given city seems to be the filtering out of many observations about the city that the newcomer or tourist finds particularly arresting; this selective process seems to be part of the long-term resident's mechanism for coping with overload. In the interest of psychic economy, the resident simply learns to tune out many aspects of daily life. One method for studying the specific impact of adaptation on perception of the city is to ask several pairs of newcomers and old-timers (one newcomer and one old-timer to a pair) to walk down certain city blocks and then report separately what each has observed.

Additionally, many persons have noted that when travelers return to New York from an extended sojourn abroad they often feel themselves confronted with "brutal ugliness" (*13*) and a distinctive, frenetic atmosphere whose contributing details are, for a few hours or days, remarkably sharp and clear. This period of fresh perception should receive special attention in the study of city atmosphere. For, in a few days, details which are initially arresting become less easy to specify. They are assimilated into an increasingly familiar background atmosphere which, though important in setting the tone of things, is difficult to analyze. There is no better point at which to begin the study of city atmosphere than at the moment when a traveler returns from abroad.

3) The popular myths and expectations each visitor brings to the city will also affect the way in which he perceives it (see *14*). Sometimes a person's preconceptions about a city are relatively accurate distillations of its character, but preconceptions may also reinforce myths by filtering the visitor's perceptions to conform with his expectations. Preconceptions affect not only a person's perceptions of a city but what he reports about it.

The influence of a person's urban base line on his perceptions of a given city, the differences between the observations of the long-time inhibitant and those of the newcomer, and the filtering effect of personal expectations and stereotypes raise serious questions about the validity of travelers' reports. Moreover, no social psychologist wants to rely exclusively on verbal accounts if he is attempting to obtain an accurate and objective description of the cities' social texture, pace, and general atmosphere. What he needs to do is to devise means of embedding objective experimental measures in the daily flux of city life, measures that can accurately index the qualities of a given urban atmosphere.

Experimental Comparisons of Behavior

Roy Feldman (*15*) incorporated these principles in a comparative study of behavior toward compatriots and foreigners in Paris, Athens, and Boston. Feldman wanted to see (i) whether absolute levels and patterns of helpfulness varied significantly from city to city, and (ii) whether inhabitants in each city tended to treat compatriots differently from foreigners. He examined five concrete behavioral episodes, each carried out by a team of native experimenters and a team of American experimenters in the three cities. The episodes involved (i) asking natives of the city for street directions; (ii) asking natives to mail a letter for the experimenter; (iii) asking natives if they had just dropped a dollar bill (or the Greek or French equivalent) when the money actually belonged to the experimenter himself; (iv) deliberately overpaying for goods in a store to see if the cashier would correct the mistake and return the excess money; and (v) determining whether taxicab drivers overcharged strangers and whether they took the most direct route available.

Feldman's results suggest some interesting contrasts in the profiles of the three cities. In Paris, for instance, certain stereotypes were borne out. Parisian cab drivers overcharged foreigners significantly more often than they overcharged compatriots. But other aspects of the Parisians' behavior were not in accord with American preconceptions: in mailing a letter for a stranger, Parisians treated foreigners significantly better than Athenians or Bostonians did, and, when asked to mail letters that were already stamped, Parisians actually treated foreigners better than they treated compatriots. Similarly, Parisians were significantly more honest than Athenians or Bostonians in resisting the temptation to claim money that was not theirs, and Parisians were the only citizens who were more honest with foreigners than with compatriots in this experiment.

Feldman's studies not only begin to quantify some of the variables that give a city its distinctive texture but they also provide a methodological model for

other comparative research. His most important contribution is his successful application of objective, experimental measures to everyday situations, a mode of study which provides conclusions about urban life that are more pertinent than those achieved through laboratory experiments.

Tempo and Pace

Another important component of a city's atmosphere is its tempo or pace, an attribute frequently remarked on but less often studied. Does a city have a frenetic, hectic quality, or is it easygoing and leisurely? In any empirical treatment of this question, it is best to start in a very simple way. Walking speeds of pedestrians in different cities and in cities and towns should be measured and compared. William Berkowitz (*16*) of Lafayette College has undertaken an extensive series of studies of walking speeds in Philadelphia, New York, and Boston, as well as in small and moderate-sized towns. Berkowitz writes that "there does appear to be a significant linear relation between walking speed and size of municipality, but the absolute size of the difference varies by less than ten percent."

Perhaps the feeling of rapid tempo is due not so much to absolute pedestrian speeds as to the constant need to dodge others in a large city to avoid collisions with other pedestrians. (One basis for computing the adjustments needed to avoid collisions is to hypothesize a set of mechanical manikins sent walking along a city street and to calculate the number of collisions when no adjustments are made. Clearly, the higher the density of manikins the greater the number of collisions per unit of time, or, conversely, the greater the frequency of adjustments needed in higher population densities to avoid collisions.)

Patterns of automobile traffic contribute to a city's tempo. Driving an automobile provides a direct means of translating feelings about tempo into measurable acceleration, and a city's pace should be particularly evident in vehicular velocities, patterns of acceleration, and latency of response to traffic signals. The inexorable tempo of New York is expressed, further, in the manner in which pedestrians stand at busy intersections, impatiently awaiting a change in traffic light, making tentative excursions into the intersection, and frequently surging into the street even before the green light appears.

Visual Components

Hall has remarked (*17*) that the physical layout of the city also affects its atmosphere. A gridiron pattern of streets gives the visitor a feeling of rationality, orderliness, and predictability but is sometimes monotonous. Winding lanes or streets branching off at strange angles, with many forks (as in Paris or Greenwich Village), create feelings of surprise and esthetic pleasure, while forcing greater decision-making in plotting one's course. Some would argue that the visual component is all-important—that the "look" of Paris or New York can almost be equated with its atmosphere. To investigate this hypothesis, we might conduct studies in which only blind, or at least blindfolded, respondents were used. We would no doubt discover that each city has a distinctive texture even when the visual component is eliminated.

Sources of Ambiance

Thus far we have tried to pinpoint and measure some of the factors that contribute to the distinctive atmosphere of a great city. But we may also ask, Why do differences in urban atmosphere exist? How did they come about, and are they in any way related to the factors of density, large numbers, and heterogeneity discussed above?

First, there is the obvious factor that, even among great cities, populations and densities differ. The metropolitan areas of New York, London, and Paris, for example, contain 15 million, 12 million, and 8 million persons, respectively. London has average densities of 43 persons per acre, while Paris is more congested, with average densities of 114 persons per acre (*18*). Whatever characteristics are specifically attributable to density are more likely to be pronounced in Paris than in London.

A second factor affecting the atmosphere of cities is the source from which the populations are drawn (*19*). It is a characteristic of great cities that they do not reproduce their own populations, but that their numbers are constantly maintained and augmented by the influx of residents from other parts of the country. This can have a determining effect on the city's atmosphere. For example, Oslo is a city in which almost all of the residents are only one or two generations removed from a purely rural existence, and this contributes to its almost agricultural norms.

A third source of atmosphere is the general national culture. Paris combines adaptations to the demography of cities *and* certain values specific to French culture. New York is an admixture of American values and values that arise as a result of extraordinarily high density and large population.

Finally, one could speculate that the atmosphere of a great city is traceable to the specific historical conditions under which adaptations to urban overload occurred. For example, a city which acquired its mass and density during a period of commercial expansion will respond to new demographic conditions by adaptations designed to serve purely commercial needs. Thus, Chicago, which grew and became a great city under a purely commercial stimulus, adapted in a manner that emphasizes business needs. European capitals, on the other hand, incorporate many of the adaptations which were appropriate to the period of their increasing numbers and density. Because aristocratic values were prevalent at the time of the growth of these cities, the mechanisms developed for coping with overload were based on considerations other than pure efficiency. Thus, the manners, norms, and facilities of Paris and Vienna continue to reflect esthetic values and the idealization of leisure.

Cognitive Maps of Cities

When we speak of "behavioral comparisons" among cities, we must specify which parts of the city are most relevant for sampling purposes. In a sampling of "New Yorkers," should we include residents of Bay Ridge or Flatbush as well as inhabitants of Manhattan? And, if so, how should we weight our sample distribution? One approach to defining relevant boundaries in sampling is to determine which areas form the psychological or cognitive core of the city. We weight our samples most heavily in the areas considered by most people to represent the "essence" of the city.

The psychologist is less interested in the geographic layout of a city or in its political boundaries than in the cognitive representation of the city. Hans Blumenfeld (*20*) points out that the perceptual structure of a modern city can be expressed by the "silhouette" of the group of skyscrapers at its center and that of smaller groups of office buildings at its "subcenters" but that urban areas can no longer, because of their vast extent, be experienced as fully

articulated sets of streets, squares, and space.

In *The Image of the City* (*21*), Kevin Lynch created a cognitive map of Boston by interviewing Bostonians. Perhaps his most significant finding was that, while certain landmarks, such as Paul Revere's house and the Boston Common, as well as the paths linking them, are known to almost all Bostonians, vast areas of the city are simply unknown to its inhabitants.

Using Lynch's technique, Donald Hooper (*22*) created a psychological map of New York from the answers to the study questionnaire on Paris, London, and New York. Hooper's results were similar to those of Lynch: New York appears to have a dense core of well-known landmarks in midtown Manhattan, surrounded by the vast unknown reaches of Queens, Brooklyn, and the Bronx. Times Square, Rockefeller Center, and the Fifth Avenue department stores alone comprise half the places specifically cited by respondents as the haunts in which they spent most of their time. However, outside the midtown area, only scattered landmarks were recognized. Another interesting pattern is evident: even the best-known symbols of New York are relatively self-contained, and the pathways joining them appear to be insignificant on the map.

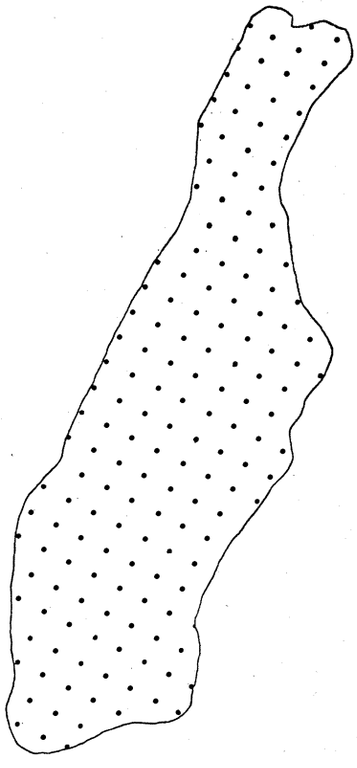

Fig. 2. To create a psychological map of Manhattan, geographic points are sampled, and, from photographs, the subjects attempt to identify the location of each point. To each point a numerical index is assigned indicating the proportion of persons able to identify its location.

The psychological map can be used for more than just sampling techniques. Lynch (*21*) argues, for instance, that a good city is highly "imageable," having many known symbols joined by widely known pathways, whereas dull cities are gray and nondescript. We might test the relative "imagibility" of several cities by determining the proportion of residents who recognize sampled geographic points and their accompanying pathways.

If we wanted to be even more precise we could construct a cognitive map that would not only show the symbols of the city but would measure the precise degree of cognitive significance of any given point in the city relative to any other. By applying a pattern of points to a map of New York City, for example, and taking photographs from each point, we could determine what proportion of a sample of the city's inhabitants could identify the locale specified by each point (see Fig. 2). We might even take the subjects blindfolded to a point represented on the map, then remove the blindfold and ask them to identify their location from the view around them.

One might also use psychological maps to gain insight into the differing perceptions of a given city that are held by members of its cultural subgroups, and into the manner in which their perceptions may change. In the earlier stages of life, whites and Negroes alike probably have only a limited view of the city, centering on the immediate neighborhood in which they are raised. In adolescence, however, the field of knowledge of the white teen-ager probably undergoes rapid enlargement; he learns of opportunities in midtown and outlying sections and comes to see himself as functioning in a larger urban field. But the process of ghettoization, to which the black teen-ager is subjected, may well hamper the expansion of his sense of the city. These are speculative notions, but they are readily subject to precise test.

Conclusion

I have tried to indicate some organizing theory that starts with the basic facts of city life: large numbers, density, and heterogeneity. These are external to the individual. He experiences these factors as overloads at the level of roles, norms, cognitive functions, and facilities. These overloads lead to adaptive mechanisms which create the distinctive tone and behaviors of city life. These notions, of course, need to be examined by objective comparative studies of cities and towns.

A second perspective concerns the differing atmospheres of great cities, such as Paris, London, and New York. Each has a distinctive flavor, offering a differentiable quality of experience. More precise knowledge of urban atmosphere seems attainable through application of the tools of experimental inquiry.

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23. Barbara Bengen worked closely with me in preparing the present version of this article. I thank Dr. Gary Winkel, editor of *Environment and Behavior*, for useful suggestions and advice.

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