InHabit: Chapter

Title:

Uncertain futures, Obscure pasts. The relationship between the subject and the object in the praxis of archaeology and architectural design

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Introduction.

This study began as a result of practice-based research into two live projects undertaken by the author with year one students of the Oxford Brookes School of Architecture (OB1 LIVE) in collaboration with The Story Museum, Oxford and with Archeox, a community archaeology project in East Oxford. This chapter identifies the relationship between subject and object as being of significance to the praxis of archaeology and architectural design. It draws upon literary, philosophical, anthropological, archaeological and architectural perspectives on subject and object that further our understanding of the relations that form between humans, architecture and the wider world. The chapter makes the case for the work of contemporary Japanese architects and academics Atelier Bow Wow as being particularly helpful in revealing many of the ambiguities between subject and object that architects and archaeologists must contend with. Forming Atelier Bow Wow's written and built work into a case study we can see ways in which they have investigated and put into practice some of the theories discussed and developed their own methodologies that work sympathetically with the complexities of the competing claims of subject and object in order to give mutual benefit to the architect, the inhabitant and the city.

Architecture and archaeology.

At first glance, the disciplines of architecture and archaeology can be viewed as diametrically opposed. On the surface it appears that the architect works at the beginning to create a new building and the archaeologist works with a building at the end of its life when it has become redundant. Of course, the importance of the building as a physical object must always be balanced by an equally important focus on its human occupants. It could be said that the archaeologist studies an absent subject and a surviving object while the architect works with a living subject and an absent object. The complexity of the relationship between the subject and the object is recognised as significant in the disciplines of archaeology, anthropology and material culture but is less commonly articulated in the field of architecture.

The identification of the subject and the object in architecture and archaeology is more complex and less diametrically opposed than it first appears. For example the architect's living subject, their client, may be a developer and not the intended occupant of the building. In such situations the intended occupant probably won't be identified until after the architect's involvement in the project has ended. The building is normally designed to last beyond the occupation or lifetime of its initial inhabitants. Even when working with an owner-occupier, many engage an architect because they aspire to live a new and different life once they occupy their newly designed space. Some archaeologists work collaboratively in contemporary situations where the subjects are still in occupation and are engaged in the archaeological dig itself. Kiddey et al. (2014) worked with homeless people to excavate their inhabited sites in Bristol. Such practices echo the participatory approaches that certain contemporary architects are adopting as part of their design process and that will be described below in the OB1 LIVE / Archeox project where participatory techniques were used in a collaborative architecture / archaeology project. In the OB1 LIVE / The Story Museum project, it will be seen that architects and

archaeologists wrestle with similar ambiguities between subject and object when working with derelict buildings.

Not only is the absent subject an issue shared by architects and archaeologists, the absent object is also a central concern. As soon as a design project is articulated, a fragmentary object begins to exist in the minds of the client and architect. This object is initially understood through the physical existence of similar precedent examples and takes on an increasingly defined form through representational objects such as physical and digital drawings and models. Architects must try to predict the future from what they know of the past and present. Archaeologists must reconstruct the past from what they know of the past and present. Let us then re-frame design as a predictive activity and archaeology as a deductive one, both disciplines working with similar uncertainties surrounding both subject and object as well as past, present and future.

A literary perspective on the relationship between subject and object.

The Story Museum collaboration (2012-13) involved working with the museum on four connected projects. The first was to design story telling spaces and form design strategies to enable them to occupy three linked derelict buildings as a museum for storytelling while preparing for a future renovation project on the site. The museum buildings are arranged around a courtyard in what was the medieval Jewish quarter of the city. The oldest buildings date back to the thirteenth century and have had several recorded uses including a pub and student lodgings for Merton College. In 1921 the site was acquired by the Postmaster General for use as a sorting office and telephone exchange. In 1934 a three story building was added that included larger telephone exchange spaces and postal strong rooms. Merton College bought the site back in 2003 and it remained unoccupied until The Story Museum acquired the lease in 2009 (The Story Museum, 2014). The combination of the rich and evocative redundant spaces with their partially-known back stories and the imaginative potential of creating a museum for storytelling proved a heady mixture and a fertile ground for us as architectural designers. The physical fabric of the building had been stripped back and repaired only to a point of structural stability and weather tightness but the place still had bunches of safe room keys on hooks, an ancient CCTV screen, notices on the wall and a staff canteen with kitchen cupboards full of pots, pans and crockery. The process of designing storytelling spaces in a place redolent of so many stories created a heightened awareness of the ambiguity and slippage between what was physical, factual, immaterial and fictional. These slippages occurred during conversations with The Story Museum, in observations of students engaged first in designing and then building their installations for the museum and in our reflections on the project (Anderson and Priest, 2013). One example of this occurred when students returned to The Story Museum after an absence of several months during which time they had been engaged in a second project to design speculative Story Towers for the museum. Upon re-entering the space they inadvertently remarked "It hasn't changed!" Logically they knew that their towers hadn't been built but they almost expected to see them there after spending so much time imagining the building with these towers added to its existing roof scape. Routinely and rarely questioning it, we all hold multiple possible perceived realities in our minds. These can be particularly divergent when we project our imaginations into another time or place, as architects and archaeologists do during the process of design and deduction.

In our reflections on the collaboration with The Story Museum we explored questions surrounding the ambiguity between fact and fiction, reality and imagination, the material and the immaterial in an architectural design project by looking through a literary lens and considering the relationship between the object and subject. Through a study of the work of architect, writer, artist and poet, John Hejduk we found a kindred spirit who declared the ambiguity between object and subject in his book about his architectural project, *The collapse of time*, stating that "all are objects and all are subjects" (1987, p.56). In English, our grammatical rules attempt to diminish this ambiguity. Grammatical rules are formed to clear up such confusion and rationalise a language. English makes a clear distinction

between subject and object. The rules suggest to us that subjects are active and therefore probably animate, characterised as naming what the sentence is about while the object is passive and therefore possibly inanimate, receiving the action of the verb. Even when rationalised by grammatical rules, our language structure allows us to attribute agency to inanimate subjects. However, because of our cultural assumptions about the identity and hierarchy between a controlling subject and controlled object, any inversion of this assumption can sound absurd, comic, anthropomorphised or perhaps poetic to our ears. Hejduk's awareness of this relationship can be seen in an extract from his poem, *Sentences on a house*: "A house roams at night when its occupants sleep." (1998, p.120).

A philosophical perspective on the relationship between subject and object.

René Descartes' *Cartesian Dualism*, in works such as the 1648 *The Description of the Human Body* and the 1649 *Passions of the Soul*, made a similar distinction to the grammatical one described above. He distinguished between the physical body and the non-physical mind with the mind being able to influence matter (Buchli, 2013, p.139). Although this concept has a beautiful clarity to it that is easily understood through our empirical experience of inhabiting the world as an individual, it does not reflect our experience when we consider it in relation to others, in relation to ideas and even in relation to matter. In his 1781 *Critique of Pure Reason*, Immanuel Kant retained this dualism (Lefebvre, 1994, p.39) but altered the traditional relationship between subject and object by positing that we never have a direct experience of the physical or *noumenal* world because our experience is filtered through our senses and we therefore experience a *phenomenal* world. It was no longer enough for the subject to observe the object in order to make sense of the world. It became necessary for us to understand how the mind perceives the world, in particular space and time and cause and effect.

In *The World as Will and Representation*, first published in 1818, Arthur Schopenhauer shifts the focus away from trying to identify which end to start from in order to solve a dualistic subject-object problem. The subject doesn't cause the object and the object doesn't cause the subject. They are inter-dependent:

> "the law of causation is itself only valid for representations…..thus, like the objects themselves, it exists only in relation to a subject, which is to say conditionally; this is why we can know it just as well when we proceed from the subject, i.e. *a priori*, as when we proceed from the object, i.e. *a posteriori*" (2010, p.123).

Christopher Tilley describes the relationship between subject and object as being "the central concern of material culture studies." (2011, p.61) It is his depiction of the complexity of the relationship between subject and object that echo the findings from my own practice-based research and which therefore inform this chapter:

> "Object and subject are indelibly conjoined in a dialectical relationship. They form part of each other while not collapsing into or being subsumed into the other. Subject and object are both the same, yet different. The ontological relationship between the two embodies this contradiction or ambiguity: same and different, constituted and constituting. Personal, social and cultural identity is embodied in our persons and objectified in our things." (2011, p.61).

If we free ourselves from the empirical notion that objects can only be inanimate, passive material things and that subjects by contrast tend to be animate, active possessors of immaterial ideas, then we are open to observing and understanding the meaning behind their changing relationships as the materiality and identity of object and subject shifts. Inanimate objects are no longer passive. This shift in thought enables an "understanding of architecture as an aspect of mind." (Buchli, 2013, p.2) For Pierre Bourdieu, "Things also shape people through their effects in relation to the reproduction of

habitus in relation to class." (Tilley, 2011, p.9). In anthropologist Alfred Gell's 1998 *Art and Agency* he describes how "we have to look at how people act through objects by distributing parts of their personhood into things. These things have agency because they produce effects" on us (Hoskins, 2011, p.76). This clearly dismisses any empirical Cartsian assumptions about the hierarchy of mind over matter. From experience as an architectural designer, I would argue that once an object is exerting agency on us, it has become a subject. During the design process the architect is immersed in the future life of the building and that projected reality becomes the intended reality as shared with client, design team and others. The building is a subject. From this perspective and with the hindsight of Hejduk's fluid categorisation of buildings and inhabitants as shifting identity between object and subject, one can readily conceive of buildings as subjects and the inhabitants as their objects, influenced by them.

We have seen that objects influence us and therefore cannot be dismissed as passive. Our empirical assumption that objects have a physical materiality is also open to question. Anthropologist Victor Buchli describes different registers in which we can understand architectural form beyond the tangible: "image, metaphor, performance, ruin, diagnostic, or symbol" (2013, p.1). The difference in the materiality of these registers "enables human relations" (Buchli, 2013, p.1) through and with objects. This material register, acknowledging that objects can be immaterial and that the subject can be social, increases the complexity and ambiguity between subject and object.

Buchli cites Carsten and Hugh-Jones' (1995) concept of the house as an "illusory objectification" (2013, p.72) where the house not only meets our physical need for shelter but also serves to resolve social tensions. For example, tension caused by the unification of two families through marriage may be resolved through establishment of a social convention that the wife must live with her in-laws. The form, organisation, meaning or materiality of houses may suggest, enable or perpetuate this convention. Buchli finds this particularly significant because society and the house achieve this through both the house's physical presence and its intangible social function. The house is not just a symbol of these social relations, it produces social relations through material and immaterial means. This makes it particularly difficult for us to disentangle the body and architecture and helps us to understand the power and persistence of architectural anthropomorphism discussed above in relation to Hejduk.

The effect of the architect or archaeologist in the dynamic between subject and object.

Archaeological and Anthropological studies of architecture understandably tend to focus on either ancient or vernacular buildings. While fascinating and revealing, this places an emphasis in the academic literature on buildings that were more likely to have been constructed by their prospective occupants and their communities. Such buildings were less likely to involve a distinct third party such as an architect or other similar figure who was given responsibility for the design of a building. This emphasis is increased further when studying domestic architecture, a typology that is often small scale or intimate and is therefore less likely to require specialised architectural involvement than public buildings. The live project collaboration between year one students at Oxford Brookes School of Architecture and Archeox, a local community archaeological group was notable for the insights that it brought regarding the significance of the presence of the architect or archaeologist in altering the subject object relationship.

Archeox (Archeox, n.d.) is a local community archaeological project based in East Oxford that was initiated by the University of Oxford's Department for Continuing Education. Year one students of Oxford Brookes School of Architecture (OB1 LIVE) collaborated with them in two connected projects. The first project involved the design and installation of a consultative exhibition at the Pitt Rivers Museum in October 2013. The exhibition required the design of interactive prototype displays for twenty-four small finds that Archeox had discovered at Bartelmas Chapel and Minchery Farm.

Archeox project developer Dr. Jane Harrison was our main contact and adviser helping us to understand the archaeological project and to develop an appropriate design brief. We shared an intention to engage the designers, community volunteer archaeologists and the public with the found objects, their materiality, their meaning and their proposed display in a museum context. Discussion with Dr Harrison brought forth certain parallels between the praxis of the architect and the archaeologist. Despite the apparent differences between the disciplines described at the beginning of this chapter, the importance to the individual of direct sensory engagement with objects and the personal significance of the moment of discovery was shared by architects and archaeologists. In addition, the role played by the experience-informed imagination of the individual practitioner is critical, albeit distinguished by its predictive use by architects and its deductive use by archaeologists.

The project began with the students being given the privilege of handling the finds that they were to design for. Their reaction to this tactile and material experience was electric and was pivotal to the project outcomes. The objects came to life in their hands, exemplified by a medieval crotal bell that rang as it was gently picked up by a group of students. Drawing on this experience, the display that this group subsequently designed and made for the bell suspended it from a sculpted hand and allowed the breeze to make it ring. Without this hands-on experience, a designer would find it much more difficult to absorb the meaning and behaviour of the object and to identify sympathetic ways to break away from a passive museum vitrine orthodoxy in their design proposals. Students had also been asked to make a film that showed their object and object display in use and told its story. Architects are traditionally associated with static representational media such as drawings and models. In their films, students combined Archeox's research with their own observations of the object in order to construct a story that processed both objective and subjective information. It was notable that these novice designers chose sophisticated mixed representational methods in order to animate their drawings and models and combine them with live action, stop frame, documentary and narrative techniques. Again, this unconventional and positive design outcome can be attributed to the emphasis on active engagement with the object that was embedded in the project. The consultative exhibition event in the Pitt Rivers Museum was in a sense a victim of the success of this hands-on strategy. Students were so keen to demonstrate their object displays and pass on their enthusiasm to visitors and Archeox participants that the event was very over-crowded, making hands-on engagement more difficult than it should have been. Nevertheless, typical visitor feedback to the question of what worked well about the exhibition was: "The amazing imagination which has brought such small objects to life."[1]

Reflecting on discussions during the project with Dr. Harrison about the archaeologist's role and praxis; observation of the students' reaction and design response to the finds; and analysing the designs that resulted from the emphasis that we placed in the design brief on an interaction between object and exhibition visitor, all led to insights related to the significance of the architect or archaeologist as a third party when considering the relationship between subject and object. The presence of an architect or archaeologist creates a third party to an otherwise dualistic relationship between an object and a subject. They may also be detached from the occupant or user by cultural difference, by gender, by social position, by time, by space. Not only this, but the architect may be detached from the process of making and the archaeologist may not be the person who made the discovery. Drawing upon Buchli's description of tangible and intangible material registers enabling human relations, this third party detachment of the architect or archaeologist functions as an additional filter in the interaction between the physical material world and the intellectual social world. Although this detachment has the potential to create challenges for the archaeologist striving to arrive at novel yet reliable theories and for the architect striving towards innovative yet functional design

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[1] Sample of visitor feedback gathered by the author during the Archeox / OB1 LIVE, Found! exhibition at the Pitt Rivers Museum on 19 October 2013.

proposals, their detachment from the conventional duality between subject and object gives them a unique insight into its complex dynamic.

The architect engages in the process of design with an awareness that they will imbue the architectural objects that they design with ideas and that to do this they work with a material palette that includes the intangible parts of the material register such as symbol and metaphor. Hejduk pins this down expertly in his observation that "art is the shell of thought" (1988, p.340) demonstrating with clarity the elusive qualities of immateriality and agency that are possessed by objects. In deference to established subject-object hierarchies and social norms, people are the subject because they are more important than buildings as objects, contemporary architects may feel obliged to describe their buildings as objects and their occupants as subjects. However their role as design agent affords them a curious and complex viewpoint on the inhabitants during the process of design.

Architects have duties towards not only their patron but all of the building's users and wider society. They must constantly shift their perspective on inhabitation from subject to subject and from subject to object as they design. For example, when considering the dimensional planning of a space or the ergonomics of a particular detail, the building's users may be considered as generic bodies more akin to objects than subjects. When considering the building user's experience they become subjects brought together as a series of likely types of user assembled from the architect's personal experience and specific research. When consulting formally and interacting informally with patrons, building users and the public during site visits, briefing events and project meetings, architects are able to engage with people as individual subjects. When considering the consequences of material choices that must be made, the architect is aware of the cultural and the physical implications. When considering the ideas that the architect will embed in the architectural object and the way that it will be occupied in the future, the building itself transcends its inanimate nature and becomes the living, breathing subject in the imagination of the architect. This may seem strange and perhaps a little detached from humanity and the everyday, but it is an essential part of the imaginative and creative process. If the material register can include the immaterial and if an object can have agency, it is not so difficult to consider inanimate objects as subjects. This is an essential conceptual shift needed in order to create something novel that doesn't yet exist (or re-create something that no longer exists). During the design process, the subject constantly shifts according to the fluidity of the context that the architect is engaging with. The architect needs to recognise and make these shifts consciously in order to grasp the complexity of the task of reconciling the architectural object with its human subjects in a way that is appropriate for the prevailing social expectations for that project.

Recognising the shifting and interdependent relationship between multiple objects and subjects within the evolving context of a design project is a complex task for the architect. Architects could learn much from archaeologists whose disciplinary need for repeatable and reliable deductions has led to the development of methodologies for recording the process of discovery that are far more meticulous than architects' often closely-guarded or cryptic record of their own personal design process. This relative lack of transparency does inhibit discussion of the issue and obscures the methods that architects use to navigate the object-subject and contextual shifts described above. The following case study of the work and methodology of architects Atelier Bow Wow describes several methodologies that they have developed and disseminated that reveal the sophistication of their understanding of the design potential of the interdependence of subject and object. The reliability and originality of their methods as well as the general theories that they have identified about the development of Tokyo derived from studying the particularity of individual homes in a contemporary context should prove of interest to architects, archaeologists and anthropologists alike.

Case study: Atelier Bow Wow

Atelier Bow-Wow was established in Tokyo in 1992 by architects and academics Yoshiharu Tsukamoto (1965-) and Momoyo Kajima (1969-). In addition to completing a diverse collection of inventive and influential private houses in Tokyo, they have written a series of books about them. This body of work is rare, if not unique, because the architects themselves have documented the entire research methodology and design process from inspiration to post-occupation for the whole collection of houses. The books begin with an analysis of the wider urban fabric, describe their response to this in terms of design strategy, show Atelier Bow Wow's predictions of how people will live in these houses, document the design process and outcomes for each house and conclude with a rare example of a post-occupation investigation by the architect of the inhabitation of the houses.

In discussing Atelier Bow Wow's unconventional methods and body of work, Tenurobu Fujimori describes his own experiences as part of an artistic group formed in 1986, their attempts to document Tokyo, particularly through redundant objects and the difficulty of applying this method to the creation of architecture:

> "When we inaugurated the Roadway Observation Society, we discussed whether or not our observing and collecting would lead to creating things in the future. Concerning architecture, I felt this was entirely inconceivable. Collapse, confusion, and deviation from order are, after all, diametrically opposed to the true nature of architecture." (2010, p.126).

Architecture, he explains, valorises creation above observation or collection. By directing their attention on Tokyo and by removing the expected architectural focus on creation, Atelier Bow Wow were able to identify the significance of the incidental in Tokyo's urban development.

Atelier Bow Wow's book, *Made in Tokyo* was first published in 2001. In it they employ their observational and almost anthropological approach where they record Tokyo "as though we were visiting a foreign city for the first time." (Kuroda, Tsukamoto and Kaijima, 2010, p.9). They were conscious of a thirty to forty year cycle of almost complete rebuilding in Tokyo. "The starting hypothesis for the survey is that in any city, the situation and value system of that city should be directly reflected through unique buildings." (Kuroda, Tsukamoto and Kaijima, 2010, p.10). By focussing on the formation of these buildings through their use rather than any aesthetic, typological or disciplinary categories, they identified the presence of strange programmatically hybrid buildings that they affectionately named *Da-me Architecture*, translated as no-good architecture. This approach chimes with Buchli's observation that "It is often the generic and interchangeable nature of architectural forms in their apparently banal and unremarkable material qualities that actually enable novel kinds of habitations." (2013, p.182) Of the seventy examples catalogued in *Made in Tokyo*, one typically curious domestic example is No. 46 "Apartment mountain temple" (Kuroda, Tsukamoto and Kaijima, 2010, p.132) which is a Buddhist temple located part way up a slope and accessed via the staircase and roof of an apartment block located at the bottom of the hill. They conclude that the reason why these buildings are important in gaining an understanding of Tokyo is because they were formed at a time when practical concerns were being prioritised over cultural ones. Therefore domestic and small scale cultural or commercial activity occupy the spaces in between the dominant infrastructure as part of a multi-scaled mixed ecology.

In *Pet Architecture Guide Book* (2001), Atelier Bow Wow explained that "When we walk on the streets of Tokyo, we find amazingly small buildings between streets, along widened roads and spaces between tracks and roads." (Tsukamoto, 2001, p.9) They catalogue seventy-two found examples of this "pet architecture". They also proposed a further nine new pet architecture project proposals for these small found Tokyo spaces that were designed using the principles established by their analysis. Each pet is named, numbered, described, measured, and its location recorded. They are each catalogued by a single photograph, a drawn location plan and an axonometric drawing that includes the same photograph of a man and his dog to give a constant scale to each building. A particularly

small domestic pet that they found is *No.10, Apartment* (Tsukamoto, 2001, pp32-33) which is a two story tenement of two apartments that is 4m wide, 2.1m deep and 5.5m high. It is located on a residual triangular piece of land between a residential road and the elevated Metropolitan expressway. Their conceptual strategy to anthropomorphise these buildings as pets deliberately deflects the expected response of society to dismiss these strange building objects on aesthetic grounds and to emphasise the close connection between the scale of these buildings and our own human scale. "Since Pet Architecture has less consideration in its appearance, it shows a sense of wilfulness, unexpectedness and hand-made feeling in its structure, it cannot be done objectively but naturally." (Tsukamoto, 2001, p.8). *Pet Architecture Guide Book* is an analysis of how buildings form in response to their physical and cultural context and where the buildings are the anthropomorphised subject of that analysis.

By casting their gaze as widely as a city in order to understand patterns evident in the creation of individual dwellings, Atelier Bow Wow's atypical approach recalls Gell's (1988) concept of a house as "a distributed object and distributed mind." (Buchli, 2013. p.6). *Pet Architecture Guide Book* observes and analyses pet architecture from the street. No interiors or plans are shown but the smallness of the buildings forms them and makes the nature of their occupation impossible to disguise. Tsukamoto observed that pet architecture connects "two different subjectivities in architecture…. Space lived by someone called the space of *representation* is always opposed to the *representation of space*, which is planned or designed by architects" (White, 2007). Explaining that although he was unaware of Lefebvre when researching Pet Architecture, Tsukamoto then likens this reconnection of these two subjectivities to Lefebvre's theories in *The Production of Space* (1974) where "the practicing agent is not a person, it is space itself" (Washida, 2010, p.250) and eliminating the distinction between designers and users. This desire to reduce the filter between designers and users connects to the practice-based conclusions described earlier in the chapter that arose from the OB1 LIVE collaborative projects where the architect or archaeologist as a third party agent becomes significant in altering the dynamic between subject and object. Atelier Bow Wow's awareness of the potential disadvantages of this situation has led them to seek to reduce the distinction between designers and users in order to draw as deeply as possible upon the user's habits, experience and aspirations in order to create architecture.

Atelier Bow Wow put the design methodology that they evolved through their research into practice via the design of a large number of private houses, often in the curious urban situations and of the very small scale that they had identified. They were conscious that their wished-for natural production of space would be mediated by their unnatural presence as architects but their knowledge of these processes would inform their design response. They also recognised that there was no need for their architecture to share the incidental aesthetic of *Da-me Architecture*.

In *Graphic Anatomy* (2009) Atelier Bow Wow catalogued their body of residential work in low density urban areas and suburban / rural areas via objective orthographic line drawings. Twenty-four houses are shown in annotated sectional perspective and construction details in an attempt to show them as objectively as an anatomist would. Anticipated occupants, possessions and activities are also shown: "contained within a single picture is the composition of rooms and components, the adjacent exterior environments, actions and locations, and the relationship between objects." (Tsukamoto and Kaijima, 2009, p.5). Towards the back of the book, project data is given for the original twenty-four houses plus an additional five. This includes a single black and white photograph of the exterior or a model, data on the project (team, dates, floor areas and construction method), 1:200 plans and elevations and in most cases, a 1:200 site plan. Of the twenty-four houses, the last seven were still being designed, were under construction or were unbuilt at the time of publication. The illustrations are an amalgam of different types of drawings that an architect would produce during the design process in order to communicate different types of information to colleagues, the client and the building contractor. Significantly, they appear to show the houses before construction, representing the house as the architect anticipates that it will be occupied and are valuable documents demonstrating the nature of

design as a predictive activity as discussed earlier, albeit always informed by past experience. There is the possibility that visits to the houses that were completed prior to publication enabled some hindsight to inform the drawings of built houses, but they are certainly not a post-occupancy analysis.

Although the scale of these houses is more generous than the pets, the house's fabric and form is still designed to retain the tight mediating role between contextual fabric and activity and the human body and behaviour (Tsukamoto and Kaijima, 2009, p119). Each house is very different and this diversity comes from the endless variation in the relationship between these two states. Atelier Bow Wow characterise this difference as occurring in the house's "behaviour" (Tsukamoto and Kaijima, 2009, p.109) rather than its appearance.

Atelier Bow Wow's book *Behaviorology* (2010) describes thirty-one architectural projects and seventeen "Micro Public Space" projects such as installations and furniture hybrids. Twenty-eight houses are included and the drawings of fourteen of the earliest were also documented in *Graphic Anatomy*. The built projects are recorded photographically with four to eight images for each house project accompanied by an introductory text and image captions that explain how the spaces relate to each other, to their context and to their inhabitants. These houses have been re-visited post-construction in order to create the book and it is possible to compare the actual occupation of houses to their predicted occupation in *Graphic Anatomy*.

Gae House is particularly revealing. The house was completed in 2003 and was lived in by its original occupants when it was recorded for *Graphic Anatomy* and *Behaviorology*. It includes an unconventional horizontal first floor window that looks down on the street from the living space and is also used as a shelf for ornaments and found objects collected by the occupants. In one photograph (Tsukamoto and Kaijima, 2010, p24), the photographer shows two little figurines sitting on the window in a position that makes them look as if they are stepping off the kerb of the street below. The house invites the inhabitants to engage with the street in unique, playful and potent ways. *Graphic Anatomy* didn't predict the window's use as a shelf for ornaments but always showed an awareness of the unusual connection between interior and exterior by drawing the exterior context as viewed through the glass in both sectional perspective and plan. Furniture and fittings right down to washing machine location and bicycle storage are all shown in their eventual locations. The large collection of books was evidently an important design consideration because they are clearly depicted in the drawings and dominate the space upon occupation. The critic who lives there is even drawn in the sectional perspective of his sunken Study space with his body and hands positioned in the same location relative to his desk, chair, laptop and paper within the space as he is shown in the photograph.

It could be argued that the photographer, Hiroyasu Sakaguchi A-Z for the majority of images in the book, may have been aware of the drawings in *Graphic Anatomy* and set up the photographs to reference them. As with most professional architectural photography, the photographs are almost certainly composed. However, Atelier Bow Wow's accuracy in predicting the nature of occupation can also be found in projects such as Mountain House (Tsukamoto and Kaijima, 2009, pp.102-105 and p.144), which were still being designed when *Graphic Anatomy* went to press and could not have been drawn from life. Atypically for Atelier Bow Wow's houses it is located outside Japan in California, USA making it more difficult practically and conceptually for them to predict the uses of the space. However, *Graphic Anatomy* and *Behaviorology* show similar activities occurring in both the pre-construction drawings and the post-occupation photographs, in this case taken by Iwan Baan. Differences in the photographs compared to the drawings are trifling and include two extra chairs pulled up towards the stove and a hammock fixed to the structure of the beautiful and unusual first floor semi-external room (Tsukamoto and Kaijima, 2010, pp.194-201). One reason for the close correlation between prediction and occupation is that these buildings are tightly designed around the occupants' activities and being of a modest size, the house defines very particular and often unconventional spaces for activities to happen.

Making the houses a subject through anthropomorphism once more, Atelier Bow Wow describe each house in its context thus: "Each building can be viewed as a sentient creature, endowed with its own unique intelligence and a defining set of living characteristics." (Tsukamoto, 2010, p9). This particularity is derived from their concept of *behaviorology* which they apply to three categories of entity: humans, natural elements and buildings within their urban or landscape context. This levelling of animate, phenomenological and inanimate deliberately breaks down our empirical Cartesian assumptions about subject and object as well as assumptions about inanimate objects being incapable of exercising agency over us as discussed earlier in relation to Gell. Atelier Bow Wow's design process attempts to synthesise the different scales and temporal rhythms of humans, natural elements and buildings in context and this mirrors Buchli's description of the house as a material and immaterial mediator between humans and the world. Atelier Bow Wow believe that their approach is closer to biology, sociology and anthropology than the more conventional privileging of individual expression established within the field of architecture by modernist thought (Tsukamoto, 2010, p.8). From the perspective of the architectural design discipline, their original methods and conclusions derived from their careful and strategic observations of people, elements and buildings would appear to share some common ground with the praxis of an archaeologist or anthropologist:

> "In places where certain attributes of a building repeat and accumulate, a streetscape order is produced…Enduring repetition over time, both the unique elements and the overall compositions of built form could only survive through a process of continuous trial and error." (Tsukamoto, 2010, p.11)

Atelier Bow Wow's assertion that "Behaviorology brings about an immediate shift in subjectivity, inviting many different elements together and calling into question who or what may be the main protagonist of a space" (Tsukamoto, 2010, p.15) shares an awareness of Lefebvre's ideas that are also important to archaeologists and anthropologists in considering the ways that buildings shape us and we (inhabitants as well as third party architects and archaeologists) shape them.

Conclusion.

If we accept the significance of the relationship of subject and object in helping us to understand how architecture mediates between people, buildings and the wider world in material and immaterial ways, then it becomes easier to see this as a useful conceptual framework for architects, archaeologists and anthropologists. However the subtle and shifting dynamic between subject and object, between people and buildings is difficult to uncover or demonstrate and is rarely articulated by inhabitants, probably because it goes against our empirical sense that animate people must be subjects and inanimate buildings must be objects. As described by Gell, objects can have agency and influence us. This makes it easier for us to conceive of buildings as subjects. Buchli describes the architectural object as existing in different material registers that can be tangible or intangible and that these differences enable us to use or be influenced by objects to facilitate social relations. Architects' and archaeologists' understanding of the relationship between subject and object is made more difficult by the uncertainties relating to the past, present and future context in which they work as well as cultural ambiguities between the tangible, the intangible, the real and the imaginary. These ambiguities can manifest themselves in literal or metaphorical anthropomorphism between people and buildings. This is not only evident in ancient and vernacular architecture but as demonstrated here, is used by contemporary architects such as Hejduk and Atelier Bow Wow to sensitise us to the richness of the imaginative and design potential of our cultural confusion between subject and object.

As demonstrated here, the involvement of an architect, archaeologist or anthropologist increases the complexity of the dynamic further. The location of their activities in time or space can act as a filter between the material world and the social world. Their third party involvement can also distance the building from its inhabitants but it also gives them a unique insight into the complexity of the dynamic between subject and object. For architects, the relationship between subject and object shifts according to changes in context, participation and time as the design project transforms from the

imaginary to the occupied. The Archeox project demonstrated that architects and archaeologists share an understanding of the importance in reducing the gap between the tactile and imaginative as illustrated by the significance placed upon physical engagement with objects and the moment of discovery. Atelier Bow Wow's awareness and understanding of the complexity of their third part position and their Lefebvrian conception of space as a practicing agent have led them to develop a design methodology they describe as being akin to the fields of biology, sociology and anthropology that seeks to reduce the distinction between designers and inhabitants. Their intention is to reconnect inhabitants with their dwellings and yet still imbue them with the immaterial ideas that an architect's imagination can bring through the process of design.

If it is clear that an understanding and consciousness of the subject and object dynamic is relevant to those disciplines with an interest in the interactions between the architectural, the human and the social, then it is helpful for them to understand the particular insights into this dynamic that they themselves bring. Architects have a strong sensitivity towards the way that the relationship between subject and object shifts over the course of the design process and are familiar with the very different and fluid perspectives of others as they engage with architecture by inhabiting, observing, discussing and imagining. This knowledge could be useful for archaeologists who "find themselves actively producing the objects of such claims for heritage….buildings move from being dwellings and functional and ritual objects to objects of heritage." (Buchli, 2013, pp.60-61) The Story Museum project showed relevant themes related to heritage being explored by architects working with a derelict building. Archaeologists and anthropologists bring detached and methodological ways to describe and catalogue their observations. Atelier Bow Wow demonstrate that an architects' design process will be blinkered if they value creation to the exclusion of observation or documentation or if they always overlook the everyday for the extraordinary. Consideration of inanimate objects as subjects and vice versa are essential conceptual shifts needed to enable the creativity of something new and the re-creation of something lost.

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