

A DEADLY REMEMBRANCE
Consolidated notes on the 1st draft

GENERAL

PEG: Some of the emotional and sexual scenes are too downmarket. Make them all more sophisticated.

The way characters express their thoughts in italics seems forced and unnecessary.

JE: Don't telegraph flashbacks

AZ: At the time, many people in the U.S. military advocated a "First Strike" against the USSR.

Techbites

PEG: The scientific lead-ins to the chapters seem too short and simplistic to appeal to the readers Ken attracted in his early books. These sections should impress the reader, even if he does not fully understand.

JE: Good idea, but there are so many of them, and the details are so trivial, I found myself copping out of reading them in the second half. Can you get us to picture the rocket? Understand the nonhuman forces that want to make it fail, feel its vulnerability? Can you make the rocket a character?

Jann: They are too fragmented to really understand them.

CHARACTERS

Luke

JE: Gripping in his day-one fight against amnesia, he sags before becoming interesting again as he weighs up t he has learned about himself. Good scene in his Huntsville home, realising his marriage must be a gake.

He's inconsistent: is he a brainy, absent-minded boffin, a thoughtful, gracious man, or Steve McQueen in *The Great Escape*? If he's all of them, perhaps Billie should tell him so when he's searching for himself.

Elspeth

AZ: Toward the end of the novel, we find out how much she loves Luke and how devastated she is by losing him. But earlier in the story, while he's in distress and being chased madly around Washington, we don't sense any of her love and concern for him. How much more interesting she would be if she tried to call off Anthony, threaten him, threaten Nik, in short, to be at least at moments a normal hysterical wife. To her, Luke could be a prince, a paragon, she should worship the ground he walks on and she must hate herself almost all the time for deceiving him. She might even have fantasies about adopting a child or children.

Another way to give her depth might be to make her jealous of Luke's fanatical devotion to his work. She could want him to teach at a university or do pure research and spend more time with her, and that could be part of her hatred of this rocket launch. But at the same time she could feel terribly guilty about working against something which means so much to him. To sum up, we have to find ways to like her or at least feel for her. Right now she's a bitch.

She has been working for the Russians even longer than Anthony has but, with her too, we have no sense of her accomplishments in this area, what she has done along these lines that she feels proud of.

Leftists of this period were particularly incensed by the cruel and unjust treatment of Negroes, and all this could have been much aroused in her with the move to Huntsville. (Huntsville schools were desegregated in the sixties.)

JE: Deepen her motivation by making more of her gut feelings in favour of the underdog and the oppressed (to form a head/heart contrast with Anthony).

Anthony

KF: Anthony is a tall, masculine, outgoing character, strong-minded and self-confident, with a beautiful tenor voice. He is scornful of people who dither and say "On the one hand, on the other". Think of Chaim Tannenbaum.

Anthony made up his mind long ago that there were going to be casualties in the ideological war of the twentieth century, and there was no point in being squeamish.

AZ: For us to become emotionally involved in the scenes written from his PoV, we need to feel for him as much as we did for Feliks or Faber.

One big thing which allied us with those earlier heroes was that from the outset they were in danger. What if Anthony from the beginning is the subject of an internal

investigation? What if one of his colleagues who doesn't even know about his Soviet involvement is trying to stab him in the back professionally? What if Nik is fed up with him for some reason and is threatening to have him exposed?

Another way to build him up is to increase his devotion to Luke. Maybe initially the plan was to kidnap Luke and confine him until the launch, but Anthony couldn't bear treating his old pal so cruelly, hence the amnesia. And when Luke slips away and becomes a threat, he could still struggle against killing him. Instead of a gun with bullets, he could limit himself to a stun gun. Maybe only at Huntsville does he become desperate enough to carry a real gun.

Another way to beef up his human side would be through his relationship with Billie. I think he should be carrying a torch for her which he would like to put out but just cannot. He's reconciled to the fact that he'll never have her, but he just can't keep away from her, and that explains his close relationship with Larry. He's fond of the boy and indeed does like doing things with him, but mainly all that is an excuse to maintain regular contact with Billie.

Anthony wants communism to triumph and to bring equality and justice to everyone, but we haven't found a way to render his idealism dramatically. I believe that in the 1950s the Washington public schools were still segregated. Could this be a burning issue for him? His communism could be rooted in a tyrannized childhood, but it would also benefit from his highly sophisticated and analytical evaluation of social and economic systems. He may hate his father, but I don't think the scenes you have with his father are working, and I'd love to see some other actions which allow us to participate in his devotion to the communist ideal. There ought to be some contemporary news items (one in particular) which you could perhaps use.

He has been in the CIA for some years and has risen to an important position, but we have no idea what he has accomplished, what special things he's managed to do, to achieve this eminence. Nor do we know anything about what he has done for the Soviets. Some of this could come in scenes with Nik or Elspeth.

I like the idea that Pete is fanatically loyal to him, but he doesn't seem to be the kind of character to whom anyone would be fanatically loyal. He seems narcissistic. We may need a scene in which we see him do something wonderful for Pete.

JE: Anthony needs thinking through carefully. Why does he choose to be a Commie to piss off his father, then never piss off his father with it? Why does he go to considerable lengths to get Billie away from Luke, then make no attempt to get her for himself?

He's head of CIA's Dirty Tricks and a successful 17-year double agent, yet he and his henchmen are amateurish (on Day One in particular). His thinking about the Soviets is callow at one moment, solid at another. He's good thinking in realpolitik terms about Cuba (but don't forget, in 1958, Egypt, Indochina, Algeria...) Anthony can be a convincing pro-Sov because he believes the balance of power is about to tip up thanks to a worldwide surge of anti-imperialism—an intelligent, informed analysis.

Nik

JE: He's good in the early scenes, pressuring Anthony. I understand you may not want to roll him on regularly like the Devil in a morality play, but he disappears for too

long. I suggest he comes in on first postponement. (There's too much uncertainty about whether Anthony's cover is blown, and will he fight on etc.) Nik could intervene higher up in the CIA, or in army security, to gain Antony temporary respite, then put even more pressure on him.

Bern

JE: Convincing. Pity you leave him in Washington. I expected him to come into the final conflict, and I think other readers will too.

UNION STATION & VICINITY

H St is a street of cheap shops.

E St is two-way

8th St is a bus route. There are cheap shops south of Pennsylvania Av.

LINCOLN MEMORIAL & VICINITY

Avenues of English elms both sides of the Reflecting Pool. No trace now of the buildings which flanked the avenues of trees north and south. Lots of trees and several clumps of bushes. Hardly any beach now opposite the southern tip of Theodore Roosevelt Island. Theodore Roosevelt Bridge is not in any of the pictures taken in the fifties, nor the maps. You can park on 23rd St north of Constitution Av.

GEORGETOWN

1. Georgetown University

Luke can drive in through the main gate on 37th St at the end of O St. He would probably park right outside Healy Building and walk up the short flight of steps to the door to the main lobby. A female receptionist on the right would direct him to the physics department.

He would go out again and down steps to the entrance to the physics department which is precisely underneath the main door. He would step straight into the North Lab, which is the more advanced of the two physics labs. There are offices either side of the lab. Through the lab and to the left is the receptionist.

Continuing in the same direction, the basement is a long, dark, dirty corridor that runs under the full length of Healy Building. At the far end of the basement is the South Lab, a more general physics lab for undergraduates. In a room off the South Lab is the seismograph, a clockwork machine that has to be wound up once a week.

Physics was not an important subject, much less geophysics, but astronomy was, and Luke would be directed to the observatory. Leaving Healy building at the south end, he would have a view across tennis courts to the Potomac river. Turning right, he would pass a building site on his left and see the white dome of the observatory across the sports field.

Inside the observatory, entering from the rear, the first thing he would see is the huge central concrete support for the dome above. Moving to the front of the building, on his right is a library. On his left, Father Frank Heyden's office, shared with his secretary and two graduate students. In a small room off the office, the computer.

In 1958 the student body is all-male, except for the nurses at the hospital and some language students. About 40% of the professors are priests.

2. Other

Bern's apartment is on Massachusetts Avenue overlooking the gorge of Rock Creek.

CARLTON HOTEL

The hotel is on the corner of 16th and K Streets. The entrance is on 16th. There is a curved driveway with a carriage porch.

(Two more entrances on K Street, one to the restaurant, the other leading down steps to the lower lobby level, where there used to be a nightclub. This is now the employee entrance.) There is also a freight entrance off an alley at the back of the hotel. The alley leads to I St.)

The lobby is rectangular, stretching left and right as you enter, and looks like an oversize drawing room. Reception and concierge desks are in niches in the wall opposite the entrance, elevators to the right in the same wall

When originally built (in 1925-6), "the public spaces were sumptuously decorated in the Italian Renaissance style....The hotel rooms—more often two-to-six-room suites—were furnished with specially-made solid walnut furniture, and each corner suite had a grand piano; bathrooms featured telephones, tile imported from Holland, and outside tubs.

In the Roosevelt era it was used by the State Department for entertaining.

In 1954 it was sold to the Washington Sheraton Corporation, and the name was changed to the Sheraton Carlton. "The lobby was redecorated with reproductions of French antiques, and at some point the grand pianos disappeared from the corner suites, and the famous bathrooms and their telephones were modernised." (530 is a corner suite.)

Original layout:

To the left, two great arches in the wall lead through to the North Lounge (now the bar). (You have to pass through this lounge to reach the Dining Room.) To the right, the same design leading to the South Lounge (the Art Deco lounge).

In the wall facing the entrance, reading from left to right:

a service elevator;

steps down leading to a Private Dining Room with service pantry (now the kitchen for the Espinasse restaurant)

a door to a staircase leading up to the mezzanine,

cashier's desk in an alcove

the reception desk in an alcove

centrally, an open entrance leading into a little lobby with two pay phones on the left wall and an old-fashioned phone booth with a seat on the right wall, leading further to the Patio or Spanish Court

the bell closet (entered from the phone booth lobby

newstand

another open entrance

two elevators

entrance to the Main Dining Room

Over this wall was a mezzanine, now walled in and used as office space.

Luke's run:

into the bar,

through to the restaurant,

turn right into the private dining room (now Espinasse) kitchen, a long narrow space,

down the serving pantry stairs

through the basement kitchen

to the back of the hotel, then back up another staircase,

and out to the loading dock, which is on I Street.

Basement, below the lower lobby, has employee lockers, employee café, laundry, wine cellar, storerooms.

The mezzanine was walled off in 1975, the nightclub redone as a meeting room in 1977.

SMITHSONIAN & VICINITY

Constitution Av is two-way

Independence Av is two-way

Madison goes west

Jefferson goes east

Adams Drive and Washington Drive are pedestrian walkways through the park, but maps of 1958 appear to show them as regular streets.

14th is two-way

7th is two-way

12th and 9th dead-end at the park at ground level and pass under the park in tunnels.

10th is now L'Enfant Plaza. Coming northwards, it dead-ends at the Smithsonian south gate.

Jefferson Drive passes close along the north front of the main Smithsonian Museum building, a dark-red gothic pile. At the south front, the entrance is directly opposite the end of 10th Street (now L'Enfant Plaza). There is a garden between the building and the Independence Avenue gate. Another gothic building, the Arts & Industries museum, is to the east of the main building. Tucked into a corner of the garden, in the angle of Independence and the Arts & Industries, is the Museum of African Art. This is where the old Aircraft Building was.

RADCLIFFE & HARVARD

Opportunities for boys and girls to meet

Classes were segregated until 1943 (when integration was imposed because of the war). Some classes were held in Harvard buildings, but they were still all-girl classes. The labs were on opposite sides of the same corridor, so it was impossible for the authorities to impose total segregation.

Radcliffe dorms would hold a "jolly-up" on Sunday afternoons, with soft drinks and cakes. You could invite your boyfriend and he could bring his friends. Sometimes professors would give parties at their homes on Sunday nights, and organise games such as charades. Wednesday nights each dorm would invite a professor for dinner and he would sit at the head table. (It was considered perfectly normal for younger professors and assistant professors to date undergraduate girls.)

Peg Dyer met her husband at a dance held in the hall of St Paul's Church in Harvard. They had donuts and cider, and danced to records. He then invited her to go to the Firemen's Ball at the Memorial Hall.

Dating

The boy would call for you at the dorm. He would ring at the door, and the uniformed maid would let him in. The maid had a desk in the lobby. She would use the speaking-tube to call to the floor where the girl's room was: "Visitor for Miss X." (This maid also operated the switchboard. There were no room phones, but there was a little phone booth on each floor next to the staircase. She would use the speaking tube to say: "Phone call for Miss X.")

Boys were allowed into Radcliffe dorms, but only on the first floor (i.e. ground floor), in the living room or smoking room. However, there was a practice known as the "panty raid". Boys would sneak into a dorm through a window, or somehow, go up the stairs and enter girls' rooms. Their object was to steal an item of underwear.)

Girls wore sweater sets and matching skirts, or a blouse with a Peter Pan collar that showed outside the neck of the sweater. Skirts were usually pleated. A broomstick skirt had fine pleats. Saddle shoes or loafers. The boy would wear a tweed jacket and khakis.

In the entrance lobby of the dorm was a board with cup hooks and keys. When going out, a girl would take the key from the hook numbered with her room number. So anyone could tell at a glance which girls were in or out.

When staying out after 10pm a girl had to make an entry in a book which was kept on the first floor. (Freshmen were allowed a maximum of 15 times out per year.) She would write where she was going and when she would be back. If going to a movie, she had to be back by midnight. If going to a dance at Harvard, the dorm headmistress would know what time the dance ended and the girl would have to be back a few minutes later. Thirty minutes was allowed to return from an event in

Cambridge, forty minutes from Boston. Then the girl had to sign herself back in. The book was checked, and if a girl was not in when she said, the house mistress would be woken up! (The house mistress lived in the dorm.)

There were often a lot of people outside the dorm door having trouble tearing themselves away from their boyfriends.

As well as the strict rules, there was a code of etiquette laid down in a booklet called the Red Book which was given to each woman freshman. Rules of etiquette included:

No wearing of slacks (although in a snowstorm it might be announced that ski pants, the popular form of trousers for women at the time, were permitted);

If a girl was going to a downtown hotel she had to be chaperoned, and her brother was not considered an adequate chaperone;

Hat and gloves were worn to tea parties. "The Dean of Radcliffe would have liked us to wear hats and gloves to walk to Harvard Square.

"I went to the Metropolitan Opera with a man in a top hat and a cape."

Students rarely took taxicabs because they were too expensive. They would walk to Harvard Square then take the subway if going downtown. The subway fare was 10c. There was also a trolley car that ran through Harvard Square. There, a traffic regulator sat in a box above the street. A boy who picked up his date in a white Packard convertible was considered too showy.

Boys could invite girls to dine in their House. The food was much better in the men's houses. Waiters brought menus and you could choose. Meat & potatoes, salad, a vegetable. A special delicacy regularly served at Harvard houses was a half grapefruit, already segmented, with a paper cup of honey on the side.

Forms of entertainment:

Movies—some of the movie theatres were palatial

A concert at Harvard

Films were shown at Harvard

Downtown nightclubs included The Coconut Grove (which burned down in 1942, killing a number of Radcliffe girls). There would be a \$3 cover charge. Bucky went to a nightclub once and ordered milk. There would be a floor show, singing and dancing. "We saw Tommy Dorsey and Frank Sinatra."

Pubs such as McBrides and Cronin's where students drank beer (cocktails were too expensive). Cronin's, in Mount Auburn St, had roast beef sandwiches.

A dance hall called The Totem Pole in the suburb of Newton They had big bands, but no liquor. This would be a big date on a Saturday night. There were tables and sofas where you could cuddle your date. You had to go there by streetcar.

The Silver Dollar Bar at the Stadtler

The Schubert Theater

MIT fraternity houses in Boston had lavish parties with big orchestras, food and entertainment.

There was a chain of ice-cream parlours called Sinclair's (?spelling) and another called Schraff's (?sp). Schraff's had baked apples. At the Vorscht House in Harvard

Square, a young man behind the counter made it his duty to see that Fran was well fed. One boy took Isabelle to a movie then to a donut shop for waffles with ice-cream and chocolate sauce. (He did the same thing every date, and she swiftly tired of him.) Students would go for hot dogs, chicken salad sandwiches, ice-cream sodas. Bickford's greasy spoon was open all night and people talked politics there.

Everything closed at midnight on Saturday! Bars and liquor stores were shut on Sunday.

House dances were big events. You would spend most of the day getting ready, including a visit to the hairdresser. You went with your date. They were formal, with the men in tuxedos or even white tie and tails. Boys would send corsages to the girls, a gardenia or perhaps, if you were lucky, an orchid. The girls would have dance cards!

Everyday life

Dorms were in a number of buildings clustered around a large rectangular lawn called Radcliffe Dormitory Quad.

Girls had to make their own beds, but cleaning was done by maids. At night, the maids wore black uniforms with white organdie aprons. (Harvard men had servants called "goodies" or "biddies".) Some houses were co-operatives where they saved money by doing their own housekeeping. Most students had jobs—this was the end of the Depression—but there was a group of wealthy debutantes.

Tuition cost \$450 a year (the price of a Ford) and board was \$550, making \$1,000 a year altogether.

The upper floors: just a long corridor with single rooms off on both sides and a bathroom at each end. Phone booth near the staircase; laundry for hand-washing clothes, a little kitchenette for making coffee and toast. Also near the staircase was a little nook with a three-way mirror, so that a girl could check her appearance before appearing in the lobby! (Men's houses did not have this feature.)

The rooms were spartan. Small, with a narrow bed. One window. A dresser, a desk, an easy chair and a desk chair, a closet. Peg's mother made curtains and sent rugs. "We used to send our laundry home." Bare pipes visible. Every door had a hook-and-eye latch which enabled it to be latched open, so that the house mistress could always look into your room as she walked by.

All the girls ate in the dining room. Lunch would be sandwiches. Dinner was meat and potatoes. At dinner you were supposed to talk. At the weekend, a breakfast tray would be brought up to the kitchenette on each floor. Sometimes we would take the food and have a picnic. Once a week, a Harvard professor was invited to dinner in the dorm. If his field was yours, you had to sit at his table. After dinner, in the living room, coffee was served in demitasses, and the conversation around the fireplace was very special.

No liquor was allowed in dorms. Men had liquor in their rooms (though this may have

been against the rules). They would smuggle liquor in cleaning-fluid bottles (carefully rinsed out). There were get-togethers after sports matches at Harvard houses, when the boys would make punch which had a lot of liquor in it. There was a drink called Purple Passion, made with grape juice and probably gin, which Harvard boys allegedly mixed in their bathtubs.

One of the buildings was a large shed called the Field House, used for various clubs and also for dances. There was a Catholic Club, a Jewish Club and so on.

Radcliffe Yard was the centre of life outside the dorms. Most classes took place in the buildings around the Yard. Social centre was the Agassiz Theatre. Here were the mailboxes, a cafeteria, a large ballroom where dances were held (and which was also used for modern dance classes and other activities) and a theatre where Opening Exercises (speeches) were held in September.

Also in one of the buildings was a swimming pool Every girl had to be able to swim or she could not graduate! Physical exercises were taken seriously.

The Harvard Coop was a co-operative store that sold books and everything else a student might need. Still exists.

The stress was too much for some students. Academic standards were demanding, college was for some girls a shocking change from the life they had been used to, they had to make decisions to drink or not to drink, have sex or not to have sex.

There were a number of private clubs, called Final Clubs, on Massachusetts Avenue, collectively known as The Gold Coast (or was this the wealthiest Houses on Memorial Drive?) Men were picked for membership on the basis of their background and invited to join. This was a snobby elite of men who were not intellectually engaged. The purpose of the clubs was drinking and dining. The most prestigious was the Porcellian Club, with a pin like the head of a pig.

The academic elite belonged to the Society of Fellows. Junior Fellows were graduate students considered so bright and responsible that they did not need to take a doctorate. They met once a week with about 10 senior fellows for dinner to discuss their work.

Politics

Sometimes people with strong political views would set up tables in Radcliffe Yard. They would give out leaflets and engage in discussion with passers-by.

The big issue was Interventionists against Isolationists (or America Firsters). At a party after the 1941 Commencement (in spring), feelings ran so high that the party was spoiled.

There were courses on comparative political systems. Among the faculty, the whole spectrum of political thought could be found. Some professors were openly Marxist, including one who taught Labour economics. (Mrs LeVin, a refugee from Soviet Russia, says the Marxists did not want to know about what was really happening in

the Soviet Union.) Others were advisers to the Roosevelt administration. At the other end of the spectrum, some older professors were vehement anti-New-Dealers. They would say that Roosevelt was endangering the Gold Standard, he was not balancing the budget, playing to the trade unions, not committed to free enterprise. However, the Nazi-Soviet pact in 1939 had done severe damage to the Communist cause.

Galbraith: "Nobody was for the existing system."

In those days, there seemed to be less hostility between right and left. But all the Marxists lost their jobs in the late forties and fifties.

7 December 1941

Bucky (who lived with her parents) was studying but she had the radio on. The program was interrupted for the announcement of the news. Shortly afterwards her boyfriend called and said: "This looks like war." Some students had already left to fight. Some professors had gone to Washington. There were German Jewish refugees at the university, so students were familiar with what the Nazis were doing. (A shop was opened in Harvard Square where the refugees sold handicrafts and pastries to help with their finances.)

The previous day, 6 December, being the first Saturday in December, was the night of Christmas House Dances. Most Harvard houses held dances. (Men's dorms were not called dorms but houses.) The dance would be held in the dining room, with the tables taken away. They sometimes had good bands. No liquor was served.

Isabelle was at one of the Houses, at a post-House-dance get-together.

Breaking the rules

Isabelle and her friends decided that after the Spring House Dances they wanted to go to the beach. They had to get a family called Jones, who lived in Boston, to write to the college saying they would all stay there. Then each girl had to get permission from her parents to stay out all night. They got food and took it to the beach and made a bonfire.

Fran was once kicked out of a Harvard house. It happened this way. She was talking to a boy about music and he said he had a record that would interest her. They went to his room to play it. This was in the daytime. Before he could get the record on the turntable, a tutor appeared. (He must have heard a girlish voice, or something: Fran is not sure how he knew she was there.) "You don't belong here," he said very firmly, and she had to leave immediately.

A girl in Peg's class had an affair with a married professor. She was thrown out, but the professor stayed on.

Isabelle knew a girl who got pregnant. Her name was Sophie and she was French. Everyone in the dorm knew she was pregnant—"Because we could tell". One day she simply disappeared. Nothing was ever said about her by the authorities.

Radcliffe had one Dean who was in charge of the girls' academic and moral welfare. She handled all disciplinary matters. (Harvard had several deans, of whom only one was responsible for discipline.)

If a girl was reported for being in a man's room, the Master of the House would report to the Dean, who would report to the Radcliffe Dean. The girl would get a note in her mailbox asking her to see the Dean

Punishments ranged from expulsion to suspension of privileges (which usually meant no late nights for a semester—considered a severe trial).

Politics

The big issue was what was happening in Europe. There was a movement called America First which was isolationist. Roosevelt had turned back a refugee ship, which was a controversial issue. There was a big local (i.e. Cambridge) issue about proportional representation in voting for the city council. Communism and socialism were much talked about. Following the Depression, many students favoured communism. On the other side, Roosevelt was much criticised for the New Deal.

Isabelle knew a girl who was a communist. She was very intellectual, very determined. At a communist party meeting she met a man who she decided was going to be her husband. She just followed him around until he took notice of her. She eventually married him.

Further references

Mary McCarthy, *Memories of a Catholic Girlhood* (?)
Nigel Hamilton's biography of John F. Kennedy, first volume

Maurice ("Moggie") Lazarus, Harvard class of 1938, phone 547-1442 and mention Julian Kaufmann)

Cary Stratton Boyd, Radcliffe class of 67, CaryseCoastal-intl.com

Avery Dulles, son of John Foster

Mrs LeVin 876 0289

Notes

For every appointment, give a departure time from the hotel or previous appointment, arrival time, and departure time from the current appointment. Open-ended appointments are the exception and should be marked "open-ended—no fixed departure time" or something like that.

Fax destination addresses and any directions to the limmo company office or hotel concierge so the drive can look it up in advance.

Signed book to Peg Dyer

Jane Knowles at the Radcliffe Library. Large collection on women's history.

Huntsville

Much of present Huntsville was cotton fields in 1958.

The major hotel in town was the Russell Erskine.

There were four layers of society: Old Cotton Money; Redstone; Mill Workers; the Poor.

If you saw a white woman shopping, you would be sure to see her black maid walking along behind carrying the packages. The maids were always called "Aunt"—Aunt Lucy, Aunt Mamie, etc. A black man called Joseph Smith could not be addressed as "Mr Smith", but "Joseph". However, to show respect to an older black man, a white person might address him as "Uncle Joseph".

The downtown area consisted of just a few blocks and would be crowded with people on Saturday. The only skyscraper was the Times Building, 12 storeys high.

Just two blocks from downtown is the wealthy area, Echols Hill, nicknamed Snob Hill. Everyone with money lived here. However, after the space program brought a huge influx of people, many large older houses were divided into apartments.

Lincoln Mills: a cluster of large cotton mills were subdivided into offices, laboratories and workshops for contractors working with the space program.

Eunice's on Jackson Way for country ham with biscuits and gravy.

Some Germans built houses on what was then the edge of town, on McClung Avenue, which was nicknamed German Row. Others built on Panoramic Drive on the Monte Sano hillside—because, it was said, it reminded them of Bavaria, although the true reason was that the manager of the bank had some land there he could not sell and he sold it to the Germans and loaned them the money.

The old airport was very small—a building only perhaps 20ft deep. A ticket desk, a shoeshine boy, vending machines for candy, cigarettes and coke. Phone booths out the front. No car rental desk. No restaurant. Passengers walked to the planes. No conveyor belt for baggage, which was loaded on to carts and taken out to the planes.

However, MATS flights would use the airstrip at Redstone Arsenal (and would fly to Andrews in DC and Patrick in Florida).

At **Redstone Arsenal** the buildings are all tan brick structures with flat roofs (since clad with corrugated steel sheeting during the energy crisis and, in some cases, given regular pitched roofs for cheaper maintenance). Inside, the breeze blocks, called clay tile blocks in the US, are visible under a coat of paint, cream now but in those days green to chair-rail level then lighter green above.

The gates are guarded by MPs. Test areas are fenced and the entrances guarded.

Blockhouses are railroad tank cars adapted and buried!
"Generals' Row" has white bungalows in a circle.

Headquarters building is a big three-storey (? Check photos) building, E-shaped, with a second, rectangular annex behind. Building No. 4488. Offices for General Medaris at A200 and for von Braun at A300, immediately above. Both mahogany panelled. Medaris has a nifty "Dictagraph" desk with built-in dictaphone. He can speak through loudspeakers to many rooms on the campus, and frequently summons people, even von Braun, infuriatingly. Most of the senior scientists are in the HQ building. Medaris carried a riding crop everywhere and liked to bang it on the desk to get your attention. He modelled himself on Patton and was a real son of a bitch.

The engineering building is a L-shaped one-storey structure. The central entrance leads to a lobby with long corridors to left and right and, straight ahead, an exit to a back yard. Off the corridors are offices and laboratories. The labs have green metal lab benches with drawers below, and black granite worktops. There are steel tables and chairs on castors.

There is a basement.

Out back is an electricity sub-station, necessary because the building uses so much power, then taller, cruder buildings which are workshops.

stepping switch, a simple cog wheel.

In the tracking room you could hear the doppler frequency.

The telemetry receiving station was in Hangar D.

There were several ways of tracking the missile, none of them perfectly satisfactory. There was no real-time information, just indicators. The DOVAP system: Doppler Velocity And Position. A signal was sent to the missile and then sent back by the missile. The difference in the signal, due to the doppler effect of the missile receding, was heard as a slow beat that rose in pitch with the speed of the missile. It was also recorded by a pen recorder. There was also real-time radar. The vehicle transmitted a signal making it easier for the radar to see.

Cape Canaveral & vicinity

First light is at 6.15am, full light by 6.45.

The road from Patrick Air Force Base through Cocoa Beach to Cape Canaveral is Route A1A. Between Cocoa Beach and Canaveral it is also called North Atlantic Avenue.

Cape Canaveral is a triangular peninsula of 17,000 acres reached by a narrow neck of land. In those days, the roads were mostly dirt roads, though a few were tarmacadamed. The roads ran through the low scrub, palmetto palms and scrub oaks and sharp sandspur grass that will cut you if you walk barefoot. There are many white-tailed deer, a few bobcats, some armadillos, and a lot of snakes—sidewinders, rattlesnakes, diamondbacks—which sometimes come out on to the roads at night for warmth. Eagles, pelicans, wood storks with a grey body and a black head, white and black ibises, egrets, scrub jays, greckles. Alligators. Florida panthers.

The missile was delivered to the base from Huntsville by a C124 aircraft which landed on the Skid Strip. The missile only just fitted into the plane. It emerged shrouded. The second, third and fourth stages, and the payload, arrived separately from the Jet Propulsion Laboratory in Pasadena.

The Redstone rocket was based on the V2. The accelerometers, relays and gyros were out of the V2. The carbon vanes that steered the rocket were a German idea. The Germans were more loyal than Americans. They had studied America.

The pump for the propellants used hydrogen peroxide passed over a cadmium catalyst which split into oxygen and water releasing energy quickly which drove a turbine. This design came from the V2.

Microswitches were always a problem. The army used cheap ones that gave trouble. There was never a launch without some system had to be jury-rigged or bypassed. Duct tape was called missile tape.

The arming disc described above is separate from this system and hard-wired. Arming would take place a short time before take-off and the arm command switch was in the blockhouse and controlled by the ABMA staff. If for any reason the launch was aborted, one of the first things that would happen was that the self-destruct mechanism would be disarmed. It is called a Safe and Arming device or S&A. In the rocket there was a visible sign of what position it was in, green for safe and red for armed.

Reverting to the use of the self-destruct mechanism in flight, there would still be two signals.

The first is the Cut Off Command. This would shut the engine down by cutting off the supply of oxidizer then of fuel (in that order, because the reverse order could cause an explosion). Some combination of two tones would command cut-off.

The second signal would be the Destruct Command, another two tones. This would fire the explosive train, opening up the side of the vehicle and causing it to break up and the fuel to burn and disperse.

Because this signalling system was well tried and tested, it was used for another purpose (to avoid laborious and unnecessary testing and development of another signalling system). The third signal would ignite the upper stages. An army person in the Command Centre (as it happens, it was Henry on 31 January) would be in phone contact with Stuhlinger, who was calculating the trajectory. At Stuhlinger's order, Henry punched the button to fire the second stage. (This was doubly redundant. The second stage was fired by a timer. And there was a communications centre downrange, in El Salvador, which also fired on Stuhlinger's order. However, the timer was likely to be late, so it was Henry's action that actually fired the second stage.)

Changing the plugs: An engineer would go up in the lift to the 2nd platform. Turn off the power. Open a door (or take off a panel?). Change the plugs. Disconnect the firing sequence. Test. This would take an hour or less, especially if done before the retraction of the gantry (otherwise a cherry picker would have to be brought in).

The command transmitter was a very simple mechanism, typically army.

Data from the missile was sent to the blockhouse by analog methods. This is why the blockhouse was so close to the launch pad. There is a room under the launch pad and a tunnel from the room to the blockhouse. Data transmission cables run in the tunnel.

The administration offices were in Hangar D and Hangar R (which are side by side). These are regular aircraft hangars, with a large central space where the missiles can be checked out, and two-storey wings either side containing offices. The basic hangar design was found to be well suited to missiles.

Missiles were given coded numbers:

HUNTSVILLE
1 2 3 4 5 6 7 8 9 0

Central Control ran its own countdown. It was also responsible for getting planes and ships out of the launch area. It operated the high-speed 70mm cameras used to photograph the launch. It was responsible for safety, radars, theodolites for visual tracking, pad safety, and the ordnance area, including self-destruct explosives and Baby Sergeant missiles.

The spinning of the tub was the most significant new feature of the Jupiter-C. The problem of the resonant frequency. "We had to go through the resonant frequency as fast as possible."

Security was poor. When you arrived, you did not have to stop, only to slow down, at the gate. Theoretically the guard would check your badge but in fact it was impossible. Occasionally they did stop people. Some guys put pictures of monkey on their badges and the guards did not notice. (The guys got into trouble, though.) Once a group of tourists wandered in and were not noticed until they approached a security guard and asked for directions because they were lost. It was fairly easy to enter the base from the water.

However, to reach the launch pad and blockhouse it was necessary to pass through a second security gate.

The coffee and snacks wagon was known as the Roach Coach and was staffed by two fat ladies, one black and one white. The black one swore to make a trooper blush. When the coffee drip machine was slow she said: "I can piss faster than this."

The blockhouse:

- A back room, the instrumentation room, where you could hear the DOVAP.

- Two firing rooms, A on the left and B on the right, corresponding to launch pads 26A and 26B. (The gantry moved between the two on its rails.) The firing rooms are mirror images. Each has a window of thick green glass that looks at the pad.

- A row of panels in front of the window. Between the backs of the panels and the window wall, a space about 18in wide with a platform about 6in high where von Braun and others would stand.

 - The propulsion panel

 - A range sequencer

 - A scale showing the weight of the missile

 - A wall of pen recorders showing voltage, pressure in the fuel tanks, temperatures, rotation

- The headsets were a sound-powered phone system: the electricity is generated by the movement of the membrane in the mouthpiece. (You could not have a spark on the launch pad anyway.) This meant you actually had to shout to speak to someone any distance away, for example on the launch pad. And the more people were connected, the less you could hear.

The launch pad:

The gantry is a derrick from an oil rig, adapted. They were put up in a few days. Painted with orange corrosion-resistant paint. (Corrosion was so bad that eventually most planes were moved from Patrick Air Force Base further inland because of the salt sea air.) Offices and machinery in the base, an elevator to the platforms, lights, cables. Around the pad, water sprays in case of fire, and a camera dome with a remote-controlled camera.

The missile was kept on course by a ball-and-disc integrator set on a platform kept level by gyroscopes.

Patrick Air Force Base consists of many low cream-coloured buildings, mostly housing for officers and enlisted men plus office buildings. The air terminal is a few small rooms at the back of an aircraft hangar.

Interview with Dr Ernst Stuhlinger
Saturday 20 November 1999
Radisson Suite Hotel, Huntsville, Alabama

We used the term "skunk work" for research which was not (yet) authorized or budgeted by the government or the organisation for which we worked. Much of the preparation for the launch of Explorer I was skunk work, including my timing device.

One way to program the trajectory of a rocket is to fire the second stage at a preordained time, regardless of how much fuel is left in the first stage. However, with the Explorer I we wanted to go for maximum altitude, so we programmed it to fly to burnout. The second stage had to be fired by a radio signal from the ground at some time after burnout of the first stage.

The second stage had to be fired when the rocket was parallel to the earth, and neither rising nor falling in altitude. The calculations were made well in advance by Geisler. If we fired the rocket at the right time, it should remain in orbit ten years. In fact it remained 12.3 years.

Hauseman and I were in a room at the hanger. We had two linear timers, a stop watch for backup, and a push-button backup for the timer.

My wife was due to have a baby on 28 January. This created a conflict, because I wanted to be with her and at Cape Canaveral. Happily, the baby arrived two days early, solving the problem.

Interview with Henri Landwirth, former manager of the Starlite Motel, Cocoa Beach. 30 Nov 99. By phone.

HW was involved in building the hotel. Before, there was nothing but palmettos and mostquitoes. It was a challenge to build and staff.

There was a huge Starlite sign outside, you couldn't miss it.

You entered to see a lobby with a desk. The facilities were on the right. The hotel was L shaped. There was a bar, coffee shop, bakery and dining room. We had room service. The hotel had two storeys.

There were a hundred rooms, plus poolside cabanas which were used as rooms because the hotel was always full. Companies took rooms by the year but when they were not in use we used to rent them. I was known as Double-up Henri because I made people share rooms.

It became the hub of everything at Cape Canaveral. Media, astronauts, families of astronauts, generals.

The Starlite Lounge was a very busy bar, with walls painted with a 3D moon effect. The press regularly set up HQ here, UPI and AP. The coffee shop was open 24 hours. "If you want to know something, go to the Starlite." You could pick up information just sitting in the bar or coffee shop. I always knew when a missile was about to go up, because I would see the scientists and top management arriving. "How is fishing?" was the code expression for "Is a missile about to go up?"

Parking was outside the rooms. The pool was at the back, between the hotel and the ocean.

On the beach near Cape Canaveral, reporters used to sit on a jetty which was close to the nearest point they were allowed to approach.