This paper describes a way of mapping the experience of the Tokyo Subway, particularly Shinjuku Station. Given that Shinjuku Station is such a dense urban space it presents us with some interesting problems regarding representation. The station and the city are too vast and complex to be grasped as a totality. Making an image of Shinjuku Station confronts us with the issue of the spectacle not as a visual, but as a kinetic phenomenon.

Donald Richie, long term resident and author on Tokyo writes that:

There is really nowhere to get a proper view of Tokyo. In Paris, one climbs up to the Sacre-Coeur; there, seen from the top of Montmartre, is the whole city – visible, discrete, understandable. In Rome, there are seven hills to choose among, each with a view of the Eternal City. Similar city views abound in Budapest, San Francisco, Edinburgh. There is, to be sure, Tokyo Tower, and the tops of assorted Shinjuku skyscrapers as well, but from these heights there is no unified panorama. Nor could there be – not only is Tokyo too large and sprawling, it is also too undifferentiated. One cannot look down upon Tokyo as upon a living map as one can in Kobe and Hakodate. Nor can one assume an order one cannot see, as in Kyoto. It is difficult to comprehend cities you cannot see all of from somewhere.¹

Shinjuku Station and the Tokyo Metro are experienced as a flow or series of movements. Rather than the classic European model of urbanism with squares and streets; vistas and monumental landmarks, the Metro is organised on completely different sets of reference points. This inscriptive project is an attempt to understand this most characteristic experience of Tokyo on its own terms, rather than forcing it into inappropriate picturesque or geometrically based forms of drawing and mapping.

In his Spatial Anthropology of the city, Jinnai Hidenobu addresses the emergence of underground streets as a reaction to the uncontrolled development of Tokyo at inhuman scales, citing these left-over spaces as the only remaining places for the provision of social functions such as fashionable and emerging trend-boutiques, concept stores, convenience stores, cafes, bars, restaurants and other informal meeting places without the pressures of multinational economic activity which squeezes such activities off the above-ground streets.² These underground streets are also, of course, associated with the Subway, often joining different lines of the system together and crammed with people waiting for friends or gathering round to listen to buskers.

This convenience store culture is described by Akira Suzuki as a form of semiotic consumption, partly to replace the notion of an urban fabric, which is seen as damaged: 'This condition can be directly attributed to the damage caused by the city-wide development boom of the late 1980s and early 1990s... Lacking an urban reproductive system, Tokyo manages to function, it seems, only by means of its communication system.'³
The Subway can be understood as an essential part of this communication system in which purchases and trends are analysed in order to produce yet more marketing strategies. This space of promenade generates its own trends, describing the parade of subcultures, which inhabit the trains and stations as one of the only remaining public spaces in the city: somewhere to see and be seen.

Indeed, the Subway map itself is a diagram of the economic development of Tokyo as described by Naomichi Kurata: 'The history of urban development in Japan cannot be described without referring to the development of railway systems. Namely, it is said that most of the urban centres are not the product of the planning efforts of local or national governments, but rather the results of commercial activities or business strategies of railway related companies'. The unique form of co-operative competition in Japanese corporations allows this development to be reinforced by placing department stores directly over Subway stations and locating hotels, apartments and other elements of the urban fabric nearby. This recalls Mark Girouard's observation that the heights of Manhattan skyscrapers function as an accurate diagram of land values on the island.

Much like Augé asserts for Paris, one of the truest faces of the city of Tokyo is its Metro or Subway. Much more than the series of static monuments one is expected to include in a tourist itinerary, the experience of the Metro in both cities is characteristic to that place. The geometric arrangement of many subways is basically similar, of a type. The character of these places is fundamentally different, however, and much of this difference lies in the quality of movement through the space.

In its written form, the infinitive with its imperative nuance confers on this impersonality the value of a rule: 'To go to the Arc de Triomphe take the direction Porte d’Auteuil-Boulogne, change at La Motte-Piquette-Grenelle and get off at Charles de Gaulle-Étoile.' It is the language of tourist guides of every genre, ranging from ecclesiastical ritual to directions for use, cookbooks or treatises on magic. The oral prescription itself ('To go to Nation via Denfert you change at Pasteur') acquires the tone of impersonal generality; it is impossible to tell whether the familiar (tu) or the impersonal (vous) therein designates a singular subjectivity (our interlocutor of the moment, the one who is worrying about what direction to take) or a class of anonymous individuals (everyone who hypothetically might be conducted to follow this direction).

'Getting Lost in Tokyo' takes a cue from this language regarding the Metro and Subway: its instructional inflection and the suggestion of a flâneur-like character taking this generalised and repeatable journey. The project questions how you might map or draw a space predicated upon movement, flow and flux. A plan of the station is an incomplete representation and does not really help this actor to navigate it meaningfully. Is it possible to make an alternative mapping or graphic mark which represents this experience over time?

Moving through the space, I was drawn towards signs and directed from platform to platform by interacting with crowds of commuters walking purposefully and other regular station users. This interaction of sign and crowd is particularly interesting when contrasted with other forms of urban navigation. The sign is different from the landmark, for example. The sign is related, and allows one to orient towards a direction, but the sign may not actually signify an actual position in this context, but simply direct the traveller towards the next in a chain of signs. The characteristic checking and re-checking, modifying one’s route constantly with reference to these signs and flows is a form of way finding as contrasted to navigation by anthropologist Tim Ingold. Rather than abstracted, as one might expect in this forest of signs, one is returned to a
1. Stay on the train.
2. Is this your stop?
3. Stand up and wait at door.
4. Is someone else at the door?
5. Wait on them opening the door.
6. Do they open the door?
7. Press the door release.
8. Mutter, grumble and complain.
10. Are you changing lines?
11. Locate exit sign.
12. Move in the direction indicated.
13. Locate transfer sign.
14. Is there another sign?
15. Is there a transfer sign?
16. Find an open space.
17. Move in the direction indicated.
18. Move in the direction indicated.
19. Move away from that crowd.
20. Are you at the correct platform?
21. Is there another sign?
22. Wait for the train to arrive.
23. Is there more than one sign?
24. Select an exit sign.
25. Does this exit lead out?
26. Have you tried other options?
27. Has the train arrived?
28. Board the train.
29. Does this exit lead out?
30. Exit station.

Fig. 1: The Flowchart Diagram. Courtesy of the author.
Fig. 2: Example of Laban Notation from *Getting Lost in Tokyo*. Courtesy of the author.
more holistic engagement with the environment. This way finding is more often associated with the actions of hunter-gatherers than the commuter in a dense modernised city.

In approaching this problem, it quickly becomes apparent that there is no single form of representation that can capture the essence of the space adequately. To this end, I decided to work with a set of representations, much in the way that traditional spaces are described by plan, section, elevation and perspective; I chose to work with diagram, movement notation, axonometric drawing and photograph.

The diagram [fig.1] depicts the decision making process similarly to a flowchart. The chart is made up of individual episodes which may be strung together in a variety of ways from start to finish. We can see from this diagram of the decision making process that a number of different paths through the station are possible. This diagram shows more than one route through the Metro system, showing an amalgamation of all the paths through the space. The diagram concentrates on the experience of 'lostness', of losing one’s way. This is illustrated by the loops one can become trapped in, making no progress until the correct path is identified.

The movement notation [fig.2] describes my movement in each instance. This notation is collated into a score for the movement through Shinjuku Station. For this section I chose to use the system of movement notation developed by Rudolf Laban. Laban notation has its origins in Modern dance of 1920’s Zurich, and has since been used to describe various forms of movement from the tightly codified dance of ballet to wartime industrial processes. Laban notation is scored from the bottom of the page up, and arranged around a central staff representing the movement of one person or group of people. Laban is a detailed form of movement notation, uniquely capable of describing movements belonging to different traditions of dance. This is due to the notation’s structure as a movement notation rather than a dance notation. Rather than describe pre-learned movements such as courtly dancing or ballet moves, Laban allows the notator to construct sequences of movements from their smallest components. This is structured from the centre of the staff outwards, from the essential support movements required to remain upright out towards the more gestural.

From the Laban notation, a series of common elements were identified. These are described in the project as archetypes, and they represent particular moves or qualities of movement found in my journey through the Subway. Fifteen elements could be distilled from the notation and this division reinforced the episodic structure introduced by the first inscription: the flowchart. Each of the fifteen elements could be reinterpreted and used as building blocks, so I set about designing simple architectural elements such as walls, columns, ramps and doors which corresponded to the movements.

The axonometric drawing [fig.3] shows the ways in which this movement creates form and geometry. The drawings are assembled from the archetypes derived from the movement notation. By establishing a simple corridor, the elements are arranged according to their timing in the notation. The experience of the Subway is contained within these corridors, the idea being that the observer places themselves into this space mentally, considering how the space draws you in or how you might negotiate elements such as changing floor planes and doors.

The drawings are collated into a labyrinth describing all the possible routes offered towards the centre [fig.4]. This overall drawing demonstrates the impossibility of such a totalising gaze, some-
Fig. 3: Examples of Axonometric Drawings. Courtesy of the author.
Fig. 4: Labyrinth Drawing containing all 30 episodes of \textit{Getting Lost in Tokyo} and all connecting routes from the Flow-chart Diagram. Courtesy of the author.
thing addressed by the philosopher Edward Casey in his writing on landscape: ‘the criterion of isomorphism, that is, of the precise part-to-part matching of original and copy, of (perceptual) presentation and (artistic) representation, must also fall under suspicion. Even if exact resemblance may serve as an important motive for a particular painter, and even if it may be more or less successfully achieved in certain great paintings (notably in Vermeer’s View of Delft), it cannot be invoked as a criterion by which all artistic representations are to be judged.’

The idea of a totality of representation is, in the case of the Subway, an overload of stimulus: where too much information is given, it becomes impossible to navigate or find one’s way as there is simply too much to choose from. The episodic nature of the initial diagrams is, therefore, much more like the experience of the place, which is encountered as a series of narrative events, small vignettes which may recur. In this sense, the diagrams and drawings can be said to constitute a landscape of the Tokyo Subway system, but rather than attempt picturesque representation, the Subway is approached on its own terms and represented with respect to the issues of importance there. This is not visual spectacle, but narrative and movement.

The photographs [figs. 5 and 6; bottom] show analogous situations, places in Tokyo which share similar conditions. These conditions may include similar crowding attributes, thresholds or flatness of space. The intention is to show how the conditions of the Subway can be found elsewhere in the city, and that a logic of space is contained within the compressed, dense environment of the Subway. The presence of these conditions in the Subway may either have its roots elsewhere, or make such conditions acceptable elsewhere.

These are collated into a map, showing where these found metaphors are distributed across the city at large. The resulting map draws on the examples of psychogeographic maps drawn by Asger Jorn and Guy Debord, attempting to illuminate the hidden connections between places, or how they might relate to one another through alternative logic. The location of each photograph was plotted on a map of Tokyo along with its corresponding number in the series. The connecting lines described by the flowchart were then added, producing this alternative understanding of the city.

In the notation for the example shown in ‘23. Is there more than one sign?’ [fig. 5] the actor (presumed by the notation) is presented with four alternatives, and drawn equally to each one. The quality of being drawn or attracted towards something is indicated by the ‘V’ shape. Later in the notation, it is the gaze that is drawn in this direction. The symbol for head is drawn inside the ‘V’ to indicate this more specific attraction. To the left of the main notation, the symbol for centre stage is shown, indicating that the actor should position themselves in a central position. This event is in two parts, two acts. These are separated by the two horizontal lines which interrupt the staff.

The drawing translates this action by using ramped floor elements to represent attraction (and repulsion, not shown in this example). The object of the attraction or gaze is rendered as a simple column: something which one must encounter physically and negotiate spatially. The staging directions from the notation are drawn by manipulating the corridor format common to each event. In this case, the corridor is widened out to allow the centre stage position to be occupied. A wall is placed in this space with openings representing the possible gazes indicated by the notation and the threshold indicated by a trench in the ground represents the different acts in this movement.

The photograph at the bottom shows a scene from the Kannon Shrine in Asakusa. It shows a number of signs, each with equal prominence and
Fig. 5: *Getting Lost in Tokyo* plate 23. 'Is there more than one sign?' Courtesy of the author.
interest, and is a scene in which the allegorical situation of there being more than one sign is apparent. Analogous situations for each Subway episode can be found elsewhere in the city, demonstrating that a common approach to space is experienced above ground and below, and it is simply a case that the underground experience is compressed and heightened.

In another example, '28. Board the train', [fig. 6] the notation indicates that there is a definite path to be taken by placing a wavy line across the staff. More specific indications can be given in Laban notation, but this indication is sufficient for our purposes. Staging directions are included again on the left-hand side, and are used to show that the actor should align towards one side of the platform whilst facing right as indicated by the box with ‘T’. Also on the side with the staging direction are effort notations showing the openness of the enclosure at the beginning of this event, tapering down to tightness at the end. The main part of the event is in the centre, with the gaze directed towards the train, and a wringing effort of tight torsion movements indicated to complement the actor’s movement towards the train. This is one of a number of efforts found in negotiating the crowds of the Subway including pressing which is made up of more definite pushing and dabbing, a lighter more repetitive touch. As the direct path ends, a direct relation and contact is made between the actor and the train, indicated by the horizontal line with ‘X’ denoting the dominance of the relationship. This line is drawn across to a separate staff for the train itself.

The drawing in this case uses an inscribed route in the ground to depict the path indicated by the notation. Staging is once again drawn by manipulating the corridor format of the plate, and the increasing enclosure is shown through the gradual narrowing of the space available for movement between the regular supporting columns. The wringing movement is, like other efforts, represented by a door. In this case, the door pivots on its centre, suggesting the movement the actor would have to make in order to pass through it - a closeness with the item and matching movements with it as it turns are all suggestive of negotiating a crowd. It is an awkward movement characterised by a proximity with as little actual contact as possible.

The exhibition of the work contains the preparatory diagram of the flowchart alongside other orienting diagrams and sample journeys through the notations [fig. 7]. Next, the entire score of the Laban notation is given, re-presenting the experience as a dance, as an abstracted series of movements. After this, the archetypes derived from the notation are described and presented along with some examples of how these are assembled into the corridors in the main series.

Along one wall, the main series is given, with each episode described by the text of the diagram, a Laban notation, an axonometric drawing and a photographic analogy. These are augmented by lines inscribed into the floor showing the various paths suggested by the flowchart, the diagram which imprints its episodic structure onto the whole series.

The exhibition ends with the compilation diagrams; several sample journeys are drawn in architectural language once again, and the final two labyrinthine drawings: the axonometrics in totality and the psychogeographic map of Tokyo. These underline the necessity of understanding density through episodes, as the totality is simply too vast to grasp.
Fig. 6: *Getting Lost in Tokyo* plate 28. ‘Board the train’. Courtesy of the author.
Fig. 7: The exhibition of *Getting Lost in Tokyo*. DCA Dundee, Scotland, 2005. Photo courtesy of the author.
Notes
7. Rudolf Laban proposed a system of movement notation which could be used for dance, but which Laban also used for early occupational therapy in the industrial workplace. The system is still in use today, and has proven adaptable for many purposes, including anthropologist Brenda Farnell’s work on sign language and movement.

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Biography
Raymond Lucas is currently researching multimodal representations of urban space at the departments of Architecture and Design, Manufacture & Engineering Management, University of Strathclyde, Glasgow, Scotland. The research is part of the United Kingdom AHRC/EPSRC Designing for the 21st Century cluster. This project looks at the broad range of sensory experience and looks to find notations appropriate to this fuller description and design of urban space. He has recently been engaged in research on the extent of the human voice in determining space at the University of Edinburgh. The Inflecting Space project was a collaboration between architecture and music supported by the AHRC looking at applications of sound design to public space. He holds a Ph.D. in social anthropology from the University of Aberdeen with the thesis Towards a Theory of Notation as a Thinking Tool. This work examined creative inscriptive practices ranging from architectural drawing through movement notations to diagrams and painting.