

DRAFT

THE PUBLIC IMAGE OF BOSTON

To study in detail the role of the urban environmental image today, and to test and refine the concept of imageability, an analysis was made of the citizens' conception of central Boston, in comparison with the physical reality that lies behind it. This study had two purposes in addition to a testing of the central idea:

- a) by a comparison of image with visual reality, to determine what makes for strong imageability, and thus to lay the groundwork for some suggestions and principles for urban design.
- b) to develop and test methods of image analysis and field reconnaissance, which might be used in the analysis of other environments.

The area chosen for study was all that portion of the central peninsula of Boston lying within the line of Massachusetts Avenue, an area approximately 2.4 miles long, and 1.4 miles broad. A sample of 30 people was interviewed as to their image of this district, the sample being composed of persons either living or working within the area, and who had been doing so for at least several years. An attempt was made to secure an even distribution of living and work places over this region, an attempt only partially successful, as will be discussed below. All subjects were chosen for their ability to be articulate about their conception of the city, and are thus all middle class people, primarily professional or managerial. All persons professionally involved with design, mapping or the physical environment (such as engineers, architects, city planners or landscape architects) were excluded, however. ~~In addition to these 30 subjects, another 10 were added, similarly chosen, with the exception that they were relative newcomers neither living nor working in the area, and~~

~~thus with a relatively superficial knowledge of it. This latter group has not been analyzed.~~

The interview consisted of many parts, and is described in detail in Appendix _____. Briefly, however, the parts relevant to this study were the following:

- a) a statement as to the first thing that comes to mind, when the word "Boston" is mentioned.
- b) a quick sketch map of the central area of Boston, made as if to show a relative stranger the things felt to be the most important to and understanding of the city.
- c) verbal descriptions of several imaginary trips across Boston, giving in detail the route taken, things seen along the way, and where the subject felt either secure or uncertain of his position. These imaginary trips were made from the Massachusetts General Hospital to South Station on foot; City hospital to the Old North Church, also on foot; and from Faneuil Hall to Symphony Hall by car. The subject was also asked to describe in similar detail his customary trip from home to work, by whatever means he normally used.
- d) a list of the elements in Boston which the subject felt to be most vivid or distinctive in his mind, followed by a detailed description of one or two of these.
- e) and finally, a concluding, non-directed discussion of the subject's opinion of the role of orientation and environmental recognition.

This was a lengthy interview, normally lasting about 1½ hours, but almost always attended with great interest by the subjects, and often with some emotion. The entire proceedings were recorded on tape and subsequently transcribed for analysis.

origin of point, the sidewalk interviewer asked directions to each destination, by accosting four or five randomly chosen passersby. He asked three questions "How do I get to _____?"; "how will I recognize it when I get there?"; and "how long will it take me to walk there?"

The remainder of this chapter will discuss the composite image of central Boston which arose from an analysis of this material, and will compare it with a field reconnaissance of the actual visual environment, using the basic concepts of imageability. Four smaller parts of this urban whole will be analyzed in greater detail for image and reality. The following chapter will describe a similar, but briefer, analysis of two other cities: Jersey City and Los Angeles. The next chapter will discuss the techniques of analysis and reconnaissance themselves their usefulness, reliability, interrelations, and suggested improvement.

The results of the analysis may in general be characterized as remarkably consistent, and in general confirmatory of the basic idea of imageability and of the hypothesized types of elements which make up a city image . It must also be clear, however, that a large superstructure is being raised upon a small sample of persons, a sample necessarily restricted by the elephantine methods of interview, reconnaissance, and analysis which were employed. Both the lack of randomness in the distribution of home or work place, and particularly the one-dass nature of the sample, are unfortunate flaws in the data. The chapter on techniques will discuss means of simplifying and speeding future analyses, so as to enable the broadening of the size and distribution of future samples.

The Unanimous Image

We can make a surprisingly consistent composite image of the city, its parts and their connections, from a detailed analysis of the field and office interviews. Certain concepts are unanimously held, while others seem to be the property of a great majority of the citizens.

In almost everyone's mind, Boston is a city marked for having many distinctive recognizable districts or regions within it, as well as for its crooked, winding, confusing paths. It is a dirty city, made of red-brick buildings. It is symbolized by the Boston Common, by the State House with its gold dome, and by the view across the Charles River from the Cambridge side. This picture is almost universal and quite strong.

Most people would add: it is an old, historical place, full of worn-out buildings, but containing some new structures among the old. Its narrow streets are congested with people and cars; there is no parking space, but there are some striking contrasts between wide main streets and narrow side streets. The central city is a peninsula surrounded on three sides by a water edge. In addition to the three symbols mentioned above (the Common, the Charles River, the State House), there are several other vividly describable elements, particularly Beacon Hill, Commonwealth Avenue, the Washington Street shopping and theater district, Copley Square, the Back Bay, Louisburg Square, the North End, the market district, and Atlantic Avenue bordered by the wharves.

The city has a gross structure to go with this description, also almost universally held. The Charles River with its bridges makes a strong clear edge to which the principal Back Bay streets, particularly Beacon Street and Commonwealth Avenue are parallel. These streets spring from Massachusetts Avenue (which is itself perpendicular to the Charles), and run to the Boston

Common-Public Gardens. Alongside this set of Back Bay streets is Copley Square into which runs Huntington Avenue.

On the lower side of the Boston Common are Tremont and Washington Streets, parallel to each other and interconnected by several smaller streets. Tremont, in almost everyone's mind, goes as far as Scollay Square, and from this node Cambridge Street runs back to another node at the Charles Street rotary, thus tying in to the River again. Farther away from the river appears another strong edge: Atlantic Avenue and the harborfront, but this may only be uncertainly connected to the rest.

Scratch almost any Bostonian, and he can tell you this much of his city. It is fully as likely that he will not be able to tell you some other things': of the triangular area between Back Bay and the South End, or the no man's land south of North Station, or how Boylston runs with reference to Tremont Street, or the pattern of paths in the financial district.

We can develop a much fuller image, however, if we move from the unanimous ideas to consider the various shades of common or uncommon concepts. Substantial numbers of people would add other characteristics about Boston: that it lacks open space or recreation space, that it is an "individual", small, or medium sized city, that it has large areas of mixed use. In many people's minds, it is also marked by bay windows, iron fences, and brownstone fronts; but, it becomes evident that, in describing the city as a whole, people tend to think more often of such elements as use, age, density, space and traffic, than they do of the physical character of buildings. This tendency is only reversed in thinking of regions or landmarks of unusual clarity, such as the State House, or Beacon Hill.

The favorite cited views are full of instances of distant panoramas, and of the role of water and of space. The view from across the Charles is often cited, and there are mentions of the river view down Pinckney Street, the vista from a hill in Brighton, the look of Boston from its harbor. These are somewhat rare experiences for the most people (except those that approach from Cambridge), but they seem to be memorable and very satisfying. Another favorite sight is that of city lights at night, from near or far, when the American city seems for most people to take on an excitement that it normally lacks.

Very apparent in these general descriptions is the role of contrast, particularly spatial and age contrasts, but also those of use or social status. There are also a few examples of the “radiation” of details, as when Boston is characterized as having cobblestones streets, or purple or violet windows. Both of these details actually occur in only a handful of instances in the city, isolated and very restricted in size. But they have been seized upon and expanded as identifying marks.

The identity and Structure of Central Boston

Let us attempt to study the city image part by part, beginning for convenience at the junction of Massachusetts Avenue and the River, and moving more or less clockwise through Back Bay, Beacon Hill, the West and North Ends, downtown, and the South End. We introduced here two drawings, which help to explain this composite image’:

a) A map showing the elements referred to with some knowledge in the interviews, arranged according to frequency of mention: Map _____

b) Another showing the frequency with which elements were cited as vivid or distinctive places or things: Map _____.

The image of the Charles River edge itself is often mentioned and is quite strong. Three-quarters of the subjects gave the river and the esplanade as a part of the city which was particularly vivid in their mind. It is frequently described and sometimes drawn in great detail, but everyone remembers the wide open space, the curving line, the bordering highways, the boats, the esplanade, the Shell. Storrow Drive is already an inseparable part of this image and its

rather frequent map appearance probably springs not only from its traffic importance, but also from its visible association with the river space.

As noted above, the sense that the major Back Bay streets are parallel to the same set of streets even though it runs into Copley Square. Many realize that Huntington goes as far as Massachusetts, but everyone knows that it runs into the vividly-imaged Copley Square.

Usually, but not always, it is clear that Copley lies on the line of Boylston Street, but although most people realize that Boylston intercepts Tremont, not all of them can mentally project the former much beyond the Public Garden.

Very often, the sense of the Back Bay grid is strong, but usually the longitudinal, or east-west streets are the dominant elements, and are much more individualized than the cross streets. If any cross streets have distinct character, they are Arlington, which ends the set and borders the Public Garden, and Dartmouth, a somewhat wider street which ties across the set and goes primarily to Copley Square and the Back Bay Station.

For some, Commonwealth Avenue is the dominant street, and the grid the other streets fade out of sight. The Back Bay is at times called the "Commonwealth Avenue section". In all cases, this particular street is very clear, and makes the firmest tie to the Public Garden. Its description is frequent and vivid in the interviews: a very wide, straight street with trees, having a grassy central mall containing benches, statues and a path bordered by separated one-way traffic lanes. It is lined by old attached houses on either side, of unified architectural style (are they brownstone? stone? red

brick?). It contains the Harvard Club and the Hotel Vendome, and has a gradient toward Massachusetts Avenue of increasing non-residential use (this last is in fact just the reverse of the truth). It is a beautiful, pleasant street.

Beacon Street is the other strong longitudinal street, appearing on the interview or drawn maps with the greatest frequency of any Boston path. It plays an important role, in name and in fact, in tying together Back Bay, the Common, and Beacon Hill. Although it also has recognizable character of its own, particularly alongside Beacon Hill, it is nevertheless relatively little described, in comparison with Commonwealth.

Massachusetts Avenue, on the other hand, while structurally vital, particularly in the context of this particular test, evokes no image at all. No one can describe it: it is an abstract line, a conceptual path.

The Back Bay region itself, at times also called the "Charles River section", makes a reasonable strong image of old brownstone or brick attached houses, which come close to the walks, with outside steps going up. It is a residential area to some, to others it only used to be so, but is now largely non-residential, or seems ambiguous. It is clean, pretty, with wide straight streets on a rectangular grid. Commonwealth and Beacon are its two principal parts. At times, it is thematically confused with Beacon Hill, or the South End.

For most, Back Bay is a sharply bounded region, edged by Beacon Street on one side, and by Newbury or more often Boylston Street on the opposite side. Strangely enough, however, Boylston does not go beyond the Public Garden for many people, even when they know of Huntington and Copley Square. The Public

Garden edge of Back Bay is always clear, the Massachusetts Avenue and usually so, although for some, Commonwealth or Beacon go beyond this line.

Although the Back Bay streets are always felt as clearly parallel to the River, yet the connection is felt to be at Dartmouth and Arlington (in reality there are in-bound street connections at Clarendon and near Arlington), but most often the tie is not understood. When on Storrow Drive, one feels he is "outside" the city, waiting a chance to get in.

The attached Copley Square (at times the cement is a little loose) is very often described and easily identified. This is a unique case in the city, since the description is made in terms of the individual buildings which face upon the square. The Boston Public Library is pre-eminent, being one of the major landmarks of the city. Also mentioned, however are Trinity Church and the Sheraton Plaza Hotel (which many persist in calling by its honorable Boston title, the "Copley Plaza"). Some see the John Hancock building in the background. The triangular park in the middle is infrequently referred to. This is less of a spatial whole than a concentration of activity and of some uniquely contrasting buildings.

The John Hancock building is itself an extremely important Boston landmark, visible for long distances; but, it seems hard to describe except for its size. It has a very vague positional relation to Copley Square or the Back Bay, but for most people it "floats", recognizable from afar but with a base which cannot be pinned down to any specific location or relationship. The nearby Back Bay station is rarely mentioned, and, if so, it also only floats in the Copley Square neighborhood, with a sense of being "behind", or "in back of".

Next to the Back Bay is the twin element of the Public Garden-Boston Common, a landscaped open space in the heart of the city. This makes an extremely sharp image in everyone's mind, and long with the River, Commonwealth Avenue and Beacon Hill, is most often mentioned as a particularly vivid spot. Structurally

for many people/

for many people it is the core of their image of city, and often, in their real or mental trips, they will veer from the direct course to “touch base” here as they go by. The image of the two areas, formally separate, is sometimes fused, sometimes kept apart. It is pictured as a green open space, bordered by one or two main shopping streets, Tremont in particular. It has grass, trees, flowers, many winding paths, a pond, and swan-boats [The last item is an ~~extremely~~ important part of the picture.] It is full of people and children. From it are visible the State House and the Park Street Church. A few note such things as fountains, the slope, the bandstand, the suspension bridge in the Garden, the hill in Common, gates and fences, or the Herald Traveller sign which is visible on one edge. For all, this is a favorite, pleasant spot. All the streets that border on it, inclusive of tiny Park Street, share in its image and are frequently mentioned.

On the other hand, this thematically clear area has an ambiguous shape. For over 2/3 of the interviewees, this is a four-sided figure which implies the omission of one of the five bounding streets, and twists their relative angles. Usually Park Street is dropped out, sometimes Boylston. Only rarely is Arlington, Beacon or Tremont omitted. The urge to regularize what is in reality a figure with five right-angled corners is quite powerful. This suppression and twisting relates to difficulties which are propagated throughout the field of the city image.

The Boylston-Tremont intersection is the nub of the problem. These two important paths, here locally intersecting at right angles, are in the larger structure only slightly divergent from a parallel alignment. Most often perhaps, the image of the immediate intersection dominates, and Boylston is thought of as perpendicular to Tremont, which thus becomes perpendicular in its turn to the

River. The North and West Ends are compressed, and the South End wrenched apart. Others take just the opposite solutions. Tremont and Washington are parallel to the Back Bay streets, thus Boylston and Tremont cannot cross, and the entire downtown area becomes confused. Even those realizing the Common to be five-sided, have the same basic problems. Only one subject was able to conceptualize the slightly angled relation of the South End and the Back Bay, and the local curving of both Boylston, Tremont, and the River which produces this anomaly. For everyone else, it is a serious weak spot in their city image. Many admit uncertainty, when crossing the familiar Common, in knowing where they will come out.

Charles Street is a structurally important path which clearly divides the Common from the Garden, and appears here if anywhere throughout its length. For most, however, Charles goes beyond and, by going past or through the edge of Beacon Hill, ends firmly in the rotary at the Longfellow Bridge. This rotary is a very important node in the city, and is a strategic transfer point between River, bridge, Storrow Drive, Charles Street and Cambridge Street. Beyond its functional importance, the elevated station over the rotary, the heavy traffic, and the trains popping in and out of the side of the hill, can all be clearly visualized. Some associate the Massachusetts General Hospital, an important city landmark, with this spot. In the general image, the rotary is crucial in making a firm tie back to the Charles River.

Charles Street itself can be less clearly seen, except for its connection with the Common, and for the specialized small stores along it at the foot of the Hill. Some people also realize that Charles Street reaches Park Square on its other end. This is a difficult point, if visualized at all, with little associated to its image but the Statler Hotel. This is one of the

most confusing intersections in Boston. A very few realizes that Broadway and Columbus also come in here. Nevertheless, all must take special precautions to pass through this local chaos successfully.

Beacon Hill itself forms an extremely strong image, even for those who rarely ascend it. Topography, position, detail, age and social connotation all reinforce each other. By far the region most frequently drawn or referred to in the interviews, it is one of the four elements in all the city which are most vivid in the subject's minds. The picture is one of steep, narrow streets, of a pattern which is complicated to some, and to others makes a fairly clear perpendicular system, although difficult to enter. Here there are small, old attached houses of distinct architectural style: red brick, violet windows, white doors, black trim, cobblestones, and brick walks. It is difficult to drive and to park here. In it are Louisburg Square, and the gold dome of the State House. It is clearly a hill.

It lies alongside the Common with Beacon Street as its edge, and this seam is sharply visualized. For most people, this seems to be its "front", or main facade, but for a few, and these are usually the most familiar, it is thought of as dominantly coming up off Charles Street. All but one subject places the opposite boundary of the district at Cambridge Street, at the foot of the slope on the north. This is done despite general knowledge of the abrupt social and architectural change at the top of the hill. Topography, spatial contrast, and a major path take precedence here. Usually, then, the Hill is further subdivided into two parts, the south and the north, the "nice" and the "slummy" (or "bohemian" if one happens to live there).

On the third side, most people place the boundary at Charles Street, but they do this hesitantly, and many conceived of the Beacon Hill district as

extending all the way to the River. Here a strong path seems to disturb the clarity of the image. On the east, finally, the boundary is for everyone quite vague and fluctuating, Joy or Bowdoin being most often cited. A few can picture the tie from Beacon Hill or Scollay Square via Pemberton Square, but for most people this relation is too difficult, and the juxtaposition of the two elements is felt only as vague and positional.

Internally, the longitudinal streets coming up from Charles Street are normally more important than the others. It is interesting to note that some of these relatively minor paths, such as Mt. Vernon Street, are not far below many of the major city streets in frequency of mention. Joy Street takes importance from being the only through street across the hill, and for its unmistakable gradient. The State House is firmly fixed to both the Boston Common and to Beacon Hill, while Louisburg Square, though an equally vivid image, usually floats "somewhere in the district".

Cambridge Street, on the north edge, is a strong path, running clearly from the rotary at the River to Scollay Square and thus enclosing Beacon Hill and tying the main system back upon itself. Undoubtedly Charles and Cambridge receive some of their importance from being the two paths around the obstacle of Beacon Hill, but Cambridge has other qualities, as well. A surprising number of subjects (more than a third), name this seemingly characterless street as being one of their most vivid impressions of the city. In frequency of mention it ranks first after such paths as Beacon, Commonwealth, Storrow, Massachusetts Avenue, Tremont and Washington. It makes strong if unattractive image: a very wide street, going uphill to Scollay Square, with a dividing strip down the middle. A few note the vista of the rather shapeless but light-colored Telephone Building in Bowdoin Square at the apparent end of the street.

Beyond this, however, little can be said, except for a recital of the uses to be found along the street, variously noted as: factories, gas stations, cleaners, taverns, hardware and paint stores, or apartments. Undoubtedly this is an example of the power of the raw spatial contrast: in describing its width, several note that it is “one of the few” wide streets in Boston. The border relationship to Beacon Hill, and the clarity of the terminal points, may be other reasons for image strength.

For some, Cambridge Street is also an edge for the West End, which otherwise seems to have no shape nor internal structure. A very few can erect some little scaffolding here, and relate it to the Charles River as well, but even then the other edges are indefinite. The confusing one-way street pattern, the nondescript physical character and lack of reference landmarks, may be partial reasons. The eastern boundary in particular, is lost in the “grey” area near North Station, which is one of the two sections of Boston which are conspicuous by their absence from everyone’s mental map. This is a region of complete path and spatial chaos, of dilapidation, and of a high degree mixture, of “fringe” commercial uses. Such an area is the polar opposite of the Charles River and the Boston Common; it is by equal consensus a “hole” in the public image.

For most people the West End simply floats, and for quite a number there is no West End at all. Even the River disappears for some beyond the Charles rotary, although for most subjects the water edge continues vaguely as far as the Dam. Many can make no connection between the two strong images of the River and the Harbor, although a substantial minority are at least intellectually aware that Boston is a peninsula. Even for these people, however, the visual image of the joint between the two sides is usually weak or absent. Only a few can make a tie, and this is normally by means of the path sequence: Storrow-Nashua-Causeway-Commerical-Atlantic, rather than

joining the waters.

This particular path sequence, however, is confused by name and direction changes. More trouble arises from the fact that the Central Artery, as well as Nashua Street, can also be considered as an extension of Storrow, and maps which show one extension will generally exclude the other. At times, Atlantic and the Artery are confused with one another, which causes trouble farther inland.

In any event, the image of Atlantic Avenue and the wharves is another strong one, similar perhaps to Cambridge Street in vividness, and important as a major boundary to central Boston. It is again visualized as a wide street, and is closely associated with the waterfront, which is either directly visible from the street, or can be sensed by the sea smells and activity, and the lack of "depth" behind the seaward facades. Some may note the presence of railroad tracks, or of warehouses.

The course of the street is difficult, however, in its combination of curve and tangent. It is either conceptualized as being straight, in which case it is parallel to Washington-Tremont and thus either parallel or perpendicular to the Charles River; or, alternatively, as curving rapidly and continuously. Both abstractions raise difficulties for the image of the whole. For most people, South Station is fixed as being at one end of Atlantic. For a minority, North Station is at the other end.

The North End appears in most city images, although it is absent in a few. In this sense, it is much stronger than the West End. Often referred to as the "Italian section", it seems a place of narrow littered streets in a confusing arrangement, crowded and composed of dilapidated tenements. The area is felt to be surrounded and isolated by water, industry and the Central Artery. The principal characteristics noted is not physical, but the Italian people themselves, their friendliness, fiestas, stores, noise

and excitement. This is the vivid experience of the North End.

For some, the area floats positionally with relation to the rest of the city, for others it is contained in the sweeping curve of Atlantic, or tied to Scollay Square via Hanover Street. This last gives great trouble, however, since many sense that Hanover is blocked by the Artery and either persist in breaking through, or are locally puzzled. The new arterial construction has snapped what was a vital psychological tie, and the break shows no signs of mending, even after five years.

In most minds, then, the North End is essentially an isolated region, although a vivid one, at the very tip of the peninsula. Internally, it may have no structure, or may be imaged with two parallel spines: Hanover and Salem Streets. Interestingly enough, the striking outdoor space of the Paul Revere Mall is rarely mentioned, even though intimately related to one of the trips. Those quite familiar with the area may also be able to grasp the system of streets coming out to Atlantic-Commercial. The northeast side of the area, however, is particularly difficult and fuzzy, with weak boundaries.

Some interviewees also think of Haymarket or the market section at Faneuil Hall as being in the North End, because of similarities of activity or people engaged in them. This further attenuates and fragments the image of the North End itself. Regardless of this, Haymarket and Faneuil Hall are often fused as one area, despite their different appearance and physical separation, which has been accentuated by the new Artery. The location and internal shape of this fused area is therefore very difficult to specify. Yet this is one of the regions more frequently described.

The activity is the key: stalls, carts, vegetables, noise, confusion. The physical surroundings are more difficult to pin down, although the Artery is seen, and sometimes the view under it to the North End of the Sumner Tunnel. Faneuil Hall itself is the important landmark, often

sharply seen, and is indeed one of the most frequently mentioned landmarks in the city. However, it sometimes must struggle with Haymarket Square for dominance as the conceptual kernel of the section.

For most subjects, this market area floats, being only in positional relation to Scollay Square and the downtown area. A very few can tie Faneuil Hall to Scollay Square via Cornhill, or can make vaguer connection from Scollay to Haymarket. For one relative stranger, Faneuil was the hub of his entire city image, although with only positional relation to other fragments.

For almost everyone, a piece of the Central Artery suddenly appears in this market area, and this small segment seems to be one of the best known things in Boston. Such prominence may come from the strong barrier action noted above, or from its spatial prominence and setting, or perhaps from the presence of a frequently used exit. In any case, the visual image is not too sharp a one, but is recognizable. From the street below, the subjects remark that it is elevated, they sense the ability to go under it and note its green paint.

A few also recognize a piece of this same Central Artery at the foot of State Street, or in construction at Dewey Square. For most people, this seems to be all the Artery there is. A few realize intellectually that there is some vague tie between these places and the Charles River and Storrow Drive. A few in addition can image the Artery as a continuous line with definite terminals: but even these cannot locate it accurately, only visualize it as a sequence of interrupted ground views, enough to furnish a reassuring, if not vivid, edge on the ground.

When in imagination or reality they are driving on the Artery, it switches its character from edge to path. Now it is visualized with its risings and turnings and its signs. It is a sequence which is seemingly utterly unrelated to the city, except by the literary device of signs; like Storrow Drive it is “outside”.

Scollay Square is in reality a very important node in the structure of Boston, being the joint of Cambridge, Tremont, Hanover Streets, as well as minor streets connecting to Haymarket and to Dock Square before Faneuil Hall. It is only a short block away from the latter location. But, as mentioned above, the image of the connection is usually weak or absent, and thus Faneuil floats in relation to the larger structure of the city. When forced to make their way from Dock to Scollay Square, as in an imaginary trip which begins by getting on to Tremont Street, most people seem to see themselves facing an impenetrable wall.

Scollay Square, along with South Station, is the node most often mentioned or drawn, due to its important role as a junction point. Yet it is exceedingly difficult to describe in any concrete way. It is passed off with such epithets as run down, unattractive, dirty, disreputable. When thirty people were asked to describe it, seven were the most that could think of any one common thing and that was that it has a subway entrance in the center. A handful mention that streets go up or down from it, or list the uses around it, such as bars. It evidently makes no visual impression at all.

The tie of Tremont to Scollay is generally understood, at least conceptually, although many on trips have difficulty in finding the Tremont entrance, when coming from the east. A minority are not aware of this connection. A lesser number see the connection of Washington to Scollay via Court Street, but more are only conscious of some vague, indefinable tie. It is in this

region that an occasional ambiguity between Washington and Tremont occurs.

The former clear link of Scollay to the North End via the Hanover path has been blocked by the Artery, and Sudbury Street, the present path between Scollay and Haymarket, is a possession only of the cognoscenti. Thus this functionally and conceptually important node gives rise to a weak and troubled image, although one which is firmly attached to the general structure.

For anyone who tries to make this relation at all, the way from this region to North Station, a significant city node, is usually confused, most often being pictured as an extension of Washington Street. In fact, this entire section of the city, lying roughly between the North Station, the North and West Ends, and the markets, is almost always a complete blank on the public mental map.

To the southwest of Scollay and the markets is the functionally important "downtown", variously defined. The dominant image is of the two streets, Washington and Tremont, parallel and one block apart, running along the "lower" side of the Common. This is the central shopping area, the functional heart of the city for most people.

Washington makes a vivid image: a narrow, canyon-like street, crowded with pedestrians, and carrying a trickle of one way traffic. It is an intensive shopping area, a mixture of big department stores and little run-down shops. There are many signs, and at night, much light from marquees, signs and shop windows. The very core of this heartland is the corner of Summer and Washington, with Jordan's and Filene's on opposite corners, and a subway entrance. This is the central node of the city to most people. Farther along the street to the west is a section of movie theaters, often distinguished from

the shopping sector. A few may note such features as the transverse slope of the street, its two longitudinal curves, or the momentary views out to the Boston Common.

Tremont, on the other hand, despite its handsome location alongside the Common and the quality of its shopping, seems to produce a rather diffuse picture. It seems to be noted primarily in terms of its role as a border to the Common, rather than for its own qualities, or secondarily for the particular uses along its course. It is mentioned or drawn just as frequently as Washington (and these are second only to Beacon Street), but is infrequently described. Washington is clearly the stronger image. In a few cases, Tremont does not appear, and only Washington floats parallel to the Common. The momentary verbal slips, which reveal some confounding of Tremont with Washington at the Scollay end, have already been noted.

The two streets are for most people joined by several small cross streets. Nearby everyone, at any rate, seems aware of the tie from Washington to Tremont, the Park Street subway station and the Common, via Winter Street. It is interesting to note here that the critical importance of subway stops for many who frequent the transit system. They become the organizing reference nodes of the city, linked by an "invisible" underground path structure. The Charles Street, Park Street, South Station, Massachusetts Station and Copley stops seem to be most important.

Tremont and Washington may be confined to the shopping district, or they may lead out only vaguely into the South End, or finally they may go more clearly, in parallel, all the way to Massachusetts Avenue. These three variants seem about equally distributed. It is curious, perhaps, that Washington ends,

for so many people, just at Stuart or Essex Street. This may be the result of an abrupt change in use type at this point, or because their customary paths then turn west to the smaller shopping and office district near Boylston Street.

Most people, of course, are aware of the Boylston-Tremont joint (however difficult the pattern shape of this intersection may be), and thus can move from the major shopping area to the secondary one, through a discontinuous, rather awkward dog-leg. A few make the tie from Washington-Tremont to Copley and Huntington view via the "back way": Kneeland and Start, although the complications of Eliot, St. James, and Park Square are often finessed. This combined gap and twist in the central shipping activity destroys much of the focus and clarity of the core area. Finally, most feel some connection between Beacon and Tremont-Washington. For what is probably the majority, this is a vague and puzzling concept; otherwise see it happening via a curving School Street, but rarely with clarity.

The ties of Tremont and Washington to Scollay have already been discussed. A very few see the connection of Washington as far as Dock Square, this being the principal way of fixing Faneuil Hall, if it is fixed at all. One or two even attempt to connect Tremont to Faneuil. A minority can push Washington on as far as Haymarket, or fancifully, to North Station.

For a substantial minority, the functionally important financial and office region, which is alternately included or excluded from "downtown", does not exist. Quite a few maps are blank between Washington and Atlantic Avenue. Where shown, it is usually a floating area, positionally related to Washington and Tremont, and with no internal structure. Occasionally it can be described as a region of banks and insurance companies housed in large old buildings, on

narrow streets. Some consider State Street as the core, while Post Office Square is rarely mentioned. The huge Post Office Building is somewhat more frequently shown or referred to, however.

Only a few can construct the difficult internal pattern of this area, and these invariably distort it into a local grid system. Even those working every day in the district often cannot detail it. There is a discrepancy between drawings and verbal knowledge here, because of this special difficulty in mapping.

It is a minority that feel even a vague link between Washington Street and Post Office Square, in reality only a short distance apart, or who understand that State Street is perpendicular to Washington. Many, however, know that State Street goes to Atlantic, and perhaps half the subjects tied Washington though to South Station via Summer Street, a path which is marked by the flow of foot traffic moving along it. For the other half, South Station has only a positional relation to the downtown. A few see Essex as a continuation of Boylston, going to South Station, and one had the mistaken idea that Franklin Street, being at first perpendicular to Washington, goes thence straight to the water. A few who are familiar with the financial district make a clear tie to South Station along Federal Street, and one connects Atlantic to the office area to the markets, all along Congress Street. The boundary relation between the financial and market districts is the one more commonly felt. Other edges of the financial district, even including that toward the central shopping, are rarely conceived with any clarity.

On the fringe of this general area, is an important city landmark: the Customs House Tower. Being a striking and characteristic part of the Boston skyline, it is often a prominent and describable part of the total image, but

its actual position, or its image from close at hand, is very difficult to define. The top is familiar, but most do not know where it comes to earth. In this, it is rather similar to the John Hancock Building. Indeed, it is the Hancock Building, the Custom House, and Louisburg and Haymarket Squares, which are most consistently felt to be floating points in the composite schema. Thus, while the Customs House was mentioned in the interviews relatively often, it never appears on a drawn map.

The South Station, also on the fringe of this area, is, along with Scollay Square one of the two important nodes in the city. The importance of South is undoubtedly a function of its key role in both metropolitan and long-distance transportation, but something is probably attributable to its bulk and spatial setting. It is brought out with some knowledge in almost every interview, and appears in two-thirds of the maps.

When pressed for a description of the station as a terminal for one of the trips, most people simply noted its bulk, the large open space in front of it, or the excavation, demolition and construction going on there in Dewey Square as part of the Artery extension. Others remark on the rounded front of the building, and the big clock in the façade. These seem to be the primary impressions. Other things noted with some frequency are the large number of doors, the subway entrance, the large sign, the taxis and trucks, the corner position, and the stone material. It should be remembered that this was a “required” description, in contrast to the primarily voluntary descriptions analyzed above. One interesting note was the confusion as to its color, it being variously described as light, dark, gray, or beige, in equal proportions.

The path connections of South Station to various sections, via Atlantic, Federal, Summer and Essex, have already been analyzed.

Moving westward, we come to two intermediate areas, that of the wool and leather region (otherwise variously referred to as the “warehouse”, “material”, or “garment” district) and the small Chinatown on its fringe. Both are fairly included, Chinatown most often is floating, though one person tied it to Essex, and another misplaced it completely in the city. In general, these regions are either blank, like the North Station region, or felt to be somewhere “in back”.

The South End, on the other hand, is a major residential area of the central city. Only a minority of the interviewees leave this section blank: most are familiar with the name or characterize it as the “rooming house district”. Yet in comparison with the Back Bay, Beacon Hill or the North End, all of which are territorially smaller, the image is a rather weak one, though stronger than that of the West End. This may in part be due to the residential distribution of the interview sample, since many had little occasion to be in the South End, but even among those that regularly go through the area, the images are very thin. One of the trips forced a long passage through the region, but most people are simply avoided talking about it. Is it the low income status of the area that encourages this conceptual vacuum among the interviewees, or a lack of actual physical character or landmarks?

At any rate, the usual description is of a slum area of dilapidated buildings, a dull place. The main streets are broad and straight, but full of litter and refuse. The houses have rounded fronts; the elevated goes through the section. There is a mixed use and a lack of open space. A Syrian area is sometimes noted.

For a substantial minority, the South End is a floating area, but for most it is tied to downtown by the parallel extension of Tremont and

Washington, which as noted above may wander out vaguely or, alternatively, take a firm course all the way to Massachusetts. Tremont, however, sometimes loses direction or identity in mid-course.

Most of those who structure the South End internally do so as a set of parallel major radials, inwards from Massachusetts, and, since Massachusetts is remembered as being straight, these radials are generally parallel to the Back Bay streets. These major radials are thought of as being various combinations of Albany, Harrison, Washington and Tremont, or, more rarely, Shawmut or Columbus. There is indication that some of these streets are distinguished one from another only with difficulty. All except Washington are prone to lose continuity somewhere along their course. The radials are crossed by a few streets for some, principally Dover and Broadway, the former going to South Boston, with a rare tie on the other end to Park Square.

The elevated, which is prominent in the district, seems to be associated with both Washington and Tremont, but at any rate functions as a major overhead edge. For a substantial number, the Boston and Albany railroad also comes in in a radial manner, although it confuses others near Copley, or appears only as a fragment at Tremont (exactly similar to the Central Artery at the market district).

The two most significant nodes are Worcester Square and Union Park, both small residential ovals of harmonious architectural character. The latter, in particular, gets occasional mention as one of the particularly vivid elements of the city. Surprisingly enough, Franklin Square (or Blackstone Park), which is spatially much more imposing, with the added interest of being crossed in an unique way by the elevated, is only once mentioned in passing.

The South End in general has no sharp boundaries: Massachusetts is not a boundary to the west, there is much uncertainty as to extension to the north and east, even among the most familiar, and there seems to be no

awareness of the southern stop at the South Bay. Thus most city maps have no southern edge, west of South Station. In the east, there is much disagreement as to whether the South End begins at Essex (at the edge of the downtown shopping) or at Castle Street by the railroad. This is particularly true among those most familiar with the area, and is similar to the ambiguity of the eastern boundary of Beacon Hill. Thus the regions between the railroad and the downtown shopping and Chinatown, i.e. the South Cove and the area behind Park Square, are alternatively put in the South End, or just forgotten. They very rarely appear in their own right. The Park Square area makes a puzzling gap in the continuity of the central shopping activity, as noted before.

Most remarkable, perhaps, is the triangular region between Back Bay and the South End. This is a true no-man's land, which is blank on every map, not even excluding one interviewee who was born and raised in this region. Along with the North Station area it is the most significant "hole" in the city. Most often there is no connection between Back Bay and the South End, except for Massachusetts Avenue. For some, of course, even Massachusetts never gets beyond Boylston or Huntington, or at least, in its extension, is only an empty concept with a name. Sometimes the Back Bay or South End cross streets, such as Arlington, Berkeley, Dartmouth, W. Newton, or Dover seem to go straight out to meet the edge longitudinal street of the other area, such as Tremont and Boylston. These connections, almost always incorrect, run right over the lost triangular region, which lies roughly between Boylston Street and the New York, New Haven railroad tracks.

This area is of substantial size, and contains some known elements, such as Huntington Avenue (which is, however, generally thought of in its course beyond Massachusetts, or as connecting to Copley), and an occasionally-mentioned

Mechanics Hall or Christian Science Church. The matrix in which these landmarks might appear is absent, and, indeed, has no name by which it may be referred to. Presumably, the blockages created by the railroad tracks, as well as the conceptual squeezing-out of this area due to making Massachusetts straight and the main streets of Back Bay and the South End parallel, have both contributed to this disappearance. Only one subject pictured the bend of Massachusetts at Huntington, and thus correctly angled the South End to Back Bay. This is the same person, of course, who was able to solve the Boylston-Tremont intersection, which is a directly related problem.

Further Analysis of the Image

This composite image of the city is drawn from our principal source of data: the office interviews, maps and field trips of some twenty subjects, which have been intensively analyzed. Diagram ____ to ____ show other analyses of this same information. Map ____ shows the variances in regional boundaries given by different subjects. Certain regions, such as Beacon Hill, the Common, and the central shopping area, show a high degree of agreement as to their extent. Others, such as the South End, the North End, the business or financial district, are very unclear in their boundaries.

Map ____ indicates all elements, appearing in the interview summary, of which half or more of the mentions were made without any visual description. These may be taken as the parts of the city which play an important role in its structure, but tend to be purely conceptual images, void of sensuous content. Three classes are obvious: the cross streets in Back Bay, the longitudinal streets in the South End, and a substantial cluster of minor landmarks in the downtown area. Most striking of all are the four elements which are mentioned in the second quartile

in the interviews, and still have this “ghostly” quality: Massachusetts Avenue, Huntington Avenue, the John Hancock building, and North Station.

Map ____ is a graphic analysis of both the frequency, and also the order, with which elements were put down on drawn maps. Here we are analyzing the entire sample of thirty subjects, rather than only nineteen. It indicates all elements shown four or more times, out of thirty individual maps, divided as to frequency by quantities and with indication as to the distribution of the time at which they were drawn.

The same basic structure appears again, with the emphasis on the River, the Back Bay, Tremont and Washington to Scollay and back around Beacon Hill via Cambridge, with Atlantic, the harbor and South Station as an outpost line. This correlation (which is, of course, to be expected since simply drawn from a somewhat larger sample of the same data) is, however, bolstered by the order of drawing. Massachusetts, the River, the Back Bay streets, the Common, are almost always put down first, as if they are the anchor points to begin with, and such things as the State House, Tremont-Washington and Boylston are usually drawn early.

Another way of showing the material on the subjects’ sketch maps is Map ____, for which the quantity of detail within each square of an arbitrary grid was counted on all the sketches taken together. These quantities were then divided into a range of six classes, and graphically symbolized. The visual “heart” of the city is strikingly illustrated.

In the study of distortion, this same common arbitrary grid was twisted so as to fit the various drawn maps, and a few examples of these are shown. Systematic study of these distorted grids, however, reveals only that familiar areas tend to be enlarged, which is hardly startling, and secondly, and more important, that the mental map, insofar as it is represented on the drawing, tends to be highly distorted indeed. A map which even approaches

anything like true scale or direction is extremely rare, even among those with a higher-order knowledge of the city.

The principal point is that all but the poorest maps are topographically invariant, there are few or no {{(?)}} tearings, the sequences remain the same in every direction. This would seem to be the criteria for a useful schema, and a topographical inversion is almost always the sign of confusion or ignorance. This may have some meaning as to the relative importance of rigid geometry in the city plan.

Another example of the kind of data used in the study is Diagram ____, which exhibits a sample of the analysis of one subject's imaginary trip, and contrasts it with his actual trip in the field. Route, elements mentioned or noticed, and the general sense of structure or uncertainty, are all shown. These trip maps were not analyzed as a separate unit, but proved most useful in the synthesis of the composite image.

Still another summary of the interviews is diagrammed in Map ____, which shows the paths chosen to be taken during the imaginary trips. The heavy concentrations which fall on such basic links as Cambridge, Tremont, Huntington, Beacon, the Artery, Boylston, Washington, and Atlantic, are clearly indicated, as well as the general regions of spreading out and searching for paths, versus the points of relatively narrow crosssection.

Most important of all in judging this material, perhaps, is Map ____, which indicates the habitual trip in the downtown area by the subjects, with their place of residence and their destination, whether for work, shopping, or otherwise. The lack of balance in this pattern colors our findings. The concentration of origins and destinations in the inner Back Bay, Beacon Hill, the central shopping area and the office district is to be expected. (Contrast with the day-night population of central Boston?) The sample is

unfortunately thin as to residence in the South End, although the paths of a fair number of habitual trips go through it. The North and West Ends are almost entirely blank, which much be taken into account in judging the conclusions.

The lack of random distribution of residence and work place in the sample is unfortunate: probably inevitable and rather true to life in the case of workplace location, but unbalanced and correctible as regards place of residence. What evidence we have, however, indicates that a random distribution would probably not affect the results a great deal, except perhaps to strengthen the South End image. The North End is already strong despite the lack of residents, Beacon Hill seems strong not only among residents but among non-residents as well, and the office district is confused despite the heavy concentration of those that work there. A sample which gave a truer cross-section of the classes in society, however, might change the results in unknown ways. This sample was primarily middle class, managerial or professional, and the only check we have on this are the results of asking directions in the streets.

One kind of summarizing of this analysis of the Boston image, in a way in which it might be useful for the preparation of a design plan, is shown in Map _____. This illustrates what have turned out to be the major difficulties in the image: confusions, floating points, weak boundaries, isolations, break in continuity, ambiguities, branchings, and lacks of character or differentiation. Since this is made at a more comprehensive level of analysis, it contains a larger degree of interpretation, and possibly personal bias, than do the other maps.

Other Revelations of the image

Confirmation of this data may be found in an analysis of the ability to

identify various photographs of central Boston, which were shown to some sixteen subjects. Map ___ illustrates the recognisability of photographs and their location, with further differentiation as to whether recognition is specific, or is generalized (i.e. "somewhere in the North End"), and therefore depends on regional characteristics. Commonwealth Avenue and the Charles River turn out to be highly recognizable by over 90% of the viewees. Good specific recognition is confined to Tremont, the Common, Beacon Hill and Cambridge Street, while good "regional" recognition applies to Storrow Drive, the Public Gardens, the Central Artery and the wharves. The other photographs go on to confirm the pattern, in their varying grades of clarity, down to the concentration of unrecognizability in the South End, the John Hancock base, the West End-North Station area, and side streets of the North End.

An entirely different source is drawn on for Map _____. This is a graphic compilation of elements mentioned by some 160 passers-by, when they were stopped in Boston streets and asked the direction to various standard destinations. The similarity of the composite image gained by such hurried and casual interviews, to what has been related above, is most striking. Principal differences are the somewhat greater prominence given to certain elements which were the natural paths to be taken away from the points where questions were asked: Salem Street, Charles Street, Summer Street, and Columbus. Otherwise, we can hardly find anything to surprise us. In studying this diagram, incidentally, it must be kept in mind that the area called into play is naturally only that which contains the possible rational paths between the set of origins and destinations (roughly, within the dashed line), and that the presence of blank spaces outside this area is meaningless.

Therefore, the emptiness of the South End, in this particular map, does nothing to support previous findings, nor does the absence of the River or Atlantic Avenue serve to upset them. The relative weight of items shown, as well as the fact that not a single new element appears, out of hundreds of possibilities, is strongly confirmatory, however.

Finally, we gather some confirmation from Maps _____, which present the composite image as gained from quick sketch maps by students in three successive years. These are small samples, very distorted both in age, training, status, and location of study and residence, and still they repeat the picture in an astonishing way. This need not be detailed again.

Image and Reality

{margin: ¶} Having shown such a homogeneity in the public image, and having described it in some detail, the central question remains: why should it take this particular form? Undoubtedly the common concentration of travel paths, as on Cambridge Street; or of work place, as in the office district; or of activity, as in the downtown shopping region; tends to present similar elements to the view of many individuals, and thus helps develop a common image. Associations of status or history, coming from verbal sources, further reinforce these homogeneities.

There can be no mistake, however, that the form of the environment itself plays a tremendous role in the shaping of the image. The coincidences of description, of vividness, even of confusion where familiarity would seem to indicate knowledge, all make this clear. It is on this relation between image and physical for that our interest centers.

An explanation of this relationship, in the entirety of central Boston, would be too complex to attempt, although possible explanations

for various features have been scattered through the text above. Many other relationships might be the subject of other studies. Therefore, we will concentrate simply on a contrast of general image and reality, note a few of the more striking and informative of the general relationships in the city structure, and then go on to analyze image and reality in the case of four particular elements of different kinds, namely: Commonwealth Avenue, Beacon Hill, Scollay Square, and the John Hancock building.

To begin with, we need some explanation of the “objective” form of Central Boston, if such a thing exists, to which we may contrast the subjective responses. Aerial photographs, or maps, or representations of the patterns of such things as density, use, building material, and so on, might seem to be such an “objective” description.

Actually, however, we find such things to be quite inadequate for our purpose, too superficial and yet not generalized enough. The variety of elements which might be evaluated are infinite, and we find that the best technique is the record of another “subjective” response, but in this case a systematic and observant one, using categories which have proved significant in the analysis of the interviews. In other words, while it is clear that the interviewees are responding to a common physical reality, the best way to define this reality is not through any highly quantitative or “scientific” method, but by means of the selective perception and evaluation of one or a few special field observers, trained to look carefully, and with a prior set toward the kinds of urban elements that have so far proved to be significant.

The result of such a reconnaissance appears in Map _____, which describes for the same area tested in the interviews, the various landmarks, regions, nodes, paths and edges which were judged to make reasonably strong images on the basis of physical appearance alone as determined

in the field. These elements were also subjectively distinguished as “major” and “minor” , the former being felt to be exceptionally strong or vivid. The map further indicates puzzling breaks in path continuity, weak edges, and so on.

These judgments are, of course, individual ones, but we find a high degree of concurrence between observers, familiar with the U.S. urban scene, who have been indoctrinated with the system. The technique is described elsewhere. What is being mapped here is an abstraction: not physical reality but the generalized impressions that such real form makes upon particular kind of person. The discussion of special elements below will illustrate the kind of detail which goes into making such judgments. The map itself, however, forms the “reality” background against which the interview summaries (Map ___) may be contrasted. The concurrence is in most cases strong. These two sets of data, were independently arrived at. We suggest this, or a similar, technique as a means of technical reconnaissance of a city, in preparation for a design plan. Such a reconnaissance requires perhaps 3-4 man-days in the field, for an area of this size.

If we compare this field analysis with the map summarizing interview mentions (Map ____), we find that 86 elements occur in common on the two. In addition, 19 elements showed on the field analysis but did not receive three or more interview mentions, while 16 received three or more mentions but failed to be noted in the independent field reconnaissance. It is interesting to see what these “differences of opinion” were.

Of the 16 elements not recorded in the field, eight, or half, were minor streets in the intensely known Beacon Hill region. Four others are streets of functional circulation importance, which have little visual character: Harrison, Dover, Sudbury and North Streets. Two more are minor,

Characterless junction nodes: Bowdoin Square and Park Square; while the last two are buildings which are also primarily of functional importance: the Parker House, and the U.S. Post Office. None of these elements missed in the field appear in the first or second interview quartiles, and only three in the third quartile: the Post Office, and Mt. Vernon and Joy Streets on Beacon Hill. These discrepancies, therefore, seem due either to ignorance of functional importance which was visually little evident, or to the intensity of popular attention placed upon one area of the city, with a consequent heightening of the importance of that area's minor parts.

Of the 19 field-noted elements not mentioned more than twice in the interviews, 13 are in the North and South Ends, and might perhaps be better known to a more widely-distributed sample. The remaining six are: Back Bay Station; Middlesex prison; the traffic circle at the Charles River Dam; King's Chapel; the burying ground on Tremont; and the Old West Church on Cambridge Street. Four of them are thus minor landmarks in the downtown area, of the type which turned out to be conceptual, or sensuously empty, images in the interviews (see Map ____). None of these six were shown as "major" elements in the field. In fact, of the total of 19 discrepancies, only two were marked as "major" field elements: the Paul Revere Mall in the North End, and Franklin Square in the South End. Both of these are spatial nodes of strong visual character, and their absence in the interviews may be taken as the only really puzzling anomalies arising out of this comparison.

Even if we compare relative ranking of elements arbitrarily, setting "major" field elements as equal to first or second interview quartile, we find that of the 86 duplicated elements only 6 were judged major in the field and yet appeared below the second quartile, while only 4 appeared above the third quartile and yet received a "minor" field rating. The other 76 elements, thus corresponded in rank, as well as in presence on the maps.

Some General Comments

The Boston tests have made clear the significance of space and breadth of view in the urban experience. It cannot be doubted that the dominance of the Charles River edge is based on the wide visual sweep it affords on entrance to the city from this side. A large collection of city objects can be seen at once, in their relations, and one's position relative to the whole is abundantly clear. In addition, there is an emotional delight arising from a broad view which is referred to many times as the subjects dwell on various panoramas. Would it be possible, in our cities, to make this panoramic experience a more common one, for the thousands who pass to and fro every day? It must also be added that a broad view can sometimes only expose chaos, as the sight of the office district from Atlantic Avenue, or express characterless loneliness, as when looking across the Back Bay yards.

Some of the strength of the Boston Common rests on this simple spatial quality, as it gives a large view of the central city, while also itself being visible from an extensive region (see Map ____). The Boston Harbor is an even greater space, and fully as interesting as the river opening. Several people speak of the view from the harbor as their favorite experience in Boston. Why then does it seem substantially weaker than the River? Clearly for two reasons: first that the travel paths of many more people pass over and along the Charles, so that this is in fact the only broad view of the city that is enjoyed by any substantial number of people. Second, that the Charles is continuously open to view, while the harbor is blocked by warehouses and docks which allow only occasional glimpses of visual fragments.

Even raw, or shapeless, space seems to be remarkable, although perhaps not pleasant, in the city. Thus many people refer to the clearance and excavation at Dewey Square as a very remarkable sight. Undoubtedly this is by contrast to the normal tight urban space, particularly in Boston, so that any

substantial opening is immediately noticeable. The contrast of a wide street in a narrow street town is always picked up and commented upon: Cambridge Street is a prime example.

When the space has some form, as it does along the Charles River or on Commonwealth Avenue, in Louisburg Square or to some extent in Copley Square, the impact is much stronger, and the feature becomes very memorable. If Scollay Square had a spatial shape commensurate with its functional importance, it would undoubtedly be one of the key features in the city.

The interviews have brought out another general response, the response to sharp contrast in the environment. The material is full of examples of the remarkableness of spatial contrast, as noted above, and equally full of references to age contrasts: the effect of the “new” artery cutting through the “old” Haymarket district, the attention given the new Catholic chapel, among the ancient buildings on Arch Street, “old” (dark, ornamented, low) Trinity Church silhouetted against “new” (bright, stark, tall) John Hancock, and so on. Relative age seems to be a quality to which most Bostonians, at least are very attentive.

Other contrasts, if not quite so potent as these two, are also often noticed. Strongest among these are contrasts of socio-economic status, as when describing the two sides of Beacon Hill, and contrasts of use, particularly residence vs. non-residence.

These themes appear again when we consider how the subjects tended to group photographs of the city, when asked to do so. We were interested to see what their frames of reference might be. Principally, we found, the grouping was done by classes of land use: houses, factories, stores, etc. Also important were groupings by spatial characteristics: open vs. crowded, wide vs. narrow. The third basic frame of reference was by the geographic district in which the view was located: North End, Back Bay. A smaller

number tended to use socio-economic status, cleanliness, or personal reactions of like-dislike for their groupings.

As many interviewees took care to point out, Boston, while confusing even to the experienced inhabitant in its path pattern, has a quality that quite makes up for it, in the number and vividness of its differentiated districts. In this city, these readily recognizable places seem to provide the basis for orientation in many cases, and they appear again, as noted above, as a tool to organize a group of photographs.

It is interesting that Boston does not have a completely haphazard pattern of paths. The pattern responds to the historical past of the peninsula, and the city seems to have a sort of a "grain". It is simpler to move generally east-west to and from Massachusetts Avenue, than it is to move at right angles to this line, through much of the central city. This is reflected in the relative ease for most people of taking various imaginary trips, either with or against this "grain". Nevertheless, the path structure is an unusually difficult one, and in its complications and specializations furnishes much material for the systematic considerations of paths in Chapter ____.

One of the striking features of Boston that reveals itself in these studies is the shape ambiguity at the very core. This is the vividly-pictured but shapeless Boston Common, as it is related to the intersection of Boylston and Tremont and the discontinuity of the central shopping district. The Common-Garden, of course, is perhaps the most important element in the structuring of Boston. Its large, planted open space, accessible to all and surrounded by thickly-set buildings, is quite unmistakable. The contrast of quiet park by the side of the most intensive district in Boston, makes a vivid picture. Its size and location are such that it exposes and interrelates one edge of three basic districts of Boston: Back Bay, Beacon Hill, and the downtown shopping. This is the nucleus from which any stranger can expand his knowledge of the environment in a simple way. Furthermore, it is highly differentiated within itself, into such parts as the little subway plaza, the fountain, the

Frog Pond, the bandstand, the cemetery, the “swan pond”, and so on. Its frontages are distinctive: Beacon Park, Tremont, Arlington, less so Boylston; and gives distinction to the streets that pass along or near it.

At the same time, it has a most peculiar shape: {See PDF of original for drawings} which is extremely difficult to conceptualize, having five right angles. Since it is not a rectangle, and is too large and well planted for all the sides to be inter-visible, people are often at sea in trying to cross it. The division between Common and Garden only intensifies the difficulty, since while making the Garden rectangular, it leaves the Common with and even more difficult shape: {See PDF of original for drawing} and the barrier of Charles Street and the treeless fields along its edge break the continuity between one section and the other. If this dividing district had a stronger character, through use or landscape, it might help to preserve orientation throughout the whole.

The city-wide importance of Boylston and Tremont which participate in this ambiguity compounds the problem. The consequences of their right-angled projection form a seemingly straight base line, and their final crossing at right angles, has already been discussed. When, finally , we add to this the awkward way in which the central shopping makes a right-angled turn at this point, weakens and then appears again on Boylston Street, we have major orientation flaw in the city. A solution must regain the shopping continuity, making its turn an easy one, clarify the difficult shape of the Common and gives it strength and character at the transition zone, and erase the Boylston-Tremont difficulty. Without a complete restructuring of the city, it is probable that what is most needed is the establishment of some key, visible activity in the Park Square area, making the hinge obvious, and allowing Boylston and Tremont to be pictured as running up to it, rather than trying somehow to merge one into the other.

This combination of thematic vividness, coupled with shapelessness, is not at all uncommon in this city, being perhaps the reverse case of so many

American cities. The market district is a prime example. Here the market activity is unforgettable. Faneuil Hall and its associations reinforce it. At the same time, the district might link together Scollay Square, the shopping district, the financial district, the North and even the West End.

Actually, of course, the market area serves only to confuse the city structure. Shapeless and sprawling, now divided by the Artery, it is further hampered by having two centers which vie for dominance: Faneuil Hall and Haymarket Square. The connections to other areas are either obscure, as to Scollay, or disrupted by the Artery. The spatial chaos of Dock Square conceals the fact that Washington extends further. Rather than a link, the district acts as a chaotic barrier zone, while retaining its highly distinctive character. Could these areas of thematic clarity be given structural clarity as well, then strong perceptual anchors would be set.

The distinctiveness of Boston seems to rest particularly upon the strong character of many of its regions, which in some parts succeed each other continuously. Their various characteristics and strengths will form part of the discussion in Chapter _____. It is also a city notable for the intricacy of its path system, and the "floating" quality of many of its important landmarks and nodes. It seems, from the interview material, to be a "one-sided" city, which loses precision and content as one moves away from the Charles River edge.

We would also like to point out the inability of most people to envision the connection between the River and the inner harbor, so as to complete, visually, the intellectual conception of Boston as a peninsula. Partly this must be due to the actual screening of the water at the tip by railroad yards and large structures, and also to the chaotic aspect

of the water at the meeting of Charles, Mystic, and the sea, with the myriad bridges and docks. The lack of frequented paths along the water, in contradistinction to Storrow Drive, must also bear the blame. Very possibly, also, the sharp drop in the water level at the two sides of the Charles River Dam serves to break the continuity quite effectively. At any rate, this lack of peninsular closure undoubtedly deprives the citizen of a satisfying sense of completion and rationality in his city.

Over one-quarter mention the following:

- old, originally single-family houses
- how, one-way traffic lanes
- stone structures, mostly brownstone
- grass
- related to Massachusetts Avenue
- the River nearby
- a gradient to Massachusetts
- a path and benches in the mall, people sitting and walking.

At least three or four agree in noting:

- statues in the mall
- the Hotel Vendome
- apartment houses
- it is a residential area
- underpass at Massachusetts
- would like to live there
- is related to Beacon, Newbury, Marlboro
- a long street
- symbol of Boston.

The essential images which arise from direction inquires in the street are in agreement:

- it ends at the Common and Gardens
- a big wide street
- a central park mall

From two to five added:

- parallel to Beacon Street

two one-way traffic lanes
intersects Massachusetts
run off Arlington Street
has trees
a long street
parallel to the River
related to Boylston Street
related to Copley Square.

This demonstrates a clear, and, for a single street, a rather full public image. It is remarkable both for this strength and for the fact that this long stretch is felt to be a continuous, unified thing, describable quite easily as a whole. Above all, this uniqueness and continuity is due to a space contrast: Commonwealth is a wide corridor flanked by continuous facades, with a broad planted mall in the center, 90 ft. wide and 5,000 feet long as shown in the cross-section. There is no other space like this in Boston, and thus the element is unmistakable, without searching further for other clues. The small front lawns, and the wide main sidewalks (about 12 ft.), reinforces this sensation. Some of the potential contrast is lost, however, due to the trees planted on the entering side streets, which both reduce the character differences, and also mask the view. This space is straight and continuous through the stretch under consideration. Visually it is delightful, except for the feeling that it lacks some articulation along its length.

The mall itself is planted with a quadruple row of large cottonwood trees, and a broad gravel path runs down its center, flanked by occasional benches. The benches are occupied predominantly by elderly people; the walk always has strollers upon it. Occasionally, the path divides around a

statue on a high base (see Map ____). The width of the mall is sufficient to give psychological protection from the traffic, although the noise level is high, and the green cover is massive and shady. This ability to sit comfortable outdoors in the city, or to stroll at ease, is unusual and obviously valued by many people. The continuous, if small, front lawns with their occasional magnolia trees, add to the particular character.

The traffic moves on either side of this mall in one-way streams, a pattern impressive to the motorist. In addition, all the other parallel Back Bay streets are one-way. Commonwealth is the only two-way stream in the area, and traffic concentrates here.

The Avenue is also remarkable for the apparent continuity of its facades, despite the length and the fact that almost each attached structure has an individual cast, often strikingly so. Continuity has been gained without mechanical repetition. It seems to reside in four principal characteristics, in descending order of importance:

1. The structures are attached, built to a common line, and mostly on lots of comparable width.
2. There is a common scale of fenestration, the windows being rather narrow but close to a floor to ceiling height, and the head and sill lines pick each other up on building to building in a general way:
3. There is a similar richness of carving and ornamentation: of plasticity of facade.
4. There is a general roof height, at about 3½ stories, whose minor variations simply add to the interest: {See PDF of original for drawing}. Where a major change occurs, and where this change does not coincide with a key use such as the Hotel Vendome or the First Baptist Church, then the effect is somewhat disturbing. When the roof line is very low or absent (i.e., a break in the

continuity of character #1 above), as occurs once or twice, than the unity is temporarily destroyed.

The continuity of front lawns has been mentioned above. There is considerable variation in the building materials used and thus in the color and fine texture of the facade: brownstone, brick, granite, marble and architectural clay being the principal kinds. The color is predominantly a reddish brown, but there are frequent white notes. This variation does not seem to interrupt the continuity of the street, and seems more pleasing than act, although it might have been disturbing, had not the variations been all in the same quiet way.

Map indicates the location of breaks in the continuity of seals of fenestration; in richness of facade (i.e. the presence of "plain" or bare facades), and of general roof line. It will be noticed that these changes are relatively uncommon before reaching Massachusetts and rarely concentrate except on the south side of the Dartmouth-Exeter block, and, to some extent, the south side of Berkeley-Clarendon block.

These physical characteristics, along with the apparent late nineteenth-century style of the structures, seem to lie at the bottom of the sensation of unity in what are actually highly varied facades. In the general style and material of these attached structures, and in the purpose for which they were originally intended, they are quite similar to most structures in the Back Bay, if often a little more ornate. Thus, quite similarly to Louisburg Square, Commonwealth Avenue seems to stand for the general area by exhibiting its typical architectural characteristics, but in a different spatial sold.

As is usual with city paths, Commonwealth gains strength from the high visibility of its termini, or at least of one of time. Connection to the Public

Garden is entirely open to view, one space flows into the other. The planning in each member adds to the continuity. Arlington Street, although heavily trafficked, has no parked cars and is not visually disturbing, particularly since there are traffic breaks all along the line of the Avenue. In detail, there is a lack of good spatial and landscape connection, since the Avenue tree alley happens to dwindle away just before reaching Arlington and the path and planting in the Gardens are of entirely different plan. Perhaps a continuation of the Commonwealth path and tree system in the Garden, preparatory to an opening out, might improve this. At any rate, this does not affect the general visibility of the joint.

At Massachusetts Avenue and the Fens, however, the situation is quite different. In concept, and perhaps in original design intention, the Avenue is a park mall running from the green of the Fenway to the green of the Gardens. This is hardly apparent any longer. At Massachusetts, the curbside sidewalks go on, but the traffic lanes pinch off the mall and its walk, and then are themselves swallowed up in the dark holes of the underpass. The Avenue is blocked off, and yet not blocked off, and the level relation to busy Massachusetts with its quite different commercial uses, is very ambiguous. There is need here, either for a definite terminus, or for continuity under the bridge.

The succeeding block on Commonwealth, as show in Map , makes a sharp break with the unity of the preceding eight blocks, both in use and the character of facades. A short fragment of mall reappears again on this side, but it is unused, empty of people. The block seems to have little relation to what has gone before. Next, the Avenue passes over the Fens on a broad double bridge. The planted waterway is lost and out of sight at the lower level, and the space seems to be given over to cars. Commonwealth in fact seems

not to connect to the Fens in any way, but to trample over it on its way to the confusion of Kenmore Square.

The terminus at the Garden, then is very clear, and could a definite visual ending be made at Massachusetts, then Commonwealth would have the distinction of a firm connection on both ends.

Along the line of the Avenue, there is little by which one can gauge position. Interviewees were often insistent on a gradient of decreasing residential use and planting going to Massachusetts, but it does not exist. In fact, the real gradient is reverse. Map _____ shows that the concentration of non-residential uses are between Arlington and Dartmouth, and field survey indicates that the tree planting in the mall becomes thicker, as one moves to Massachusetts. This widespread misconception must be due to the association interviews have with the Gardens, on the one hand, and with Massachusetts Avenue commercial uses on the other, and not upon anything actually seen in reality. Such a reversal is possible because the real gradient is not highly perceptible: the non-residential uses blend easily into the general background, except for a few such as the church, the hotel, and the Professional Building.

Other possible physical gradients are slight or non-existent. The avenue has only a slight hump in it, approximately between Dartmouth and Exeter. The concentration of statues in the mall toward the Gardens end is a very flimsy clue. There is no appreciable change, from one end to the other, in traffic, type of people on the streets, or level of maintenance. The houses toward Massachusetts become somewhat simpler and smaller. In sum, there is little change that would be obvious to the ordinary passer-by. At night, however, this situation is somewhat modified, since the segment intown from Dartmouth is more brightly lit, and has more pedestrian activity, than does the more purely residential section.

Similarly, there is very little articulation by which a person may make his location more precise. The principal feature of this kind is the

intellectual device of the alphabetized cross-streets: Arlington, Berkeley, Clarendon, etc. The regularity of the cross-streets provides a basic rhythm, and the succession of initial letters gives progression. This is widely understood and used when actively looking for some location. Like most purely conceptual devices, however, it requires searching and does not provide instantaneous recognition of place.

Except for this, the principal articulating features are the two distinctive buildings: the First Baptist Church and especially the Hotel Vendome; as well as the noticeably broader space scale of the one cross-street, Dartmouth.

Views of objects outside the Avenue itself give rather uncertain clues as to direction and position on the line. The Garden obviously terminates the Avenue in one direction, but is not easily visible for more than a block or two, due to the messing of foliage. Close to this end, the view of the Washington statue, and of the tip of the Customs House tower, both on axis with the street, reinforce the sense of direction. Looking the other way, the buildings on the south side of the street between Massachusetts and the Fens, which appear because of the change in street alignment, are visible for longer distances. They form a rather nondescript termination to the view, however.

There is little differentiation of one side of the Commonwealth Avenue from another, except for minor variations near Clarendon, -Dartmouth; the only real clue to the left-right orientation are the office towers, such as John Hancock, visible to the south at the Garden end of the street, and the views of the Charles River, which appear momentarily and at right angles to the normal line of vision, at most cross streets. Thus, except when one is close to either of the two ends, it is always obvious that one is on Commonwealth, but where on Commonwealth, or in what direction one is going, is often obscure.

The Avenue is an important part of the structure of the Back Bay region. It is a heightened thematic symbol, with a distinctive spatial form, the central line of the set of major Back Bay paths. It links visibly the two ends of the area. It is noticeable down each cross street, and crossing Commonwealth is the principal visual event that occurs in going across the area. In this way, it is structurally more vital than such a path as Storrow, whose interceptions are few, and visibility low.

It plays a structural role even on the level of central Boston as a whole, since it ties together Massachusetts and the Common, and reinforces the direction of the River. It has less value as a link between major parts of central Boston than does such a street as Washington, however, since it is wholly contained in Back Bay. Nor can it give scale to the remainder of the city, since the street pattern changes sharply at the end of it.

The tendency of some to call the Back Bay the "Commonwealth Ave. Section" has been noted earlier. The relation to the River is reasonably clear, due to the side views down the cross-streets, but undoubtedly would be better were it easier to reach the river bank along these side streets. The image of the Avenue is further strengthened by the fact that its course is visible from a distance for many people working in such buildings as the John Hancock, the New England Mutual, and the Consolidated Gas Buildings or the Hotels Statler, Sheraton Plaza, Lenox, or Somerset. The breadth and planting of this street is clearly identifiable even from a roof-top view, a rather uncommon quality for a city path. Commonwealth is thus a very delightful, distinctive and structurally clear path, with a remarkable unity over its length despite much individual variation. It lacks only a satisfactory western terminus, as well as means whereby position and direction along the line can be more adequately grasped.

not interesting

not dirty

like buildings in any other city.

~~There seems to be a persistent impression of nonentity in its design.~~

The street inquires produced such of the same, the overwhelming comment being simply:

it's big

while five people agreed:

it has colored lights on top

on Berkeley

on or near Arlington (!)

on Boylston (!)

and two or three said:

can see it from a distance

near the Common

has a sign on it (!)

it's tall

on Clarendon

near Tremont (!)

Two persons gave directions to it, without pointing to it or recognizing it, while it was in full view.

Both the size-height contrast, and the general familiarity and yet the difficulty of description or location is apparent. In reality the building occupies the block between Clarendon, Berkeley, St. James and Stuart Streets with its main entrance on Berkeley. With a height of stories, and sq. ft. of floor space, it is a unique vertical mass in the city.

The skyline silhouette, if poorly scaled and lumpish, is also reasonably distinctive, with its fat slope, stepped pyramid, and crowning signal-pole. The blankness, and colorlessness of the facade is quite similar to that of many recent tall buildings in Boston, such as the Country Court House, or the Post Office, or the Telephone Building, but the silhouettes are quite different. The United Shoe Machinery Building has a similar stepped top, but without the pole. The Customs House Tower is equally high, but its bulk and silhouette quite different. At night, the Hancock building stands out even more, and its colored weather beacon dominates the sky. Occasionally there is name confusion between the John Hancock Life Insurance Building and its close neighbor, the New England Mutual Life Insurance Building.

In general, then, the John Hancock is easily identifiable on the skyline. It is visible from a great distance, and from such vantage points as the Blue Hills seems to dominate and symbolize central Boston. Within central Boston, it plays an increased role as a landmark, since in no place, other than the North End, can one walk more than 2000ft. without having a glimpse of the bulky silhouette. It marks the Copley Square-Boylston Street office and shopping region, just as the cluster at Post Office Square marks the principal office district, the State House and Court House mark the governmental center. From certain panoramic viewpoints as from across the Charles River, the city's basic pattern is explained by these characteristic towers which stand for the important areas. The Hancock is rather like the Custom House, however, in that it stands somewhat at the fringe and not the center of the area it symbolizes, and thus loses some of its force as a location device.

As one approaches the building even more closely, it begins to lose its importance. It is invisible from positions closer than Boylston Street or

Copley Square, due to the setbacks. Facades of the lower stories are faceless and indistinguishable from such neighbors as the Park Square Building, the Liberty Mutual, the Salada Tea and the police station. It was a photograph at this level that proved difficult for subjects to identify. The main entrance on Berkley is monumental, but cold, featureless and without invitation to enter. The connection to the older annex, and therefore the fact that the skyscraper has another entrance on Clarendon, is hard to see. In sum, there is no apparent visual connection between the notorious tower and the anonymous base.

The relationship to surrounding paths is also obscure. The more important arteries, Boylston, Columbus, Arlington or Dartmouth, are all a block away. St. James Avenue is a brief fragment, going nowhere; Stuart Street loses its name and its spatial identity in the confusion near Park Square. Only Clarendon and Berkley have any meaningful connections, particularly the latter which goes through to Dover. This is the street on which those who can do so generally place it. The base of the building has, moreover, a catty-corner relation to Copley Square, highly visible therefrom, but difficult to conceptualize.

In addition to indicating direction, it also gives some hint of relative distance when seen from the "middle-range" of other parts of central Boston, since it is large enough and close enough to increase markedly in apparent size as one approaches it. This visual "growth" also serves to enliven the urban scene, just as the very newness, bulk and coldness of the Hancock facade does when it acts as a backdrop to such intricate, old and dark-colored buildings as Trinity, or the Arlington Street Church.

While direction to the Copley area is easily marked by a glance at the skyline giant, it is very difficult to estimate the direction from which one is looking. One facade cannot be differentiated from another, the silhouette changes but little as one rotates around it, and the color texture and relief are such that the tower often looks shadowless and unsubstantial, like a huge piece of light cardboard thrust up in the air.

The upper stories of the building itself, give a broad panorama of the central city. Although the experience is rare except for the daily workers in the offices, yet such a view, with its clear explanation of Back Bay, Common, Beacon Hill, core area and water edges, but its relative confusion of other relations, must play an important role in the general orientation image of many people.

The John Hancock Building, aesthetically unpleasant as it may be, plays an important role, day and night, in the structure and symbolism of Boston. Could its base be more closely related to other features and to the tower above, could the tower itself gain more solidity, angular differentiation and describable character, the Building could do more than dominate by size alone.