

MANCHESTER SCHOOL OF ARCHITECTURE



MArch Research Methods Workshop, 2021-2022

Mobile Architectures

Tutor: Dr Fadi Shayya [fadi.shayya@manchester.ac.uk]

Time: Tuesdays 2:00-5:00 + 2 Intensive Weeks

Image Credits: New Routemaster, London 2010 [[Heatherwick](#)]

Research Agenda

Heatherwick Studio's design of the *New Routemaster* in London (2010) and Kazuyo Sejima's design for the *Seibu 001* train series in Japan (2016) continue an intermittent design practice of architects thinking about mobility and its inhabitation. Le Corbusier's *voiture minimum* (FLC/ADAGP, n.d.), Buckminster Fuller's *dymaxion car* (BFI, n.d.), and the yacht designs of Zaha Hadid, Greg Lynn, and Frank Gehry come to mind. But also, the many infatuations of Alison and Peter Smithson with the *Jeep* and the *Citroën DS* (Boyer, 2017), and Sir Norman Foster's with the Boeing 747 (Foster, 1991; Waldek, 2021).

Thinking about mobility and designing its vehicles demonstrates not only the design acumen of an architect, which could extend to various domains of design thinking. It is a lens into an architect's broader scope for understanding and realizing spaces of inhabitation beyond the common architectural figure of the building. Vehicles of the land, sea, and air domains become mobile architectures that house users for the duration of transit between buildings and geographies. Similar to inhabiting buildings, users experience the environment/landscape as an *outside* through/with/from the *inside* of a vehicle's enclosed space albeit via moving with terrain.

Still, vehicles of mobility continue to remain external objects with respect to buildings and landscapes that concern architectural/urban thinking, although architectural/urban research fairly explored the machinic relationship between cars, movement, and environment (Sorkin, 1992; Urry, 2006; Le Corbusier, 2007; Graham, 2011; Van Uffelen, 2011; Ben-Joseph, 2012; Morrison and Minnis, 2013; Boyer, 2017). They have not been explored as sites of inhabitation and/or as extensions to sites of inhabitation like buildings and urban spaces. But one can argue that vehicles – although not architectural objects – assemble associations of an architectural/urban character between an inside and outside conception of space.

It is this *inside-outside* relation that this Research Methods workshop allows us to explore through an architectural/urban lens and using architectural analytical tools. Expanding on Yaneva's theorisation of *the architectural as an association* (Yaneva, 2010, 2017b; Shayya, 2021) and learning from the philosophy of technology (Combes, 2012; Simondon, 2017; Shayya, 2021) and science and technology studies (Akrich, 1992; Latour, 2005), **students will follow non-humans, trace technical developments, and re-assemble the making of space (i.e., spatialisation) and habitat (i.e., inhabitation)**. They can ask questions about mobility architectures, technogeographic milieu, architectural associations.

Students will extend the fields of architectural humanities and urban studies to study the architectural, urban, and/or infrastructural modes of connection across environments of movement, beyond the common figures of the building and the city. While those figures remain useful, there is ample potential in studying the envelopes and atmospheric enclosures of new figures in an increasingly mobile world, evolving the experimental architectural thought of the 1960s on walking cities (Centre for Experimental Practice, 2010).

With this novel approach and methodology, you can expand your architectural know-how beyond buildings, but you can also stay with buildings and see them in a new light.

In addition to research reports, groups will work on mural presentations.

Aims & Learning Outcomes

This workshop has two aims:

1. To familiarize students with an advanced notion of methodology and methods, where methodology reflects philosophical/theoretical approaches to understanding the world and methods actualize such understanding through empirical engagement.
2. To introduce students to techniques from Science and Technology Studies (STS) that will equip them with an expanded repertoire of visual and discursive analytical tools to analyse, describe, and re-present spatialization and inhabitation.

Upon learning about and engaging with the workshop material, students will be able to:

- Understand the notion of architectural/urban associations as dynamic and changing relations that figure the inside-outside relations of the vehicles' mobile architectures.
- Identify architectural associations in vehicles and their environment/landscape/milieu using drawings, patents, manuals, and technical specs.
- Graft architectural/design tools of program/script, typology/figure, and others onto the figures/forms of vehicles such as the cars, bus, train, and aeroplane.
- Envision the architect's complex and interdisciplinary role within design futures.

Structure & Pedagogical Approach

We meet in two formats: seminar sessions and intensive weeks. If you are attending online and you have a time zone conflict, you must inform the tutor before the first session (fadi.shayya@manchester.ac.uk).

The workshop is organized in two phases. In the first, we read and discuss methodology and methods to set the ground for the group project (specific parts of the books will be agreed on in class). You are expected to complete the readings, watch the videos, and engage in class discussions. The themes cut across the humanities and the social sciences, and readings for each group will be agreed relative to the chosen topic and approach. In the second phase, we focus on conducting the research and producing the workshop outputs. We will form groups and assign the research topics during the first session, so you can start collecting data in parallel to the first phase of the workshop. The following is our guiding schedule.

Session 1 (28 Sep 21): Architects, Vehicles, & Methodology

2:00-5:00 (UK time), Crawford House, seminar room C

- Introductions & Workshop Expectations
- Lecture & Discussion
- Assignment: Setting the Research Agenda

Required Reading

Shayya, F. (2021). "Introduction & Literature Review." In *Politics of Survivability: How Military Technology Scripts Urban Relations*. PhD Thesis. University of Manchester.

Watch >>> [Building Sights, Series 3, Boeing 747](#) (1991)

Watch >>> [Why Do so Many Architects Obsess About Boats?](#) (2021)

Recommended Reading

Boyer, M.C. (2017) *Not Quite Architecture: Writing around Alison and Peter Smithson*. Cambridge, MA: MIT Press.

Le Corbusier (2007) *Toward an Architecture*. Translated by J. Goodman. Los Angeles, CA: Getty Research Institute (Texts & documents).

Morrison, K.A. and Minnis, J. (2013) *Carscapes: The Motor Car, Architecture and Landscape in England*. New Haven, CT: Yale University Press.

Sorkin, M. (ed.) (1992) *Variations on a Theme Park: The New American City and the End of Public Space*. 1st edition. New York: Hill and Wang.

Van Uffelen, C. (2011) *Automobile Architecture*. Salenstein: Braun Publishing.

Session 2 (05 Oct 21): Modes of Existence of Technical Objects

2:00-5:00 (UK time), Crawford House, seminar room C

- Lecture & Discussion
- Assignment: Student presentations of key texts (every student should submit 200-250 words summary of key concepts in their own words, no quoting)

Required Reading

Simondon, G. (2017) *On the Mode of Existence of Technical Objects*. 1st edition. Translated by C. Malaspina and J. Rogove. Minneapolis, MN: Univocal Publishing.

Combes, M. (2012) *Gilbert Simondon and the Philosophy of the Transindividual*. Translated by T. LaMarre. Cambridge, MA: MIT Press.

Recommended Reading

Fisch, M. (2018) *An Anthropology of the Machine: Tokyo's Commuter Train Network*. Chicago; London: University of Chicago Press.

Latour, B. (1996) *Aramis, or the Love of Technology*. Cambridge, Mass: Harvard University Press.

Session 3 (12 Oct 21): Associations and their Characters

2:00-5:00 (UK time), Crawford House, seminar room C

- Lecture & Discussion
- Assignment: Student presentations of key texts (every student should submit 200-250 words summary of key concepts in their own words, no quoting)

Required Reading

Akrich, M. (1992) 'The De-Description of Technical Objects', in Bijker, W.E. and Law, J. (eds) *Shaping Technology / Building Society: Studies in Sociotechnical Change*. Cambridge, MA: MIT Press.

Yaneva, A. (2010) 'The "Architectural" as a Type of Connector: A Realist Approach to Architecture', *Perspecta*, 42, pp. 141–145.

Recommended Reading

Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.

- Massumi, B. (2013) 'Becoming Architectural: Affirmative Critique, Creative Incompletion', *Architectural Design*, 83(1), pp. 50–55.
- Yaneva, A. (2017b) *Five Ways to Make Architecture Political: An Introduction to the Politics of Design Practice*. New York: Bloomsbury Academic.

Session 4 (19 Oct 21): Drawing as Method

2:00-5:00 (UK time), Crawford House, seminar room C

- Lecture & Discussion (Guest Speaker TBC) (Jorn and Debord, 1959; Tresch, 2007; Sousanis, 2015; Cruz and Rodriguez, 2016; Arènes, Latour and Gaillardet, 2018)
- Assignment: Student presentations of key texts (every student should submit 200-250 words summary of key concepts in their own words, no quoting)

Required Reading

Suggestion by Guest Speaker (TBC)

Tresch, J. (2007) 'Technological World-Pictures: Cosmic Things and Cosmograms', *Isis*, 98(1), pp. 84–99.

Recommended Reading

Arènes, A., Latour, B. and Gaillardet, J. (2018) 'Giving Depth to the Surface: An Exercise in the Gaia-Graphy of Critical Zones', *The Anthropocene Review*, 5(2), pp. 120–135.

Cruz, T. and Rodriguez, F. (2016) 'In Conversation with Dominic Willsdon', *Journal of Visual Culture*, 15(1), pp. 146–161.

Jorn, A. and Debord, G. (1959) *Mémoires* [Illustrated book]. Available at: <https://www.metmuseum.org/art/collection/search/727492>.

Sousanis, N. (2015) *Unflattening*. Cambridge, MA: Harvard University Press.

Sessions 5 & 6 (1 & 4 Nov 21): Tutorial + Presentation

Intensive Week 1 (9:00-5:00, 1-5 Nov 21) *

	Date	Session	Building	Room
S5	1 Nov	Tutor-directed online search and data collection	James Chadwick	G.018
	2 Nov	Self-directed data collection and analysis	Uni Place	3.209
	3 Nov	Self-directed data collection and analysis	Uni Place	4.212
S6	4 Nov	Presentations of findings + Tutor Feedback	Uni Place	4.212
	5 Nov	Self-directed data collection and analysis	Zochonis	B22

*Program subject to modification in case any scheduling conflict arises

Session 7 (16 Nov 21): Inhabiting Vehicles on the Move

2:00-5:00 (UK time), Crawford House, seminar room C

- Lecture & Discussion
- Assignment: Student presentations of key texts (every student should submit 200-250 words summary of key concepts in their own words, no quoting)

Required Reading

Bissell, D. (2010) 'Vibrating materialities: mobility–body–technology relations', *Area*, 42(4), pp. 479–486.

Urry, J. (2006) 'Inhabiting the Car', *The Sociological Review*, 54(1_suppl), pp. 17–31.

Watch >>> [Swedish Technology Aims to Allow Truck Drivers to Work from Home](#) (2020)

Watch >>> [The Economics of Airline Class](#) (2017)

Recommended Reading

Bissell, D. (2014) 'Encountering stressed bodies: Slow creep transformations and tipping points of commuting mobilities', *Geoforum*, 51, pp. 191–201.

Graham, S. (2011) *Cities Under Siege: The New Military Urbanism*. London; New York: Verso.

Sheller, M. (2016) 'Moving with John Urry', *Theory, Culture & Society*, 33(7–8), pp. 317–322.

Session 8 (23 Nov 21): Learning to talk about Bodies & Environments

2:00-5:00 (UK time), Crawford House, seminar room C

- Lecture & Discussion
- Assignment: Student presentations of key texts (every student should submit 200-250 words summary of key concepts in their own words, no quoting)

Required Reading

Horn, E. (2018) 'Air as Medium', *Grey Room*, 73, pp. 6–25.

Latour, B. (2004) 'How to Talk About the Body? The Normative Dimension of Science Studies', *Body & Society*, 10(2–3).

Recommended Reading

Bélangier, P. (2009) 'Landscape as Infrastructure', *Landscape Journal*, 28(1), pp. 79–95.

Frichot, H. (2009) 'The Atmospheric Ecologies of Peter Sloterdijk: A New Thinker for Architecture?', in *Performative Ecologies in the Built Environment: Sustainability Research Across Disciplines. The 43rd International ANZAScA Conference*, University of Tasmania, Australia.

Michael, M. (2000) 'These Boots Are Made for Walking...: Mundane Technology, the Body and Human-Environment Relations', *Body & Society*, 6(3–4), pp. 107–126.

Mol, A. (2002) *The Body Multiple*. Durham, NC: Duke University Press.

Yaneva, A. (2017a) 'Architectural Theory at Two Speeds', *Ardeth*, (1), pp. 89–101.

Sessions 9 & 10 (10 & 14 Jan 22): Tutorial + Final Presentation

Intensive Week 2 (9:00-5:00, 12-18 Jan 2022) *				
	Date	Session	Building (TBC)	Room
S9	12 Jan	Tutor-directed visual outputs production	Roscoe	4.8
	13 Jan	Self-directed data collection and analysis	Simon	4.5
	14 Jan	Self-directed data collection and analysis	Samuel Alexander	A114
S10	17 Jan	Self-directed data collection and analysis	Mansfield Cooper	2.14
	18 Jan	Final Presentation (guest reviewer TBC)	Stephen Joseph	G4

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Submission 19 January 2022

Research Guidelines & Tips *

As students of architecture and design, you can choose to analyse your vehicles and understand their associations in relation to common design principles/strategies across vehicles and buildings. You are encouraged to:

1. Ask questions about inhabitation schemas for vehicles and if/how these schemas learn from buildings (and/or vice versa).
2. Interrogate how innovation in materials and technologies travel across domains (civilian, military, land, marine, etc.) and industries (trucking, passenger vehicles, housing, etc.) (e.g., Aluminium and air conditioning).
3. Identify concretized design schemas that become situated trends for inhabitation in vehicles and buildings (e.g., large viewing windows).

As professionals who can read technical drawings and documents, you are invited to:

1. Employ your skills in reading drawings, patents, brochures, manuals, and reports to analyse these highly technical sources.
2. Collect innovations to trace technical/sociotechnical evolution across energy eras.
3. Translate the folded associations into architectural and urban associations

First, form groups and choose your research project from the list provided below. Familiarize yourself with the topic by conducting a preliminary online search about the topic. Identify an initial workplan to collect data from secondary sources (publications, press, online archives, online exhibitions, corporate brochures, technical manuals, etc.). You are not required to conduct interviews or do ethnography, but you are encouraged to collect observations about your experiences where the situation allows (such as in the case of riding a bus).

Second, trace the currently known figure of the object () to its *non-constituted* version. This can be done through collecting and analysing the different modes of associations and their technogeographic milieus. The result will be an assemblage of strategies, techniques, ventures, and speculations of materialities and energies.

Third, analyse the collected data. Slowdown and unpack the design schemas. Pay attention to how the human body is associated with the technical object, and by extension with the object's technical and geographic milieus. Identify the type, pattern, and intensity of the inside-outside relations. Use your architectural skills to tease out the associations with architectural and/or urban characters. This includes spatial analysis of drawings (plans, sections, elevations), technical analysis of details (patents, brochures, manuals), and flow analysis of processes (innovation, energy, materials).

Fourth, re-present your process, analysis, and findings in textual/visual modes (annotations, sketches, drawings, renderings, diagrams, and/or infographics). Re-presenting is a form of re-assembling your analysis and findings into a new whole/being/reality. Use your architectural skills of making and construction to assemble your findings as a structured and legible narrative. The group output includes: a Research Report that rigorously documents your work process; and a Cosmogram Drawing (one A0 size) that creatively presents your findings.

**Please be mindful of your and others' health and safety at this uneasy pandemic time. Take care of yourselves and follow university procedures where required.*

Workshop Outputs

1. **Group Research Report**: This is the final document that you will present and submit, documenting your text summaries, work process, and research findings.
2. **Group Cosmogram Drawing**: This is the final visual you will present and submit, illustrating the collective cosmogram that your group produced on Mobile Architectures. This is one A0 size (118.9x84.1 cm) visual; details about production and printing will be discussed in the workshop.
3. **Other Possibilities**: Some/All of the group Cosmogram Drawings might be selected to be featured during the MSA end-of-year exhibition (TBC) or in the architectural press (TBC). You can also decide to build on your group work and turn a specific part of it into a dissertation. As students, it is imperative that you uphold high standards of academic integrity by properly crediting the group work and fairly using the material produced through collective effort.

Suggested Research Topics

- A. The evolution of the Station Wagon (or, estate) car to the Sport Utility Vehicle (SUV) as an association among nuclear family, cargo, suburbs, and off-road.
- B. The design of the New Routemaster bus as an association of transport, tourism, Olympics, and iconicity.
- C. The design of Seibu's Laview train as an association of transport, blending, lounging, and landscape watching.
- D. The design of the Boeing 747 as an association among milieu, utility, and ergonomics.

Other possible topics

- Inhabiting the Extreme 1: vehicles of science and power in the Poles from the US Antarctic Snow Cruiser to the Soviet Kharkovchanka.
- Inhabiting the Extreme 2: Refugees Rescue Ships from the M.V. Aquarius Dignitus (MSF) to [M.V. Louise Michel](#), Geo Barents (MSF), and [others](#).

Assessment & Marking

1. Content (35%)
 - Structured and consistent use of theory to inform the methodology
 - Rigorous data collection and robust analysis
 - Original findings in relation to architectural/urban studies
2. Argument (35%)
 - Robust methodological approach and effective use of methods
 - Depth and sophistication of engagement with the research topic
3. Presentation (30%)
 - Creative mural design
 - Confident and clear oral presentation

Bibliography

- Akrich, M. (1992) 'The De-Description of Technical Objects', in Bijker, W.E. and Law, J. (eds) *Shaping Technology / Building Society: Studies in Sociotechnical Change*. Cambridge, MA: MIT Press.
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- Michael, M. (2000) 'These Boots Are Made for Walking...: Mundane Technology, the Body and Human-Environment Relations', *Body & Society*, 6(3–4), pp. 107–126.
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- Morrison, K.A. and Minnis, J. (2013) *Carscapes: The Motor Car, Architecture and Landscape in England*. New Haven, CT: Yale University Press.
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- Tresch, J. (2007) 'Technological World-Pictures: Cosmic Things and Cosmograms', *Isis*, 98(1), pp. 84–99.
- Urry, J. (2006) 'Inhabiting the Car', *The Sociological Review*, 54(1_suppl), pp. 17–31.
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- Yaneva, A. (2010) 'The "Architectural" as a Type of Connector: A Realist Approach to Architecture', *Perspecta*, 42, pp. 141–145.
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- Yaneva, A. (2017b) *Five Ways to Make Architecture Political: An Introduction to the Politics of Design Practice*. New York: Bloomsbury Academic.

Empirical References

- Al Jazeera English (2020) *Swedish Technology Aims to Allow Truck Drivers to Work from Home*. Available at: <https://www.youtube.com/watch?v=0ddIT5TvPVI> (Accessed: 10 September 2021).
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- FLC/ADAGP (n.d.) *Voiture 'minimum', 1936, Fondation Le Corbusier*. Available at: http://www.fondationlecorbusier.fr/corbuweb/morpheus.aspx?sysId=13&IrisObjectId=6442&sysLanguage=en-en&itemPos=215&itemSort=en-en_sort_string1%20&itemCount=215&sysParentName=&sysParentId= (Accessed: 6 September 2021).
- Foster, N. (1991) *Building Sights, Series 3, Boeing 747, BBC*. Available at: <https://www.bbc.co.uk/programmes/p01rqxwc> (Accessed: 6 September 2021).
- Heatherwick Studio (2010) *New Routemaster - London, United Kingdom, Heatherwick Studio | Design & Architecture*. Available at: <http://www.heatherwick.com/project/new-routemaster/> (Accessed: 27 July 2020).
- Hicks, S. (2021) *Why Do so Many Architects Obsess About Boats?* Available at: <https://www.youtube.com/watch?v=qEJLBPoPTLA> (Accessed: 10 September 2021).
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