The Foundations of Architectural Research

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The papers collected in this special issue respond to questions that have long been in the back of our minds as we have toiled over funding applications to enable us to pursue our research work: what is the relationship between architectural research and the various public and private bodies that fund it, be they foundations, governmental organisations or private companies? And how have these sources of funding shaped the outcomes of that research? Despite the way in which funding necessarily underpins research in our discipline – even the existence of universities attests to some structure of funding for research – it has received relatively little explicit or conscious scrutiny.

As we were in the first stages of developing the papers with our authors, and during the final stages of production, two events occurred which brought our topic into sharp relief, both involving research at the Massachusetts Institute of Technology. In 2017, a lively debate played out in the letter pages of the London Review of Books, when Hilary Rose, repeating the claims of anthropologist Chris Knight, accused linguist Noam Chomsky of having been unduly influenced by military funding at MIT. A raft of letters followed, including a memorably indignant rejoinder from Chomsky himself in which he said: ‘There is much more to say about [Chris] Knight’s quite astonishing [accusation] and, more important, about the idea that scientific work is necessarily influenced by its source of funding (corporate, military, whatever).’¹ Then, in September 2019, Ronan Farrow, writing for The New Yorker, alleged that the MIT Media Lab had sought to conceal millions of dollars of donations stewarded by the disgraced financier Jeffrey Epstein. After the allegations were published, Media Lab director Joi Ito resigned, and the MIT president, L. Rafael Reif, announced an investigation into the claims.²

These events showed that funding, and the way it makes research possible, matters, but in ways that are not clear cut. On the one hand, Chomsky argues that he was able to uphold the principles of intellectual and political autonomy, even while working for an institution that developed into an elite research university thanks to extensive funding from the U.S. military. On the other hand, the controversy over Epstein’s MIT donations implicitly accepts that a complete separation between funding and academic agendas is impossible: funding...
always comes from particular places, organisations and individuals with distinct ideologies, motivations and morals. As Hilary Rose bluntly put it in her rejoinder to Chomsky, ‘To the funder there is no disinterested knowledge.’ The fact that MIT is now investigating its links to Epstein means that ethical codes regarding the receipt of money are part of how institutions seek and accept funding and conduct research, even as these codes may be broken or subverted.

The issues raised by the events surrounding Chomsky and Epstein need to be seen beyond their newsworthiness. They remind us of the complex ways in which institutions respond structurally to the funding they receive. In this way, our use of the word ‘foundation’ in the title of the special issue is twofold. On the one hand it represents one prominent kind of funding body, and on the other, it invokes the sense of funding being foundational, that is, influencing the very structures by which funds are able to be received, agendas set, and research undertaken. Beyond presenting specific case studies to do with particular foundations and research bodies, this special issue is a preliminary attempt to flesh out these foundational underpinnings of architectural research.

Although the subject has not received much explicit discussion, one notable exception is Arindam Dutta’s monumental edited volume of essays on MIT, A Second Modernism: MIT, Architecture, and the ‘Techno-Social’ Moment (2013), which has been an important launchpad for our enquiry. Dutta’s own inquiry confirms that postwar funding had a significant impact on the institutional structuring of research, noting, for instance, that in the School of Architecture, ‘micro-institutions’ proliferated, their existence and aims responding to ‘the disparate prerogatives of their funding bodies, federal or foundation-based.’ (One of these ‘micro-institutions’ was of course the Media Lab, which grew out of the School’s Architecture Machine Group.) Dutta’s work consistently highlights that knowledge paradigms are not essential or self-contained but emerge from ‘a hybridized system involving the infrastructural or regional contexts in which they are set – the availability of funds, of people, epistemic currents, disciplinary audience, and so on.’ He concludes, ‘In ignoring these parameters, there is a patent idealism in architecture’s long lingering and naïve dalliance with the premise of “autonomy”.’

We do not have to look hard to find high-profile instances of funders changing the path of architecture and urban studies. Perhaps the best known case, lucidly traced by Peter Laurence, is that of the Rockefeller Foundation’s funding of research on the city in the 1950s and 1960s, leading to Kevin Lynch’s The Image of the City (1960) and Jane Jacobs’ The Death and Life of Great American Cities (1961), and helping put the nascent field of urban design on a firm footing. As this example underscores, the interests of foundations (and those who run them) can have a catalyzing effect, substantially changing the orientation of a field by shaping the kinds of questions which are asked, the ways those questions are conceptualised and articulated, how a research programme is designed and delivered, and how the resulting research is then deployed to champion or critique particular theories, practices, buildings types or institutions – mostly in line with a funder’s ideology but occasionally extending or revising it.

While these prominent examples act as an entry point for our considerations about architectural research as such, we would also emphasise that architecture has a deeper,
more embedded place in the funding of research across a range of fields. While disciplinary knowledge in architecture has been shaped in various ways through funded research, architecture has played an important role in the way funding bodies have worked to convey their interests more broadly. Architecture has often been seen and used as a means to apply research findings and deliver outcomes in ‘bricks and mortar’. In this way, the development of knowledge in architecture through funded research is inextricable from architecture’s role in realising innovation and change in a wider sense. It also means that architecture is entangled with different kinds of knowledge production.

The papers collected in this special issue thus explore architecture’s embeddedness in a range of different funding types and their outcomes: from the use of architecture to deliver the cultural and political goals of individual philanthropists and organisations including those set up by John D. Rockefeller Jr. in the United States (Azra Dawood), the Gulbenkian Foundation in Portugal (Ricardo Agarez), and the Nuffield Trust in the United Kingdom (David Theodore), to the funding of architectural research as part of the broad social programs of state bureaucracies, including the Tennessee Valley Authority in America (Avigail Sachs) and the Centre for Institutional Studies, Research and Training [CERFI] in France (Meredith TenHoor), to the emergence of architectural research as organisational consultancy in the British firm DEGW (Amy Thomas). In this way our work moves beyond the funding of individuals and discrete projects within the discipline to the funding organisations themselves.

This entanglement between architecture and research goes back to the origins of research funding in the way a modern structure of philanthropic giving was established in American law and political history. Perhaps the most well-known – and controversial – document written about philanthropy is Andrew Carnegie’s essay ‘The Gospel of Wealth’, first published simply as ‘Wealth’ in 1889. The argument it lays out sets the terms for the emergence of philanthropy in its modern form, that is, as the administration of giving in ways determined by those who have accumulated wealth. At the end of a sustained period of industrial expansion and rapid urbanisation in the United States – the period known as the Gilded Age – Carnegie argued that only the wealthy themselves, by dint of their acumen in accumulating such wealth, had the capability to determine how best it should be distributed for the benefit of the greatest number of people. He argued that financing the establishment of and providing contributions to institutions for education, social aspiration and social care such as universities, libraries, art galleries, museums, concert halls, parks and leisure facilities, as well as hospitals and medical facilities, was superior to the provision of charity or basic social welfare. He believed that these kinds of facilities provided a permanent benefit for a broad public. Moreover, such a structuring of giving was necessary to perpetuate the conditions that supported sustained wealth accumulation in the first place. In this period, vast fortunes were made under conditions of labour market exploitation and monopolisation. For Carnegie, any attempt to address inequality and social deprivation at a systemic level – his bugbear was communism – would be disastrous for overall social and economic development. Philanthropy, properly administered, was necessary to maintain progress and provided the means to instil industriousness and self-improvement in individuals, these being understood as the values on which progress depended. As Peter Dobkin Hall writes, such a doctrine of philanthropy replaces ‘traditional
equality of condition with equality of opportunity’, and underpins an individualist, entrepreneurial approach to social and economic aspiration.

While Carnegie’s own philanthropic activities gave rise to the establishment of what amounted to an urban infrastructure for education and self-improvement, the establishment of structures for philanthropic giving were hardly seen as an unalloyed good. Carnegie’s doctrine rested on the distinction between for-profit and not-for-profit incorporated entities that had entered U.S. law in 1870, and that exempted not-for-profits from taxation. The desire to secure tax-free status while evading government oversight led to much manoeuvring on the part of that other industrial titan, John D. Rockefeller, who sought federal incorporation for his newly conceived Rockefeller Foundation in the early 1900s to avoid possible state restrictions on its size and purpose. Despite the foundation’s grandiose aim of promoting the ‘wellbeing of mankind’, Rockefeller encountered considerable opposition from leading public figures, including former U.S. President Theodore Roosevelt and sitting President William Taft, stemming largely from the ruthless and illegal means by which Rockefeller’s company Standard Oil had accumulated its wealth to begin with. In this context, giving Rockefeller the power and freedom to undertake philanthropic activity on an unprecedented scale, and without specific intent, caused great concern. In order to gain a federal charter, Rockefeller offered a series of concessions, including limiting the scale and lifespan of the foundation and allowing trustee oversight, yet the bill was defeated in the U.S. Senate. The Rockefeller Foundation was subsequently incorporated in New York State in 1913, ironically without any of the concessions offered in the federal negotiations. In his recent book on contemporary philanthropy, Rob Reich suggests that this ‘set in motion an institutional path dependence that led directly to the widespread organisation of private foundation activity today’, a period that, underwritten by the wealth of similarly unfettered technology entrepreneurs, has created a second Gilded Age.

In the way that giving was negotiated, the history of the modern philanthropic foundation is also central to how modern ideas and practices of research themselves emerged, especially those related to social concerns. The Russell Sage Foundation, formed in 1907 through a gift from Margaret Olivia Sage, widow of financier Russell Sage, marked the emergence of the philanthropic foundation in its modern form. The Foundation’s remit, which holds to this day – ‘for the improvement of social and living conditions in the United States’ – was the culmination of efforts over the preceding decades to professionalise and reform the provision of social welfare and charity in the United States through voluntary associations, agencies and the church in the context of increasing urbanisation and its social side-effects. The Russell Sage Foundation, however, would not set out simply to be another provider of welfare or charity. Instead, it would seek to investigate the larger societal issues that necessitated the provision of charity and welfare in the first place. In this way, it signalled the emergence of what Hall calls a ‘genuinely scientific philanthropy directed to identifying and solving the root causes of social problems rather than treating their symptoms.’ Hall points in particular to the Foundation’s provision of social policy research, considering its seminal Pittsburgh Survey of 1907-1914 which investigated the living and working conditions of the city’s working class, and made recommendations for action. In Carnegie’s city, this dynamic of ‘wealth’ was in full play. The structural problems of inequality that
drew wealth accumulation became the motivation for and the subject of research funded by such accumulated wealth.

Architecture plays a central role in this history of the emergence of the philanthropic foundation. In its bricks and mortar manifestation, it is the means by which Carnegie’s demand for ‘enduring’ benefit is frequently made manifest. Two papers in this issue address this context directly. Azra Dawood investigates an institutional building program emerging from the philanthropic interests of Rockefeller’s scion, John D. Rockefeller Jr. She tracks his development of the first International Student House built in Morningside Heights in Manhattan in 1924. In its spatial form and urban siting, Dawood demonstrates how the I-House supported Rockefeller’s push for a modernised, American Protestantism that would be exported internationally as its residents returned to their countries of origin and became leaders. The thinking for such a program had emerged directly from two foundations Rockefeller supported: the Bureau of Social Hygiene, and the Institute for Social and Religious Research. Through its physical presence, and the way in which it organised the social and cultural relations of its inhabitants, the I-House put the ideologically-laden social scientific research of these foundations into practice. While not the subject of research per se, Dawood argues that architecture became the ‘scaffold’ for Rockefeller’s philanthropic interests, and she analyses the I-House’s spatial organisation according to Rockefeller’s social and theopolitical aims.

The realm of housing, long a central concern for reform-minded philanthropists, perhaps offers the clearest intersection of architectural and social concerns, and shows the way in which a certain scale of funding enabled direct research on architecture’s processes and technologies. In her contribution, Avigail Sachs focuses on the way in which the Tennessee Valley Authority (TVA) leveraged its housing delivery program as a context for research into architectural technology and prefabrication. In the 1930s and 40s, the TVA delivered hydroelectric infrastructure on an unprecedented scale and in the process had to house thousands of its workers and their families across several states. The TVA established an Architectural Research Division to focus on developing construction and fabrication techniques that could deliver housing at scale. As a public authority in a liberal democracy, the TVA had to be seen to be avoiding centralisation or the imposition of planned solutions that could be aligned with a ‘creeping’ socialism. Sachs argues that research offered the TVA a rhetoric and a set of practices in which to situate design development as systematic, scientific inquiry. The results of its housing research were made public and hence could inform the uptake of its innovations by the private sector. In this way, published research, in its rhetorical dimension, was shown to underpin American democracy, skirting the politically sensitive issue of government-sponsored housing undermining free-market capitalism.

By mid-century, the role of private foundations was still causing a deal of disquiet as social research became more embedded in their activities. An epic series of articles published in The New Yorker in 1955 produced a merciless profile of the Ford Foundation, then the largest philanthropic organisation in the world, and its main operatives, dubbed ‘philanthropoids’. The three articles described how a collective social scientific model of research, skewed towards big multidisciplinary teams, constant self-study and reporting, and resolute objectivity, had itself become foundational. While at the turn of the twentieth century the criticism of foundations had revolved around the means by which great wealth
had been earned, and tended to come from the political left, by mid-century, criticism had swung on its political axis, with the right decrying research that was thought put at risk the means by which great wealth could continue to be made. Between 1952 and 1954 two congressional committees were convened to investigate the role of foundations in relation to McCarthyist ‘un-American activities’. The report of the first, finding no evidence of this, did however note that “‘Many of our citizens confuse the term ‘social’, as applied to the discipline of social sciences, with the term ‘Socialism’.”

This shift in political sentiment illustrates just how significant the large-scale funding of research by private foundations had become. By the time these articles on the Ford Foundation were written, and as the work of the TVA shows, the United States government had for some time been following the lead of private foundations into large-scale funding of research, an involvement that increased significantly after the Second World War. The private research university was the main beneficiary of this governmental largesse. Again, an instructive example here is MIT which, as with many other universities, was the beneficiary of direct US government spending, mostly for defense-related research, which dwarfed that given to private corporations in the postwar period. This institutional setup provided a particular foundation for architectural research as it played out through MIT’s School of Architecture and Planning and its outgrowths such as the Media Lab. These disciplines were ripe for transformation in a context where the stewarding of bounded knowledge was giving way to an expanded sense of managing information. It was the complexity inherent in processing data and drawing meaningful – and actionable – insights from it that aligned with and further reframed the expertise of architecture and planning, disciplines used to handling and synthesising multiple inputs towards practical outcomes.

We should be wary, however, of reading these developments exclusively within the American political context, however influential it would become. The New Yorker humorously drew attention to the particularly (and peculiarity) of the American situation by subtitling the first of its Ford Foundation articles with ‘The French Just Don’t Believe It’. Yet, just a year after their publication, in 1956, the Calouste Gulbenkian Foundation would be established in Portugal, receiving the majority of oil magnate Calouste Gulbenkian’s private fortune, then the world’s largest. In his contribution, Ricardo Agarez discusses the way in which, during the 1960s and 70s, the work of the Gulbenkian Foundation established a comprehensive, research-based architectural bureaucracy that would be instrumental in delivering bricks-and-mortar social and cultural infrastructure across Portugal and in Iraq (the location of Gulbenkian’s oil concessions, and hence his wealth). Agarez shows the way in which the Foundation’s cultural and educational grants program was essentially a building program. Proposals would be assessed by architects and engineers for their value as enduring, built institutions. In turn, the Foundation’s management of the projects it funded would require, and also enable, the development of what Agarez calls built environment expertise in Portugal and abroad. The design and construction of the Foundation’s cultural headquarters in Lisbon is a case in point. Incorporating an extensive art collection, library, performance space, as well as the headquarters of the Foundation itself, the project acted as a practical laboratory for the development and application of the latest knowledge and techniques across architectural design and construction, as well as the organisational aspects of the headquarters’ cultural and bureaucratic functions. In line with Dutta’s observations, the way in which the building was procured presents a radically different
image of architectural production, one shifting from heroic authorship towards the management of knowledge generation and its exchange, a shift, that is, towards research.

All the while, Agarez observes, the Gulbenkian Foundation was acting as Portugal’s ‘unofficial Ministry of Culture’ within the dictatorship of António de Oliveira Salazar, which had given the foundation significant tax exemptions on its establishment. This renders more complicated and fraught the relationship between research, funding and politics than we have seen hitherto. The approach to architectural research of the Gulbenkian Foundation could be aligned with that of the TVA, that is, as applied and technically focused. It could also be seen to be acting in similar ways to Rockefeller Jr., and Carnegie before him, in establishing and funding enduring institutions of human betterment. It flourished, however, under a repressive, highly centralised political regime. This case study suggests that the nexus of architecture, research and funding is deeply and inextricably political, but in ways that are not determined in advance.

The context of the post-war United Kingdom offers a further example of this issue. David Theodore considers Richard Llewelyn Davies’ pioneering research into hospital design funded by the Nuffield Provincial Hospitals Trust. While this research would have a significant impact on the way in which the relationship between hospital architecture and medical care was understood through the 1950s and 60s, in turn underpinning the hospital building program of the National Health Service, Theodore argues that a more fundamental reconceptualisation of the architecture profession was offered in this moment. For Llewelyn Davies, the nexus between medicine and architecture offered a model of how research related to architecture. He argued that architecture was not a discipline like science, hence it had no recourse to ‘basic’ research. Rather, like medicine, it was a profession that could advance in practice in relation to knowledge generated by other disciplines, becoming the means by which such knowledge could be applied. With this model, Llewelyn Davies argued for the establishment of government-funded research for architecture along the lines of the medical research councils. With access to funding at scale, architecture, like medicine, could develop its professional expertise in the state service of social care.

The context of the post-war United Kingdom exemplifies what we might understand, broadly, to be the European experience of state-funded social welfare. In investigating the context of architecture and social care in France in the late 1960s and early 1970s, Meredith TenHoor offers an analysis which both confirms the positivism of this orientation and provides an example of how architecture could have a different agency in the conceptualisation and delivery of social care. She investigates the Centre for Institutional Studies, Research and Training, or CERFI, a research collective that received funding from the French Ministry of Equipment. As a research group linked to government funding while generating its own research priorities and projects, CERFI operated as a collaborative, multidisciplinary entity, comprising architects, psychoanalysts, psychologists, urbanists, historians and sociologists, amongst others. With this mix of expertise, CERFI sought to use their funding to investigate the workings of the state itself, opening up new priorities and forms for what they called équipements collectifs, or ‘collective amenities’. At one level, CERFI’s key members, including Félix Guattari and Michel Foucault, continue to be immensely influential in the critical and theoretical terrain of inquiry in architecture. Beyond this obvious influence, TenHoor shows the way in which the group’s research mission
reoriented architecture’s instrumental role in applying the outcomes of research. CERFI developed a discursive process – literally involving extended conversations between researchers – which folded architecture into ways of rethinking social problems and ameliorative social provision. That architects, historians and psychoanalysts might work together on the problem of psychiatric care, for example, meant that hierarchies and expectations regarding knowledge, expertise and action were radically rethought, together with the potential for practical outcomes in the provision of care. Psychoanalysis was not just the subject of research or a professional practice. Rather, it was a mode of thought which opened up the discursive process of research towards new potentials. Similarly, architecture was not just the physical infrastructure for the provision of care. It was the very armature of institutional knowledge, encoding spatial dynamics which solidified, or, potentially, could emancipate, the subjective interactions of social and medical care. In this endeavour, ‘bricks and mortar’ were at once vitally important and yet insufficient in imagining and bringing into being collective amenities that could transform what care meant and could mean.

The conceptual tools CERFI produced through their work continue to be foundational for critical and historical research in architecture, as in many other disciplines. Indeed, these tools are used to critique the ‘techno-social moment’ which framed architectural research in the post-war period. While architecture departments still undertake what is now called ‘industry-engaged’ research (with health-related research still being a major activity), research practices have become more embedded in private industry. In her contribution, Amy Thomas looks at the ORBIT report, published in 1983 by British architectural firm DEGW. Funded by a range of public bodies and private firms, including the Department of Industry, British Telecom, developers, real estate firms and office supply firms, the report looked at the impact information technology was likely to have on the contemporary office building and the way it was designed and developed. Margaret Thatcher’s implementation of neoliberal social and economic policies through the 1980s fundamentally changed the kinds of relationships between research and professional practice that Llewelyn Davies, for example, had envisaged. A space would open up for private firms to seize on the potential deregulation would allow by offering different kinds of products and services to a competitive market. For an architectural firm like DEGW, research offered a means of professional differentiation and advantage. Schooled in systems thinking at the University of California Berkeley by Christopher Alexander, firm principal Frank Duffy did not simply transfer research findings into practice. He reshaped it, developing the firm into a consultancy that offered knowledge services, rather than simply architectural design services. The ORBIT report, and subsequent ones DEGW and Duffy would publish, communicated and used a range of practical research methods that promised to enhance decision making and productivity. User observation and interviews, client workshops, space audits, and post-occupancy evaluation have now become standard professional tools in architecture.

At the beginning of this introduction, and of the project itself, we asked in what ways the funders of architectural research shape the agendas of that research. In asking this question, we had assumed that architectural research was a distinct endeavour, and while often hidden or not explicitly recognised, that funders could be identified, and their various priorities and ideologies accounted for in the research outcomes. Collectively, our
contributors have shown that such connection and causation misconstrues architecture’s relationship to research. While the contexts and studies they present are specific and different, each has shown that the relationships between research, funding and architecture can take on different values and forms of significance. Architecture can be instrumental, a tool of research, as well as critical and generative in how research questions are asked. Architects can undertake research, but with a range of different outcomes in relation to architecture as professional practice. Research can be undertaken on architecture, and on environments and problems to which architecture can be seen to contribute, in both positive and negative ways. In all of this, architecture, whilst not exactly elusive, does not cohere into a single subject, scene or mode of practice.

However, we would not want to see in this situation simple divergence or relativity. We believe there is a distinct architectural history traced by the collected papers, one that poses two consistent, related questions that are perhaps more foundational for architectural research than the one with which we started: how is architectural knowledge constituted, and what is its relationship to the practice of architecture? An answer to the first question brings the issue of funding to the fore: when considered in relation to the conditions that make research possible, knowledge production in architecture is entangled with knowledge production in a range of other fields – health, engineering, economics, social science – and, as such, is contingent upon what they bring to its generation. This does not mean architectural knowledge is relative or subservient. Rather, it provides a thread through a larger terrain of knowledge formation, linking social and political ideologies normally held apart. Dictatorships, liberal democracies and social welfare states have all funded research and used its outcomes to further their objectives. Architecture has developed through and served these agendas in a range of ways. This prompts the second question: how is the knowledge generated in these contexts related to the practice of architecture? The answer repositions architectural practice – indeed architecture itself – as the deployment of an expertise of translation. While it took several forms, from instrumental application to critical questioning, the papers show that the architectural expertise of turning ideas into things, be they buildings, specifications or programs, has been inextricable from knowledge production in its modern form, and that architecture developed this form of expertise through funded research programs.

It is perhaps missing the point to keep asking the question that many of us who are researchers in the field of architecture often hear (and are sometimes obliged to pose): ‘what is the impact of your research?’ The papers have shown that impact, as another way of stating the translating function of architectural expertise, and far from being a recent ideology governing funded research, is at the foundation of architecture’s relationship to research, and of the ability of a range of research programs to be transformational in different social and political contexts (for good and for ill). To research that apparatus and inquire into its origins and contexts, as our contributors have done in this special issue, not only generates new knowledge in architecture, it situates research funding itself as a topic of inquiry, and tells us much about knowledge as a practical, political question in the context of social and political change.

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1 Noam Chomsky, ‘Chomsky Says’, London Review of Books, 15 June 2017, p. 4. In an astute commentary on the dispute, Jackson Lears frames it in epistemological terms, noting that it pits a ‘pure science’ against a ‘constructivist’ approach. That is, Chomsky’s entire academic project rests on a belief that ideals, such as ‘truth’, are universal, whereas his accusers believe ‘science and society are co-constructed’, making disinterested or pure intellectual inquiry impossible. The latter exactly describes Knight’s position: he argues that military funding shaped Chomsky’s ‘intellectual milieu’ to such an extent that he couldn’t escape its influence, producing his interest in accurate machinic translation. Jackson Lears, Letter, London Review of Books 15 June 2017, p. 4; and Chris Knight ‘Chomsky Says,’ London Review of Books, 13 July 2017, p. 4.
5 Ibid., p. 19.
10 See the account in Rob Reich, Just Giving: Why Philanthropy is Failing Democracy and How it Can Do Better (Princeton: Princeton University Press, 2018), pp. 1-7; 137-140.
11 Ibid., p. 140.
13 Hall, ‘A Historical Overview of Philanthropy,’ p. 44.
14 Ibid., p. 45.