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## The Origins of the Anglo-American Research Alliance and the Incidence of Civilian Neuroses in Second World War Britain

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### Introduction

From August 1940 until May 1941, Germany subjected Great Britain to air bombardments by night and day. Desmond Flower recalled how London shook as the first bombs hit the docks, while in early September 1940, nurse Frances Faviell described London's casualties as, "bodies, limbs, blood and flesh mingled with little hats, coats, and shoes".<sup>1</sup> Despite this onslaught and the "Blind savagery" of night attacks,<sup>2</sup> *The Times* described a courageous dignity among the citizenry.<sup>2</sup> Continuing this pattern in his private correspondence, the Edinburgh psychiatrist David Kennedy Henderson would write in the New Year to his American colleague, Adolf Meyer, that:

**In such times as these the potential neurotic or psychotic pulls himself together a bit, he wants to put on a face as good and as great as any other man, he rises to the occasion and in consequence consultation work and admission to hospital are rather less than in ordinary times.**<sup>3</sup>

Such public and private sentiments were commonplace and echoed the personal, societal, and political need to appear courageous, as well as controlled, unified, and unwavering in morale.<sup>4</sup> In various ways, it was a language of reassurance: one that comforted the British population at home while also heightening the confidence of her allies abroad that Britain would carry on. This rhetoric of fortitude was becoming one of the lifelines of Britain's national sovereignty.<sup>5</sup>

Scholars often discount the effects of such rhetoric on the production of science and the practice of medicine, yet such rhetoric is significant, especially when explored from outside the more traditional perspective of national history.<sup>6</sup> This paper does that by emphasizing the connected context of biomedical science in Britain and North America during the early years of the Second World War. At the time of the blitz, physicians and scientists on both sides of the Atlantic began developing informal structures and institutions to support a transnational biomedical research collaboration for the combined defence of Anglo-America.<sup>7</sup> As this biomedical collaboration formalized slowly within institutions and government directives, relations at times became problematic.<sup>8</sup> One area where differences arose concerned questions about the causes and incidence of civilian neuroses in Britain. Were air raids, for instance, causing increases? The rhetoric of the times suggested they were not, but was that merely the consequence of social policy? In Britain by 1940, physicians, cradled in the experience of treating patients with neuroses during the First World War, and now acting as advisers to the Ministry of Health and the Ministry of Pensions, had crafted "a double-barrelled approach" to mental illness. This, according to Ben Shephard, treated real neurotics

while discouraging civilian and military cases of war neuroses by suppressing “all mention of quasi-medical terms like ‘shell-shock’”, denying pensions for such cases, and making it “impossible for ‘neurosis’ to be used as grounds for getting discharged from the Army”.<sup>9</sup> These policies, however, were not well understood by civilian scientists and physicians in the United States, who alleged that their collaborators were under-reporting the direct effects of the bombing on the civilian population. These differences exacted a toll by politicizing the transnational collaboration's aims, methods, and even its scientific conclusions.

Nevertheless, the origins of this Anglo-American biomedical research alliance lay in a realm of assumed shared values, while the tensions of that assumption became inextricable from the joint endeavour in cooperation. The international context of the question of civilian neuroses in Britain, therefore, provides a site from which we can survey the resulting political tensions between government agencies and friends alike. This paper uses the case of this transnational collaboration to examine the limits of scientific objectivity in wartime Britain, while also calling attention to the ways this alliance helped to foster the transformation from the informal world of inter-war biomedicine to the structured government science found in Britain and North America in the post-war period.<sup>10</sup>

## The Origins and Political Context of the Trans-Atlantic Research Alliance

In the summer of 1940, President Franklin Delano Roosevelt created a committee in the United States devoted to the organization of scientific research for the national defence.<sup>11</sup> He empowered the National Defence Research Committee (NDRC) with the executive authority, funds, and remit “to correlate and support scientific research on mechanisms and devices of warfare”.<sup>12</sup> In mid-1941 the Chairman of that Committee, Vannevar Bush, was asked by Roosevelt to invite the British government “to send a mission to the United States to consider ways and means of sharing scientific and technical information between the United States Services and the NDRC ... and the British Services and scientific organizations”.<sup>13</sup> Research science, thus described, became part of a joint effort for the combined defence of Anglo-America. This relationship, however, had already existed unofficially for more than a year in the biomedical sciences.<sup>14</sup>

Multiple precedents for combined defence research had existed since the First World War.<sup>15</sup> During the 1914–18 conflict, the American National Academy of Sciences created the National Research Council (NRC), which had cooperated with the newly formed British Medical Research Committee.<sup>16</sup> Both agencies had collaborated in the organization of the medical services and research. In addition, they had jointly published a *Medical Bulletin* focusing on the health problems of war, and brought research workers in the two nations together with the hope of preserving “common ties between American and British science”.<sup>17</sup> At the onset of the Second World War, both bodies still existed, although the Medical Research Committee had been renamed the Medical Research Council (MRC) and by then had achieved far greater authority in dictating national science policy than its American counterpart, which remained a private agency closely affiliated with government bodies.

In Second World War America, however, the primary role of the new NDRC differed substantially from that of the older NRC, in that its major emphasis was on applied research in physics and chemistry.<sup>18</sup> The result of this difference was that between 1940 and the summer of 1941, biomedical collaborations like those that had existed between Britain and the United States during the First World War were excluded by Roosevelt's executive remit to the NDRC.<sup>19</sup> This situation was corrected finally in summer 1941, when Roosevelt replaced that government committee with the Office of Scientific and Research Development (OSRD).<sup>20</sup> Shortly thereafter the OSRD Committee on Medical Research—known usually by its acronym CMR—was formed and it incorporated the NRC transnational liaison into its full, officially mandated remit.<sup>21</sup> Unofficial collaborations between biomedical scientists in both countries had nevertheless been established from autumn 1940.

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In early September 1940, the Director of Johns Hopkins Medical School, then also Chairman of the Medical Sciences Division of the NRC, Lewis H Weed, unofficially approached his counterpart in the MRC, Edward Mellanby about the possibility of a biomedical research collaboration between the two countries.<sup>22</sup> For this task, Weed enlisted John Fulton, an American physiologist and former Rhodes Scholar who had worked at Oxford under Charles Sherrington during the interwar period.<sup>23</sup>

Shortly after the blitz started, Fulton wrote to Mellanby explaining that he and Weed thought collaboration between the respective national agencies might prove advantageous; the “suggestion goes to you quite informally and unofficially, but I hope that a more formal proposal may be drawn up in the near future”.<sup>24</sup> Mellanby replied that he favoured the proposal, but advised that the only way collaborations could be effective would be for some figure from America to visit Britain. “I am quite sure ... that if you yourself could come to England, all your many friends would give you a great reception” and it would help in devising “some method of bringing about closer liaison”.<sup>25</sup>

Fulton arrived in Britain on 16 October 1940.<sup>26</sup> By the time he departed, an informal proposal for cooperation between the Anglo-American biomedical research agencies had been written.<sup>27</sup> Both the MRC and NRC were to operate as central clearing-houses for information. University and industrial laboratories engaged in scientific research in either nation would communicate information to their respective sub-committees within each of the national agencies. Those sub-committees, in turn, would pass recommendations and conclusions to their chief administrators, who would then send transcripts of meeting minutes and recommendations overseas by diplomatic courier to their counterparts. In this way, information would be disseminated up and down the chains of command.<sup>28</sup> This proposal garnered the highest Cabinet approval within the British government. Maurice Hankey, former Secretary of the Admiralty turned Representative on Science to Winston Churchill, gave the collaboration his blessing, provided it did not cause “embarrassment” to Roosevelt, who was then engaged in a fierce presidential election and running on a neutral platform.<sup>29</sup>

The most famous biomedical discovery this transnational inter-agency collaboration yielded was penicillin.<sup>30</sup> In a 1944 letter to a journalist, Mellanby wrote, “The most dramatic of the war medical discoveries associated with the Medical Research Council is, of course, that of penicillin. Information on this substance was supplied to the Americans at an early stage, but the discovery was essentially British.” He was sensitive to the spirit in which that research had been conducted, cautioning the journalist, “I should consider it harmful to the complete interchange that now holds between the two countries, if claims of priority were specially stressed in the public press. At present the most amicable relations exist and there is no doubt in the minds of the scientific men engaged where particular discoveries have originated.”<sup>31</sup>

Yet penicillin was just one among many success stories of this collaboration. The administrators, scientists, and physicians involved could have boasted of their successes in creating better military technologies such as armour, helmets, and textiles for military uniforms that were designed for specific environmental combat conditions.<sup>32</sup> Likewise, joint studies on operations research, aviation medicine and physiology, blood transfusions, chemotherapy, orthopaedic surgery, and nutrition studies had led to a series of conclusions shaping policies for the provision of citizen safety and supplies to the fighting forces.<sup>33</sup>

One underlying assumption of this partnership was that the exchange of scientific information between the two nations should be free from political tinkering—the goal of both agencies was to disseminate information and coordinate research.<sup>34</sup> This was not, for instance, a place for propaganda or censorship. Almost immediately, however, peculiar political tensions emerged within the mechanics of this collaboration, especially when physicians in the United States asked whether air raids were increasing the incidence of civilian neuroses in the British population.<sup>35</sup> For the British, the question was loaded with national security implications, and the miasma of patriotic sentiment began to cloud the exchanges.

Recent scholarship has argued convincingly that debates in Britain that linked the incidence of civilian neuroses with air raids and declining civilian morale diminished throughout the course of the war, especially as the threat of a German invasion subsided.<sup>36</sup> Yet questions about the incidence of neuroses in Britain, as well the relationship between psychiatric illness and civilian morale, still had political salience in 1940 and early 1941.<sup>37</sup> Though the incidence of civilian neuroses was foremost a domestic medical problem, reported increases of such cases would have created a distressing picture of Britain's long-term prospects, to allies and enemies alike.<sup>38</sup> The discovery of increasing mental instability within the civil population would have implied diminishing morale and faltering resolve, and this could have been exploited in enemy propaganda. In the context of this research alliance, the implications of an increase in the incidence of civilian neuroses threatened a carefully assembled network of commitments and friendships, sustained, in part, by the belief that the British would carry on.<sup>39</sup>

Contrary to numerous pre-war forecasts projecting enormous civilian psychiatric casualties resulting from the aerial bombardments of metropolitan centres, an article published in February 1941 in *The Times* reported that the British Ministry of Health had found air raids were having no noteworthy psychological effect on the civilian population.<sup>40</sup> In fact, the number of cases of shock had decreased by a factor of two since the onset of the raids in September 1940. Sir Wilson Jameson, the Chief Medical Officer of the Ministry of Health, reported that shock "instead of ... becoming an increasing disability ... had actually become a decreasing disability".<sup>41</sup> As will become clear, this was not a view universally shared.

That same February, Daniel O'Brien, the Rockefeller Foundation's European authority on medical science, returned to Britain from a visit to the United States and hand-delivered the first package containing correspondence and minutes relating to the biomedical collaboration.<sup>42</sup> It apparently contained various minutes and recommendations for British researchers from the NRC's committees, but all that remains now is an index of the packet's contents and an extract from the NRC sub-committee on war neuroses. The index reveals that the packet contained information and recommendations from sub-committees on venereal, tropical, infectious, and cardiovascular diseases. There was also information on blood transfusions, tuberculosis, medical nutrition, anaesthesia, and urology. Finally, there were the proceedings from an NRC Committee on Neuropsychiatry, which was broken into three sub-committees: Psychiatry, Neurology and War Neuroses.<sup>43</sup>

A great deal can be learned from this index about differences in the administrative organization of neurology, psychiatry, and neuropsychiatry in Britain and America.<sup>44</sup> In America, neuropsychiatry functioned as an umbrella committee, under which the specialist committees of psychiatry and neurology were collected. This created some professional antagonism.<sup>45</sup> According to Jack Pressman, American neuropsychiatrists, many proponents of Freudian-based therapy, had been politically organizing their medical services throughout the inter-war period in order to gain substantial philanthropic resources and government recognition, and to develop a lasting institutional presence in American hospitals, asylums, and universities.<sup>46</sup> The Rockefeller Foundation, in particular, had been pushing for similar developments for neuropsychiatry throughout the rest of the world, especially in London.<sup>47</sup> Such a social organization for neuropsychiatry was almost wholly absent in Britain, where the organization of medical services for nervous diseases was divided, usually between neurologists, psychiatrists, consultant physicians and general practitioners.<sup>48</sup> The tensions that would develop around the War Neuroses sub-committee extract must, in part, be located within this context of professional conflicts and differences in national priorities and variations in standards of practice on nervous and mental diseases.

The extract in the packet sent to the Medical Research Council casts light on how the Americans perceived civilian mental health circumstances in Britain:



**There was a lengthy discussion about the possibility and desirability of sending an observer of neuroses to England. Dr [Frank] Fremont-Smith said that in his opinion, based on first-hand information, it would be inadvisable to send an observer, as such, because of the attitude of the British in minimizing the problem. The chief available source of information at present is through Dr Dawson of the U.S. Public Health Service, who is stationed in England and who will send reports every week or so, especially dealing with civilian morale. The disadvantage of an official as compared with a freelance observer was mentioned.<sup>49</sup>**

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Frank Fremont-Smith was an influential figure in American psychology and psychiatry in this period. A graduate of Harvard Medical School and influenced by Freudian theory, in 1936 Fremont-Smith had become Director of the Josiah Macy Foundation, a medical philanthropy advocating the advancement of psychoanalysis and improvement in the organization of psychiatric services in North America.<sup>50</sup> Since mid-September, he had been agitating for an American psychiatric observer to be placed in Britain. Alan Gregg, the Rockefeller Foundation's Director of the Medical Sciences Division, had warned him, however, that few in Britain would have much sympathy with the suggestion, because it would "have a curious ring to persons at present in London" who "might be quite overwhelmed with events crowding rather rapidly around them".<sup>51</sup>

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Clearly, members of the sub-committee on War Neuroses believed neuroses to be more of a problem among British civilians and soldiers than was being admitted officially. Yet, even as the Americans connected neuroses to morale, they identified three reasons for not sending a special observer: the British seemed to minimize the problem, there was already an official observer in the country, and finally there was the implicitly political view that an official observer would see a different picture than someone sent unofficially. O'Brien, for one, eventually corroborated these views in letters sent in May 1941 to Gregg but which he asked to be forwarded to Fremont-Smith. In his covering letter O'Brien clarified the situation:

**Shortly after my arrival I had the opportunity of seeing Dr Wilson, formerly assistant at the Tavistock Clinic under Rees, and later Gillespie. From conversations with both of these psychiatrists it was evident that there were practically as many opinions about the psychiatric situation due to the war, as there were observers, or schools of thought. In general, it was evident that [John Rawlings] Rees, who is the psychiatric consultant for the Army, did not carry much weight either with the services, or with the other psychiatric groups. [Robert Dick] Gillespie, too, had not much of an influence, even though listed as a consultant to the Air Force. [David Kennedy] Henderson was in Scotland, and generally more highly considered, but was not particularly active or driving. The psycho-analysts like [Ernest] Jones and Anna Freud, and [Edward] Glover, and other groups, were held either in relatively ill-repute, or carried no weight. The only man who had influence, and who was widely accepted, and whose opinion was of importance, was [Charles] Symonds, who is consultant for the Air Services, and is the man on whom Vice Air Marshal Wittingham [*sic*] of the Air Force depends. Symonds is also, more or less, the spokesman for the medical profession per se, and particularly for the group of organic neurologists.<sup>52</sup>**

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O'Brien's comments underscore the significant divergence between the two nations. The elite British consultants charged with the care of civilians often preferred to emphasize the lack of known organic causes in neuroses and, moreover, were ill-disposed to Freudian theory and practice. By contrast, American psychiatrists, although mindful of somatic causes, were often psychodynamic in their approaches and tended to advocate for early intervention in the treatment of neuroses.<sup>53</sup>

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Once delivered, the packet containing the index and extract was sent to various individuals. Information was disseminated down to the individual laboratories, hospitals, and universities directly concerned, and information was sent back up from those bodies to the Medical Research Council, which was acting as the clearing-house.<sup>54</sup> Mellanby sent the minutes from the Neuropsychiatry Committee—which included the extract, as well as the minutes of the committees on Neurology, Psychiatry, and War Neuroses—to the Cambridge neurophysiologist and Nobel Laureate, Edgar Douglas Adrian for review.<sup>55</sup>

Adrian wrote to Mellanby in early April 1941 offering his assessment that the documents were largely unimportant. He added, however:

**one passage ... is very interesting. You may have seen at the top of the page, about the desirability of sending an observer of neuroses to England. Dr Fremont-Smith said it would be inadvisable to send an observer as such, because of the attitude of the British in minimizing the problem.**<sup>56</sup>

He then continued:

**But are we "minimizing" the problem? From casual papers in the Lancet etc. one certainly gets the impression there has been no great increase in neuroses (unless gastric ulcers count), but I know that [Daniel] O'Brien was puzzled at the apparent complacency of our people and was going to consult various groups about it.**<sup>57</sup>

Adrian perceived the minute as an allegation:

**I don't like the suggestion that we are minimising the problem, which means, I suppose, either that we are not treating people who ought to be treated, or are treating them for organic ailments when they are really functional, or are concealing numbers. If any of these things are happening or are in danger of happening, I should have thought someone would have made a fuss about it.**<sup>58</sup>

Mellanby agreed with Adrian's assessment of the situation, and he wrote to Weed declaring that he had no knowledge of an increase in neuroses.<sup>59</sup> Whether Mellanby had asked other people about this the record does not indicate, but the archives of the Medical Research Council, typically detailed, show an absence of other correspondence, suggesting that Adrian was his chief source on the issue. In his letter to Weed, Mellanby finished:

**If our attitude is simply one of complacency and ignorance, I am sure that we should be glad to be made to see the truth. What none of us wants is to be allowed to live in a fool's paradise. Our psychologists in England, as I expect in America, are always fairly vocal and, if there were any great increase in war neuroses, I expect they would let us know about it pretty quickly.**<sup>60</sup>

If these reactions seem exaggerated, then it was because the American allegation was insensitive to the potential political ramifications of the question. It not only presented the possibility that civilians were not coping as well with the air raids as the triumphant newspaper headlines suggested, it also trivialized the British medical community's response and painted it as either intentionally evasive or emotionally repressed. The Americans were furthermore irritating the prevailing somaticist orientation of Britain's neurological, psychiatric and physiological traditions.<sup>61</sup> The British medical community had often linked the causes of

functional diseases with mitigating environmental factors such as pecuniary reward.<sup>62</sup> Many consultants were, moreover, sceptical if not openly derisive of psychoanalysis. One British neurologist's comment was archetypal of the organic point of view:

**There is, I admit, something rather attractive about a conception of an unconscious mind that acts almost as a sort of “villain of the piece”, or sinister power behind the tottering throne of reason that makes us very ready to accept it. It offers to relieve us of a great deal of responsibility for some of our erratic ways—it is a very convenient scapegoat. For this reason a cynic might say that if there were not an unconscious mind it would be necessary to invent one.**<sup>63</sup>

Shortly after Mellanby replied to Weed, Adrian suggested that the MRC commission a report examining the question—this was to be the first detailed study of civilian neuroses in Britain since the onset of hostilities. Adrian wrote, “I have had a talk to Aubrey Lewis, who tells me that he has fairly reliable data (from S.P.s, hospitals, etc.) about the general incidence in the civil population—and that it is surprisingly low.” In another indication of the importance of the international context, Adrian added in his letter that Lewis was unimpressed by the American neurological and psychiatric observer based in the country, because he was “addicted to psychoanalysis and lots of other enthusiasms”.<sup>64</sup> Admitting that Lewis was known to be somaticist in his sympathies, Adrian pointed out that anyone was preferable to the current adviser to the Ministry of Health, Gordon Holmes, a fiery conservative neurologist renowned for his short temper with psychiatric cases as well as his total disdain for Freudianism.<sup>65</sup> Adrian completed his letter with the thought:

**I believe it might be well worthwhile (for propaganda's sake if for nothing else) for the MRC to ask Lewis for a report which we could then send over to the States. Things like the suicide of Virginia Woolf get into the news and may tend to create the impression that we are in a bad way from the point of view of morale.**<sup>66</sup>

Aubrey Lewis was a respected figure in American circles. An Australian of Jewish descent, and a graduate in medicine from Adelaide University, Lewis had been a Rockefeller Travelling Fellow to the Boston Psychopathic Hospital and Johns Hopkins Medical School, before settling at the Maudsley Hospital, where by 1941 he was director.<sup>67</sup> Lewis was known to be disposed to Emil Kraepelin's model of mental illness.<sup>68</sup> This perspective emphasized that psychiatric symptoms often revealed underlying somatic aetiologies but were unrelated to hidden urges.<sup>69</sup> He articulated his views of proper psychiatric treatment in a letter sent to Gregg in late November 1940:

**We have ... started what is in effect a social experiment in treatment by arranging for a number of experts to conduct regular twice weekly classes and discussion circles which supplement the daily regime of occupational therapy, psycho-therapy, physical training etc., but are different from these in that they are optional and are not explicitly related to health and treatment. The University ... has provided a panel of lecturers and the subjects at present range through motorcar engineering, history of architecture, European affairs, book-keeping, music, drawing, wireless and electricity, French, period furniture and gardening. As you will recognise, the subjects are partly cultural and partly applied techniques; the therapeutic and educational side of it seems likely to be of considerable importance ... Under the conditions that are prevailing, this and rehabilitation seem to be the only aspects of actual treatment (as apart from prophylaxis) likely to develop in an original way during the war (unless new chemical methods of treatment prove valuable in controlling emotional happenings.) Otherwise, it seems a matter of applying the lessons and using the methods of 1914–18 in the light of general psychiatric principles.**<sup>70</sup>

Lewis was thoroughly somatic in his convictions and practice, and emphasized education, discipline and duty when treating patients suffering from functional neuroses. Adrian would have sympathized with Lewis's therapeutic perspective. In addition, he would have known that Lewis was an adviser to the Ministry of Health and the War Office and thus cognisant of the national security issues that surrounded concerns about increases in the incidence of neuroses.

On 8 May 1941, Mellanby wrote to Lewis, explaining that Adrian had recommended him as capable of producing an authoritative statement. Urging Lewis to remain objective, Mellanby added, “there is . . . no reason why we should delude ourselves on the subject of war neuroses, if such have increased in the country”.<sup>71</sup> Lewis was delighted with the proposal.<sup>72</sup> Yet, despite Mellanby's assurance that there was little need for delusions, once Adrian had used the word “propaganda”, Lewis's work became linked inextricably to the political context. True, Lewis may have been unaware of Adrian's views, or he may have been determined to remain impartial and objective, but it is an unavoidable conclusion that a broader set of political concerns and structures were now influencing the status of the future report. A comment Adrian made when he learned that Lewis was drafting it underscores this view: “I am glad Aubrey Lewis is sending a report on neuroses. There are too many emotional people concerned in the treatment of neurotics that mutual distrust is natural.”<sup>73</sup> Doubtless, some of the emotional people were Britain's American research collaborators, yet the National Research Council's reaction to the news that Lewis was drafting the report was ambivalence.<sup>74</sup>

## The First Report on Civilian Neuroses in Britain

Despite the enormous volume of literature on civilian neuroses in Britain, no historical study has ever sought to place Lewis's report in its national or international context, and the historiography concerns itself more with the polemical question of whether there actually were increases in neuroses (never defined). This is an interesting oversight given that this report was the first lengthy treatment of the topic in the British medical press. Perhaps this is because the report, which Lewis published with few modifications in the *Lancet*, is a challenging, ambiguous document.<sup>75</sup> Although its introduction and conclusion are clear, the internal presentation of data, the statistical analyses Lewis used, and his justifications for his methodology are difficult to follow. As published in the *Lancet*, the report ran to eleven pages, had thirteen figures, identified thirty-two individuals who had contributed data and other information, and ended with twenty-two endnotes. The information given about the origins of the report appeared as an oblique note at the bottom of the first page: “ Report prepared at the request of the Medical Research Council”.<sup>76</sup> There were no hints of the international context in which it was produced or that the MRC intended it to appease their biomedical collaborators in the United States.<sup>77</sup>

Lewis began his study by explaining that it was impossible to tell if a mental disturbance is “directly attributable to war conditions, and particularly to air-raids”. Because of this, he suggested it would be useful to see if there were more or fewer cases of neurosis before the war. He proceeded initially, therefore, by comparing the number of known neurotic patients and the statistics from 1937 (the last year Lewis argued it would be reasonable to claim people were unaffected by war conditions) and 1941. Towards the latter half of the report, however, Lewis became increasingly expository in tone. Although his text remained analytical, it relied on empirical observations from physicians residing in bombed areas, and there were fewer statistical comparisons. The final pages analysed correlative changes in suicide, motor accidents, and alcohol abuse rates. By the time it concluded, Lewis seemed less interested in his initial comparative study, and more interested in whether the war was causing neuroses. This subtle shift from his original question—*are there more or fewer cases of neurosis since the war began?*—was one that changed the overall coherence of his entire report.

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Beginning by identifying how alterations in policies could cause dramatic changes to occur within individual institutions, he noted that the number of patients admitted to special EMS Neuroses Units in the period between October 1940 and June 1941 was only 300, and added that 136 patients had been admitted in May and June 1941. This, he insisted, was because of a “newly instituted policy whereby all persons receiving an injury allowance for ‘shock’ or similar neurotic reactions were required to enter hospital for an expert opinion on the cause of their illness, and for treatment”. He added, “Many of the latest admissions represented cases of unnecessarily long-continued payments.”<sup>78</sup> In general, however, the numbers of people claiming benefits for shock were not numerous, and it was possible, he admitted, that many with a case for claiming the benefit did not do so, thereby escaping the attention of medical practitioners.

Because “neuroses attributable to war conditions might occur in others less dramatically exposed to stress”, Lewis opted to study the case records of one London general practitioner to see if there were any change in the overall incidence of neuroses. The general practitioner, Lewis found, had seen 970 patients in nine months in 1937. Between September 1940 and May 1941, however, the number of patients decreased to 740. In both years, the number of neurotic patients was between 240 and 250, in effect implying an increase in patients manifesting mental symptoms during the war period. Lewis had suspected the increase was due to there being more women patients during the war, but instead he found similar gender proportions to 1937.

“ The rise, therefore, in the proportion of neurotic illness did not depend on a change in the sex ratio.” This was an important observation because it established that any increase in neuroses was not the product of worry about loved ones fighting in the armed services. Lewis concluded this section, “it appears that there had been a slight rise since the blitz in the amount of neuroses in the available population”. That slight rise, based conservatively on his data, amounted to an increase of 6 per cent in London.

Lewis then compared the demographics of the neurotic populations between the two years. More than half in both years had “a straightforward neurosis and the remainder have prominent neurotic symptoms masquerading as physical disease or due to physical disease”. Twenty per cent of the patients had never been diagnosed with mental illness, while 74 per cent had been known to suffer from neurotic illnesses, which had “been made worse by the war”. As many as two-thirds of the patients had either developed neurotic symptoms or seen such symptoms aggravated since the war began. But, he cautioned:

**As to the part played by actual war stress, including air-raids, there was evidence that this was one of the causes of the illness in three-quarters of the patients who were now having their first neurotic attack; and that it was partly responsible in four-fifths of the patients who had a history of previous neurotic trouble. Air-raids alone had played a causal part in an eighth of the previously neurosis-free: and in a sixth of those with previous neurotic history.<sup>79</sup>**

By diverting his attention to whether the war was causing neurotic symptoms, Lewis was ignoring his primary question regarding the increase or decrease in cases of neurosis. Even on the question of whether the war could be causal, Lewis adopted a mixed position. He argued that two-thirds of the patients being seen in hospitals and clinics would have been admitted anyway. Thus, the war could not be causal even though it correlated with the presence of the symptoms. Lewis concluded his assessment of the situation in London with this observation:

**From all of this it follows that a severe neurosis hardly occurs as a war phenomenon except in people who had been neurotic before the war; and that when neurosis develops or is aggravated during the war, war stress had not been responsible for this in a quarter of the previously healthy, and in a fifth of those with previous neurotic history.<sup>80</sup>**

Lewis had adopted the explanation that most of the patients with neuroses would have developed them anyway. That these symptoms appeared in the context of the war was coincidental.

Lewis then addressed himself to the overall incidence of neurotic illness throughout England. In this section, rather than relying on statistical data, Lewis utilized written observations from physicians. A professor of medicine, three psychiatrists, and six general practitioners in the bombed areas of Liverpool, Birkenhead and Wallasey reported that there was no evidence of an increase in “psychoneuroses as a result of the war”. A physician in Rhyl admitted to seeing many heightened anxiety states but claimed, “they have all been in people who have not been bombed at all (anticipation neuroses)”.<sup>81</sup> The physician added that the demeanour of injured persons was “patient and stoical”. Another physician remarked:

**These patients ... were grateful for any attention and had a serenity and calm which might be due to the fact that, having experienced their worst fears and come through, they were content to await the future and not rush to meet it—no evidence here of neurosis either hysterical or depressive.**<sup>82</sup>

Lewis concluded his report with a discussion and a summary. In his discussion, he admitted causes of neuroses were almost impossible to identify, but it was clear to him that the terror of air raids was less attributable than secondary factors like the loss of a home.<sup>83</sup> The tremendous social upheaval that had happened in population centres like London meant that many individuals had been displaced to unfamiliar areas of the country—their isolation from family and friends might well have caused stresses.

Overall, it was impossible to argue that air raids had caused a “striking increase” in neurotic illnesses. Crude figures suggested that the number of cases had diminished. Since it was impossible to distinguish between neurotic illness attributable to air raids and that resulting from secondary circumstances caused by air-raid disruption, it could not be suggested that air raids in themselves were causal. Instead, Lewis concluded, “it is to the war as a whole, with its accumulated stresses, that people have had to adjust themselves, and signs of failure to do this can be taken as warning signals of neurosis”.<sup>84</sup>

Lewis's report is a challenging document to read, and it has curious inconsistencies. Several times, for example, Lewis claimed an increase in patient numbers was due only to changes in health care organization. Yet, when trends demonstrated a decrease in the number of neurotics, the question of whether changes in health provision might have influenced this decline was ignored. Because there is no other mental health survey from the same years (1939–42), it is impossible to compare data in the report with other information. Although there is no definitive evidence that it was propaganda, the document possesses an undeniable aesthetic quality, especially in the testimonials about the stoicism and courage of the civilians whose lives were ravaged by the bombardment. Comments like that of a psychiatrist in Liverpool—“all my patients and friends have stood up to the raids much better than I expected”—left traces of a community narrative of struggle, fear, and perseverance, which would have resonated with readers in North America. That “patients and friends” were represented together almost suggested a blurring of the lines between physicians, patients, and friends—everyone was affected by the blitz. Boundaries between the social and the professional had vanished within a narrative of resistance, patriotism, and commitment to maintain the morale of the nation.

## International “Facts” and the Production of “Fairly Reliable Data”

Aubrey Lewis sent his report to Edward Mellanby in early August 1941, and Mellanby forwarded it to Adrian, asking for his assessment.<sup>85</sup> Adrian was pleased: “Lewis's report is very good stuff and ought certainly to go to Weed—as a report in which his psychoneuroses committee would be interested, and to [Wilder] Penfield in Canada.” He then pondered whether there was any government committee that could

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look at the issue more closely: “The difficulty is that there are a lot of bodies already in the field—Child guidance, mental health, psychological society, etc., and a special committee would be no use at all.” But, he added, “if you could either make a special committee or call an occasional conference, thoroughly unrepresentative ... I think we could then feel that we were not ignoring this particular problem.”<sup>86</sup>

Mellanby eventually forwarded the report to the Americans.<sup>87</sup> Reminding Weed of the circumstances that had initiated the document, he wrote that a special enquiry by Lewis, “one of our best psychiatrists”, had now revealed the “real state of affairs”—there was little or no evidence of an increase in neuroses.<sup>88</sup> Weed replied a few weeks later:

**It is an important statement which Dr Lewis makes, and I am sure that it will go far towards clearing up the conception or misconception which the American psychiatrists have had regarding the neuroses problem in England. We have had so many differing reports regarding this medical question that an authoritative statement is most welcome.**<sup>89</sup>

Weed's comments contain a tone of ambiguity.<sup>90</sup> True, Lewis's report had revealed no evidence of an increase in civilian neuroses, yet at best it had not addressed the question fully. For the most part, and by Lewis's own admission, the data and analysis did not conclusively support any specific position. Whether Weed was aware of this or had simply glanced at the summary is impossible to know, but his choice of redundancy, “conception or misconception”, seems subtly sarcastic now. Even if the report was objective, there was no reason why Weed or any American psychiatrist should treat it as more than political propaganda. Still worse, they could have interpreted it as proof of their original allegation that the British tended to minimize the problem.<sup>91</sup>

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## Conclusion

The Canadian Wilder Penfield, an Anglophile who visited Britain in 1941, characterized the problem of civilian neuroses in an essay titled ‘Clinical notes from a trip to Great Britain’.<sup>92</sup> He wrote,

**Not only is there no increase in psychoneuroses in the civil population, but there is an actual decrease as compared with peace time. This is an established fact. It is part of the general national reaction of quiet defiance that is immediately apparent, and thrilling, to a new arrival in Britain now.**<sup>93</sup>

Penfield's remarks are interesting to contrast with another official explanation that appeared ten years later:

**Early in 1940 [admissions to mental hospitals] began to drop below normal, but this was at first probably mainly due to the refusal of many local authorities to admit voluntary patients to their already overcrowded hospitals. Incidentally, this illustrates the difficulty of measuring the true incidence of mental disorder, since the admission rate is always liable to be affected by variations *in the accommodation available*.**<sup>94</sup>

Both explanations appealed to different logics, relevant to time and context. Penfield's wartime remarks were one style of reaction to the crisis in Britain. His observation was loaded with heroic and rhetorical imagery that spoke to the morale of a people who would never give up. In contrast, the post-war explanation feels pragmatic, and oriented towards unified national policy. Even as it confirmed the observation that the numbers of mentally ill patients had decreased prior to the onset of the blitz, it offered a more prosaic interpretation—available beds not numbers of patients had decreased and the organization of

hospitals had been disrupted by the conditions of war.<sup>95</sup> In correspondence found in the Rockefeller Archives from 1940 and 1941, John Rawlings Rees of the Tavistock Square Clinic for the Treatment of Functional Nerve Cases affirmed that the work of his clinic had decreased during the blitz because many people would go nowhere after dark and many had left London.<sup>96</sup>

Where Lewis's report found sympathy and support in narratives like that of Penfield, views like those of Rees were being circulated in other places, and suggested another reason for the fall in neurotic patients. It would be wrong to claim that Lewis's study was propaganda—we will never know and it seems unlikely. These tensions nevertheless tell us much about the influences of national security concerns on science and especially on transnational science collaboration during periods of crisis. Several political realities forcefully intersected in the origins and production of Lewis's report. Firstly, there was the devastating crisis of the war, and especially of the air raids, on the civilian population, which threatened British national sovereignty. Secondly, the informal transatlantic collaboration in biomedical research blurred the concept of sovereign nation states by making the boundaries of knowledge for combined defence transparent and open. Yet, in turn, openness created special problems. There were, for example, inherent differences between North American and British national styles of science and science organization. It was in these differences between what might be loosely termed national schools of thought that another political layer emerged. In Britain, as Shephard has argued, “psychiatric policy towards civilians was being run by tough-minded veterans of the First World War, determined not in any way to encourage neurosis”.<sup>97</sup> It was these tough-minded veterans who antagonized professional interests in America, especially psychiatrists on the National Research Council's War Neuroses subcommittee.<sup>98</sup> At the same time, the Americans seemingly failed to understand the pressure the British psychiatric, neurological, and psychological authorities were under, especially those with military appointments and advising the Ministry of Health, the War Office, or the Medical Research Council. The morale of the nation, and the image of that morale, needed to convey a message to allies and enemies alike: Britain would not fall; its citizens would never give up. Increases in civilian neuroses would have posed a direct contradiction to that most important claim of courage and fortitude. If a suicide like Virginia Woolf's, as Adrian identified, could become the propaganda of the enemy, then it could be conflated with an aura of defeatism in the British public.

Lewis's report wrestled with these tensions, but its conclusions ultimately reflected the most optimistic picture. An editorial in *The Times*, citing Lewis's work, commented,

**It is said, for example, that those who live in dangerous times develop a more acute realization of the value and virtue of life and that when life has an object in which interest and enthusiasm are strongly enlisted the temptation to end it is discounted.**<sup>99</sup>

This image of resolve could not be tarnished. If it were a “truth” projected outward to a hostile foe or for the benefit of friends and allies, then it was also a “truth” reflected inwards. A truth intended to construct a rhetorical fortress that circumscribed a multiplicity of truths with the moral and political bricks and mortar of defiance, patriotism, duty, and unequivocal courage.

By autumn 1941, science in Anglo-America was undergoing a massive transformation, especially in the United States. It is clear that the executive order that established the Office of Scientific and Research Development in the summer of 1941 was paving a road towards the era of centralized government science. For the biomedical sciences in the United States, one of the immediate results of the creation of the OSRD was the formation of the Committee on Medical Research, an entity that effectively diminished the role of the NRC. The transnational liaison initiated by the NRC, however, did not diminish in importance; and the people involved in it continued to work together on problems related to the medical defence of Anglo-America. In hindsight, their informal liaisons were inextricable from the informal networks in science and medicine that had characterized the earlier progressive era, yet they were also indicating a way towards that



new world of science which emerged in the post-war period. This biomedical collaboration reveals the ways those two separate historical worlds can be connected. In many respects, it was through the small ingredients of informality and friendship that Anglo-American scientists constructed and then accustomed themselves to a world of big laboratories and even bigger operating budgets. This would become a world where national security considerations and the production of scientific knowledge could not be disentangled.<sup>100</sup> The questions and answers about the incidence of civilian neuroses in Britain during the Second World War were small signs of a not too distant future.

## Acknowledgments

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## Footnotes

<sup>1</sup> Desmond Flower, 'London docks bombed, 7 September 1940', and Frances Faviell, 'The Blitz: Chelsea, 14 September 1940', in John Carey (ed.), *Eyewitness to history*, New York, Harper Paperbacks, 1987, pp. 537–41.

<sup>2</sup> 'Blind savagery' of night attacks', *The Times*, 10 Sept. 1940, p. 2.

<sup>3</sup> The Adolf Meyer Collection, Alan Mason Chesney Medical Archives of Johns Hopkins Medical Institutions, Baltimore (hereafter AMCMA), I/1659/16 Henderson, David K, letter from David Henderson to Adolf Meyer, 1 Jan. 1941; see also George O Kent, 'Britain in the winter of 1940–41: as seen from the Wilhelmstrasse', *The Historical Journal*, 1963, 6: 120–30.

<sup>4</sup> Joanna Bourke, 'Disciplining the emotions: fear, psychiatry and the Second World War', in Roger Cooter, Mark Harrison and Steve Sturdy (eds), *War, medicine, and modernity*, Stroud, Sutton, 1998, pp. 225–34; Eric Hobsbawm, *Age of extremes: the short twentieth century, 1914–1991*, London, Michael Joseph, 1994, pp. 28, 143–77; Arthur Marwick, *The home front: the British and the Second World War*, London, Thames and Hudson, 1976; Ronald Blythe, *The age of illusion: England in the twenties and thirties, 1919–1940*, Harmondsworth, Penguin, 1964, pp. 294–316; Mark Mazower, *Dark continent: Europe's twentieth century*, London, Penguin, 1998, pp. 141–84; the late interwar political context can be found in Robert Rhodes James, *The British revolution: British politics, 1880–1939*, London, Hamish Hamilton, 1977, pp. 584–611; the medical context in Rosemary Stevens, *Medical practice in modern England: the impact of specialization and state medicine*, New Haven and London, Yale University Press, 1966, pp. 38–79. For the cultural context, see Modris Eksteins, *Rites of spring: the Great War and the birth of the modern age*, London, Bantam Press, 1989.

<sup>5</sup> On rhetoric see, David Harley, 'Rhetoric and the social construction of sickness and healing', *Soc. Hist. Med.*, 1999, 12: 407–35.

<sup>6</sup> Numerous scholars have debated the role ideology plays in defining the truth of scientific knowledge. Steven Shapin, *A social history of truth: civility and science in seventeenth century England*, Chicago and London, University of Chicago Press, 1994, pp. 409–17; Steven Shapin, 'History of science and its sociological reconstructions', *Hist. Sci.*, 1982, 20: 157–211; and Jean François Lyotard, *The postmodern condition: a report of*

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knowledge, Minneapolis, University of Minnesota Press 1989, pp. 3–67.

7 The origins of their collaboration cannot be disentangled from the context and rhetoric of the times, because it was the blitz that mainly prompted the crucial public outpouring of sympathy in North America for the British cause. Alan S Milward, *War, economy, and society, 1939–1945*, Harmondsworth, Penguin, 1987, pp. 55–98, on pp. 56–8; Nicholas Cull, *Selling war: the British propaganda campaign against American “neutrality” in World War II*, New York and Oxford, Oxford University Press, 1995, pp. 1–17; ‘The torrent of American sympathy. Help for the homeless poor in London. Mrs Roosevelt and the children’, *The Times*, 15 Oct. 1940, p. 5; see also ‘ “ All possible help for Britain”, Lord Lothian on American opinion. Growing cooperation with Canada. Governor-General’s talks with President’, *The Times*, 21 Oct. 1940, p. 4. Not all of this aid to Britain was benevolent. “The loss of her allies and delays in home production forced Great Britain to buy from the United States large amounts of war and other provisions for which, under the terms of the Johnson and Neutrality acts, cash must be paid.” Alzada Comstock, ‘Financing national defense in Great Britain and Canada’, *Ann. Amer. Acad. Pol. Soc. Sci.*, 1941, **214**: 111–17, p. 116.

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8 The most detailed study of the organization of science in America for this period remains Daniel J Kevles, *The physicists: the history of a scientific community in modern America*, Cambridge, MA, Harvard University Press, 1997; see also *idem*, ‘The National Science Foundation and the debate over postwar research policy, 1942–1945: a political interpretation of *Science—The Endless Frontier*’, in Ronald L Numbers and Charles E Rosenberg (eds), *The scientific enterprise in America: readings from ISIS*, Chicago and London, University of Chicago Press, 1996, pp. 297–319. For Britain, see David Edgerton, *Warfare state: Britain, 1920–1970*, Cambridge University Press, 2006.

9 The effect, Ben Shephard argues, was the unsurprising reduction of cases of neurosis and the feeling among some psychiatrists that they were being strait-jacketed by the system. Ben Shephard, ‘ “ Pitiless psychology”: the role of prevention in British military psychiatry in the Second World War’, *Hist. Psychiatry*, 1999, **10** (40): 491–524, pp. 522–3.

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10 I thank one of my anonymous reviewers for helping me to see how this point could be more strongly developed. This paper does not seek to address the status of the medical literature on the subject of civilian neuroses throughout the 1930s and 1940s. Instead, it aims to place the first report on the incidence of neurosis in its proper context—this transnational collaboration—and to show ways that the report’s content paralleled public and private discourse.

11 James Phinney Baxter, *Scientists against time*, Boston, MIT Press, 1946, p. 15; Bernard Katz, ‘Archibald Vivian Hill, 26 September 1886–3 June 1977’, *Biog. Mem. Fellows R. Soc.*, 1978, **24**: pp. 115–19.

12 Archibald Hill, ‘Science and defence. Anglo-American partnership in research. Speed in communication the key to success’, *The Times*, 17 June 1941, p. 5; see also Joseph Hinsey, ‘Herbert Gasser’, in Webb Haymaker and Francis Schiller (eds), *The founders of neurology: one hundred and forty-six biographical sketches*, Springfield, IL, Charles Thomas, 1970, p. 215.

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13 Hill, *op. cit.*, note 12 above, p. 5; see also Stanley Goldberg, ‘Inventing a climate of opinion: Vannevar Bush and the decision to build the bomb’, in Numbers and Rosenberg (eds), *op. cit.*, note 8 above, p. 277.

14 For related examples, see Wellcome Library, Archives and Special Collections (hereafter WL), GC/135/B/1 Box 2, Service Psychiatry Monographs, 49, Ladislav Farago, ‘German psychological warfare: survey and bibliography’, New York, 1941, pp. 44–5, 50–2.

15 Saul Benison, A Clifford Barger, and Elin L Wolfe, ‘Walter B Cannon and the mystery of shock: a study of Anglo-American co-operation in World War I’, *Med. Hist.*, 1991, **35**: 217–49; Daniel J Kevles, ‘ Into hostile

political camps”: the reorganization of international science in World War I’, *Isis*, 1971, **62**: 47–60; Brigitte Schroeder-Gudehus, ‘Challenge to transnational loyalties: international scientific organizations after the First World War’, *Sci. Stud.*, 1973, **3**: 93–118; Wilder Penfield, *The difficult art of giving: the epic of Alan Gregg*, Boston, Little, Brown, 1967; For a broader account, see Daniel T Rodgers, *Atlantic crossings: social politics in a progressive age*, Cambridge, MA, Belknap Press of Harvard University Press, 1998.

<sup>16</sup> The major history of the Medical Research Council remains A Landsborough Thomson, *Half a century of medical research*, 2 vols, London, HMSO, 1973–5, pages 292–332 of vol. 2, are the most relevant for this study. Joan Austoker, ‘Walter Morley Fletcher and the origins of a basic biomedical research policy’, in Joan Austoker and Linda Bryder (eds), *Historical perspectives on the role of the MRC: essays in the history of the Medical Research Council of the United Kingdom and its predecessor, the Medical Research Committee, 1913–1953*, Oxford University Press, 1989, pp. 23–33.

<sup>17</sup> Walter Morley Fletcher, ‘The national organization of medical research in peace after war’, in *Contributions to medical and biological research dedicated to Sir William Osler ... in honour of his seventieth birthday ... by his pupils and co-workers*, 2 vols, New York, Paul Hoeber, 1919, vol. 1, p. 462; The only study that I know exploring the origins of the National Research Council is Nathan Reingold, ‘The case of the disappearing laboratory’, *Am. Q.*, 1977, **29**: 79–101.

<sup>18</sup> Harry M Marks, *The progress of experiment: science and therapeutic reform in the United States, 1900–1990*, Cambridge University Press, 1997, pp. 98–100; Richard Rhodes, *The making of the atomic bomb*, New York, Simon & Schuster, 1986; ‘Dr Vannevar Bush, development of atomic bomb’, *The Times*, 1 July 1974, p. 16.

<sup>19</sup> Alan Gregg Diary, Reel 3, Friday, February 14, 1941, p. 16. Rockefeller Foundation Archives, Rockefeller Archive Centre, Sleepy Hollow, New York (hereafter, RAC).

<sup>20</sup> National Archives, Kew (hereafter NA), FD 1/6580, *Executive order: Establishing the Office of Scientific and Research Development in the executive office of the President and defining its functions and duties, 28 June 1941*.

<sup>21</sup> Letter from Warren Weaver to Daniel O’Brien, 8 July 1941, folder 482, box 37, series 401, Record Group (hereafter RG) 1.1, RAC.

<sup>22</sup> The impetus for this liaison seems to have come from John Fulton. Lewis Weed (1886–1952) is a neglected but interesting figure in American history. See *Repository guide to the personal papers collections of Alan Mason Chesney Medical Archives Johns Hopkins Institutions, the Lewis H Weed Collection*; [www.medicalarchives.jhmi.edu/sgml/weed.html](http://www.medicalarchives.jhmi.edu/sgml/weed.html) (accessed 25 Jan. 2008). On Mellanby, see ‘Sir Edward Mellanby, diet and nutrition’, *The Times*, 31 Jan. 1955, p. 8; B S Platt, ‘Mellanby, Sir Edward (1884–1955)’, *Oxford Dictionary of National Biography*, Oxford University Press, 2004 (hereafter *ODNB*), vol. 37, pp. 744–5.

<sup>23</sup> Philip Wilson, ‘Fulton, John Farquhar’, <http://www.anb.org/articles/12/12-00308.html>; *American National Biography Online*, Feb. 2000 (accessed 23 Sept. 2006).

<sup>24</sup> NA, FD 1/6578, America, Co-operation with Research Problems 1 (hereafter FD 1/6578), letter from John Fulton to Edward Mellanby, 18 Sept. 1940.

<sup>25</sup> NA FD 1/6578, letter from Edward Mellanby to John Fulton, 25 Sept. 1940.

<sup>26</sup> NA FD 1/6578, letter from Edward Mellanby to Kenneth Franklin, 17 Oct. 1940.

<sup>27</sup> NA FD 1/6578, letter from John Fulton to Edward Mellanby, 31 Oct. 1940; National Academy of Sciences, Washington DC, USA, National Research Council, manuscript (hereafter NRC, MS): Allied Cooperation 1940–

April 1941, letter from John Fulton to Lewis Weed, 11 Nov. 1940; NRC, MS: Allied Cooperation 1940–April 1941, *A memorandum on exchanging information*.

<sup>28</sup> One description of Fulton's time in Britain came to the Rockefeller Foundation from Hugh Cairns, Nuffield Professor of Neurosurgery at Oxford. "John Fulton is here and has been cramming in an enormous amount of valuable liaison work into a short time. He will be able to give you a well-balanced account of things when he goes back to US next week. He has I think seen a great deal of the Research work that is going on and has a really good view of the handicaps of a democracy at War, reduplications and overlapping of work, etc." Letter from Hugh Cairns to Alan Gregg, 31 Oct. 1940, Maudsley Hospital Psychotherapy, folder 257, box 19, series 401, RG 1.1, RAC.

<sup>29</sup> AMCMA, Fulton Diary, 14 Oct. 1940, p. 39, Fulton, John (Diaries) Oct. 1940–Aug. 1949, Lewis Weed Papers, Correspondence, The Lewis H Weed Collection.

<sup>30</sup> On penicillin, see Robert Bud, *Pencillin: triumph and tragedy*, Oxford University Press, 2007, pp. 23–87; Virginia Berridge, *Health and society in Britain since 1939*, Cambridge University Press, 1999, pp. 18–22.

<sup>31</sup> NA FD 1/6579, letter from Edward Mellanby to G E Brown, 7 Jan. 1944.

<sup>32</sup> Letter from Daniel O'Brien to Alan Gregg, 8 May 1941, folder 271, box 26, series 401, RG 1.1, RAC.

<sup>33</sup> NRC, MS: Allied Cooperation 1940–April 1941; Distribution of NRC Reports, Minutes, etc; letter from Edward Carmichael to Daniel O'Brien, 10 March 1941, folder 271, box 26, series 401, RG 1.1, RAC; see also M Fortun and S S Schweber, 'Scientists and the legacy of World War II: the case of operations research', *Soc. Stud. Sci.*, 1992, **23**: 595–613; moreover, it can be added that much of this work was facilitated informally by the Rockefeller Foundation as well as the NRC. "It is hard to write to friends in trouble without a sense of guilt and a discomfiting feeling of being privileged and unfairly favoured. If letters alone could help, I would have written many long since. Please keep an eye open for what we might do to help and tell O'Brien." Letter from Alan Gregg to Edward Mellanby, 11 March 1941, folder 647, box 60, series 401E, RG 1.1, RAC.

<sup>34</sup> NRC, MS: Allied Cooperation 1940–April 1941, *A memorandum on exchanging information*.

<sup>35</sup> The question of air raids and civilian neuroses had been raised as early as 1939. See 'Treatment of neuroses in air-raids', *Lancet*, 1939, **ii**: 1344–5. The literature on neuroses is enormous, but for my purposes the discussion in Ben Shephard, *A war of nerves: soldiers and psychiatrists, 1914–1994*, London, Pimlico, 2002, is adequate, especially pp. 169–86 and 279–97.

<sup>36</sup> The most important recent consideration of the subject, which contains a useful survey of the content and status of the contemporary medical literature, appears in Edgar Jones, Robin Woolven, Bill Durodié, and Simon Wessely, 'Civilian morale during the Second World War: responses to air raids re-examined', *Soc. Hist. Med.*, 2004, **17**: 463–79; Adam Phillips, 'Bombs away', *Hist. Workshop J.*, 1998, pp. 196–7; Ben Shephard op. cit., note 9 above, pp. 514–20.

<sup>37</sup> Erick Wittkower and J P Spillane, 'A survey of the literature of neuroses in war', in Emanuel Miller (ed.), *The neuroses in war*, New York, Macmillan, 1945, pp. 1–32, on pp. 2–4; Edgar Jones, 'War and the practice of psychotherapy: the UK experience 1939–1960', *Med. Hist.*, 2004, **48**: 493–510.

<sup>38</sup> Jones, *et al.*, op. cit., note 36 above p. 479.

<sup>39</sup> Reports of the decline in neuroses were already in circulation by November 1940. John Fulton, for example, upon his return from England, reported to Alan Gregg that the "neuroses developed at the time of Dunkirk are clearing up and that there are relatively few neuroses among the civilians". Alan Gregg Diary, Reel 3, Friday,



November 9, 1940, p. 146. Such statements and observations should be considered in light of the broader context of the British propaganda campaign against the United States. Philip M Taylor, 'If war should come': preparing the fifth arm for total war, 1935–1939', *J. Contemp. Hist.*, 1981, **16**: 27–51; Nicholas Cull, 'Overture to an alliance: British propaganda at the New York World's Fair, 1939–1940', *J. Br. Stud.*, 1997, **36**: 325–54.

<sup>40</sup> Jones, *et al.*, *op. cit.*, note 36 above pp. 463–74.

<sup>41</sup> 'Air raids' effect on health. Cases of shock fewer than expected', *The Times*, 19 Feb. 1941, p. 2; see also Ministry of Pensions, *Neuroses in war-time: memorandum for the information of the medical profession*, London, HMSO, 1940, pp. 1–7; E E Krapf, 'War-time psychiatry in Britain', *Britannica*, 1944, **31**: 11–23, pp. 13–22; Tom Harrison, 'Obscure nervous effects of air-raids', *Br. med. J.*, 1941, **i**: 573–4; Joanna Bourke, 'Fear and anxiety: writing about emotion in modern history', *Hist. Workshop J.*, 2003, **55**: 111–33, on pp. 114, 126–7, and fn. 7. Bourke cites an important Home Intelligence Report in her excellent discussion of the place of emotions in history, but misses the critical links between the Home Intelligence Reports and Home Guard Propaganda. See David K Yelton, 'British public opinion, the Home Guard, and the defense of Great Britain 1940–1944', *J. mil. Hist.*, 1994, **58**: 461–80, pp. 462–4.

<sup>42</sup> Daniel O'Brien (1894–1958) was normally based in the Paris office, which was closed and relocated to Lisbon after the German occupation of France. O'Brien, however, after a war-time tour through Europe, took up residence at the Athenaeum and occupied offices at the Royal Society in London. For a discussion of the relationship between the Rockefeller Foundation and the MRC, see William Schneider, 'The men who followed Flexner: Richard Pearce, Alan Gregg, and the Rockefeller Foundation Medical Divisions, 1919–1951', in William H Schneider (ed.), *Rockefeller philanthropy and modern biomedicine: international initiatives from World War I to the Cold War*, Bloomington, Indiana University Press, 2002, pp. 7–59; see also Jean-François Picard and William H Schneider, 'The Rockefeller Foundation and the development of biomedical research in Europe', in Giuliana Gemelli, Jean-François Picard and William H Schneider (eds), *Managing medical research in Europe: the role of the Rockefeller Foundation (1920s–1950s)*, Bologna, CLUEB, 1999, pp. 13–50, on pp. 34–40.

<sup>43</sup> NRC, MS: Allied Cooperation 1940–April 1941, Index of Minutes, Recommendations, etc., pp. 1–2.

<sup>44</sup> The best discussion of neurology and psychiatry in America appears in Andrew Abbott, *The system of the professions: an essay on the division of expert labor*, Chicago and London, University of Chicago Press, 1988, pp. 281–308. For the British context, see W F Bynum, 'The nervous patient in eighteenth- and nineteenth-century Britain: the psychiatric origins of British neurology', in W F Bynum, Roy Porter, and Michael Shepherd (eds), *The anatomy of madness: essays in the history of psychiatry*, 3 vols, London, Tavistock, 1985–1988, vol. 1, pp. 89–102.

<sup>45</sup> See, for instance, Guy McKhann, 'A forty-year journey', in Ingrid G Farreras, Caroline Hannaway and Victoria A Harden (eds), *Mind, brain, body, and behavior: foundations of neuroscience and behavioral research at the National Institutes of Health*, Amsterdam, IOS Press, 2004, p. 281.

<sup>46</sup> Jack Pressman, *Last resort: psychosurgery and the limits of medicine*, Cambridge University Press, 1998, pp. 25–8.

<sup>47</sup> For example, see WL, GC/135/B/1 Box 2, Service Psychiatry Monographs, Alan Gregg, 'What is psychiatry?' An address by Dr. Alan Gregg, director of the medical services division of the Rockefeller Foundation, given on Dec. 2<sup>nd</sup>, 1941 to the Trustees of the Foundation'. See also folder 19, box 2, series 906, RG 3, RAC.

<sup>48</sup> A history of the development of British psychiatric clinics is in C P Blacker, *Neurosis and the mental health services*, London and New York, Humphrey Milford and Oxford University Press, 1946, pp. 14–15, 17–21 and 47. This report also analyses the various groups handling cases of neuroses.

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49 NA, FD 1/6580, Neurological Problems: Co-operation with America, Extract of the National Research Council in the United States, Division of Medical sciences, 14 Jan. 1941.

50 On Fremont-Smith, see *Who was who, volume 6: 1974–1976*, Suwanee, GA, Marquis, 1976, p. 148; for more on the Macy Foundation, see Pressman, op. cit., note 46 above, p. 370; Abbott, op. cit., note 44 above, pp. 304–8.

51 Alan Gregg Diary, Reel 3, Thursday, September 26, 1940, p. 125, RAC.

52 Letter from Daniel O'Brien to Alan Gregg, 2 May 1941, folder 1455, box 206, series 100, RG 1.1, RAC. He may be referring to Air Vice Marshal H E Whittingham, Director General of RAF Medical Services 1941–46.

53 Gerald N Grob, *From asylum to community: mental health policy in modern America*, Princeton University Press, 1991, pp. 5–23; Jones, op. cit., note 37 above, pp. 499–33. It should be noted, however, that some general practitioners were receptive to psychological approaches to disease. See Rhodri Hayward, 'Desperate housewives and model amoebae: the invention of suburban neurosis in interwar Britain', in Mark Jackson (ed.), *Health and the modern home*, Abingdon, Routledge, 2007, pp. 42–62.

54 NRC, MS: Allied Cooperation 1940–April 1941, *Memorandum on liaison between the United States and Great Britain*, pp. 1–4.

55 Alan Hodgkin, 'Edgar Douglas Adrian, Baron Adrian of Cambridge, 30 November 1889–4 August 1977', *Biog. Mem. Fellows R. Soc.*, 1979, **25**: pp. 1–73.

56 NA, FD 1/6580, letter from Edgar Adrian to Edward Mellanby, 3 April 1941.

57 Ibid.

58 Ibid.

59 NRC, MS: Allied Cooperation 1940–April 1941, letter from Edward Mellanby to Lewis Weed, 16 April 1941.

60 Ibid.

61 Chandak Sengoopta, 'A mob of incoherent symptoms?' Neurasthenia in British medical discourse, 1860–1920', in Marijke Gijswijt-Hofstra and Roy Porter (eds), *Cultures of neurasthenia from Beard to the First World War*, Amsterdam and New York, Rodopi, 2001, pp. 97–115, p. 107.

62 Nikolas Rose, *The psychological complex: psychology, politics and society in England, 1869–1939*, London and Boston, Routledge, & Kegan Paul, 1985, pp. 146–219, esp. p. 210; Shephard, op. cit., note 9 above, pp. 522–3.

63 University College London Francis Walshe Papers, MS ADD 301 fd. B3, Anon., 'Mind: doctor or patient?' *The Listener*, 4 July 1934.

64 NA, FD 1/6580, letter from Edgar Adrian to Edward Mellanby, 20 April 1941. Edward Arnold Carmichael was also sent the extract, and he was equally dubious about an unofficial observer on neuroses. He wrote, "this form of tourist and sight-seer, often collecting wrong information and sending uncritical observation to America, appears to me to be likely to lead to confusion more than anything". NA, FD 1/6580, letter from Edward Carmichael to Edward Mellanby, 10 May 1941.

65 On Gordon Holmes, see Stephen Casper, 'The idioms of practice: British neurology, 1880–1960', PhD thesis, University College London, 2006, pp. 174–95; on Holmes's impatience with neurotics, see R J Minney, *The two pillars of Charing Cross: the story of a famous hospital*, London, Cassell, 1967, pp. 174–5.

<sup>66</sup> NA, FD 1/6580, letter from Edgar Adrian to Edward Mellanby, 20 April 1941. The brackets are Adrian's.

<sup>67</sup> Biographical details on Aubrey Lewis, folder 915, box 121, series 401, RG 2, RAC.

<sup>68</sup> Hugh Series, 'Lewis, Sir Aubrey Julian (1900–1975)', *ODNB*, vol. 33, pp. 586–7.

<sup>69</sup> 'Sir Aubrey Lewis: leading psychiatrist of his time', *The Times*, 22 Jan. 1975, p. 14; see also K Angel, E Jones, and M Neve (eds), *European psychiatry on the eve of war: Aubrey Lewis, the Maudsley Hospital and the Rockefeller Foundation in the 1930s*, London, Wellcome Trust Centre for the History of Medicine at UCL, 2003, pp. 23–37.

<sup>70</sup> Letter from Aubrey Lewis to Alan Gregg, 28 Nov. 1940, Maudsley Hospital Psychotherapy, folder 257, box 19, series 401, RG 1.1, RAC.

<sup>71</sup> NA, FD 1/6580, letter from Edward Mellanby to Aubrey Lewis, 8 May 1941.

<sup>72</sup> NA, FD 1/6580, letter from Aubrey Lewis to Edward Mellanby, 12 May 1941.

<sup>73</sup> NA, FD 1/6580, letter from Edward Mellanby to Edgar Adrian, 13 May 1941; and letter from Edgar Adrian to Edward Mellanby, 15 May 1941.

<sup>74</sup> NRC, MS: Allied Cooperation 1940–April 1941, letter from Sanford Larkey to Edward Mellanby, 5 June 1941. This ambivalence almost certainly reflected the fact that the organization and role of the physical and biomedical sciences was being significantly changed in America at this time. The OSRD was formed later that month. See note 20 above.

<sup>75</sup> Aubrey Lewis, 'Incidence of neuroses in England under war conditions', *Lancet*, 1942, **ii**: 175–83. Cf. Felix Brown, 'Civilian psychiatric air-raid casualties', *Lancet*, 1941, **i**: 686–91.

<sup>76</sup> Lewis, *op. cit.*, note 75 above.

<sup>77</sup> There was also no mention that Whitehall had been asked to approve publication and distribution of the report. However, the text does not seem to have been censored. NA, FD 1/6580, letter from Wilson Jameson to Landsborough Thomson, 4 Sept. 1941.

<sup>78</sup> Lewis, *op. cit.*, note 75 above, p. 175.

<sup>79</sup> *Ibid.*, p. 176.

<sup>80</sup> *Ibid.*, pp. 176–7.

<sup>81</sup> One of the problems of interpreting this report arises from the fact that some of the psychiatrists and general physicians Lewis interviewed used the term psychoneuroses, while others mentioned anticipation neuroses, anxiety neuroses, and depressive neuroses in their written testimonials. Lewis never clarified if these terms were synonyms or whether they indicated separate clinical entities. This problem of classifying all types of air-raid casualties had been identified by G B Shirlaw, 'Classification of air-raid casualties', *Lancet*, 1940, **ii**: 344–5; it was also considered by Blacker, *op. cit.*, note 48 above, p. 47.

<sup>82</sup> Lewis, *op. cit.*, note 75 above, p. 177.

<sup>83</sup> Lewis was aware of a "proposal" by Solly Zuckerman to conduct research on the question of links between civilian housing and morale. This was then being considered by the Ministry of Home Security. NA, FD 1/6580,

letter from Aubrey Lewis to Edward Mellanby, 14 Aug. 1941.

<sup>84</sup> Lewis, *op. cit.*, note 75 above, p. 183.

<sup>85</sup> NA, FD 1/6580, letter from Edward Mellanby to Edgar Adrian, 15 Aug. 1941.

<sup>86</sup> NA, FD 1/6580, letter from Edgar Adrian to Edward Mellanby, 18 Aug. 1941.

<sup>87</sup> NA, FD 1/6580, letter from Wilson Jameson to Landsborough Thomson, 4 Sept. 1941.

<sup>88</sup> NA, FD 1/6580, letter from Edward Mellanby to Lewis Weed, 2 Oct. 1941.

<sup>89</sup> NRC, MS: Allied Cooperation 1940–April 1941, letter from Lewis Weed to Edward Mellanby, 17 Oct. 1941.

<sup>90</sup> Weed was more aware of the psychiatric research situation in Britain than Mellanby might have suspected. In August 1941, O'Brien had sent Weed the Maudsley Hospital's 'Report on Research' to the Rockefeller Foundation, " through the channel of Dr. [Pat] Cushing [nephew of Harvey Cushing] who is now here, as it contains some material on psychiatry in war-time that I thought might be of some use to the N.R.C." Letter from Daniel O'Brien to Alan Gregg, 25 July 1941, folder 258, box 19, series 401, RG 1.1, RAC.

<sup>91</sup> Later, the medical press would confuse the issue further. WL, GC/135/B/1 Box 2, Service Psychiatry Monographs, extract from the *British Medical Journal*, 1942, **ii**: 574–6: William Sargent, 'Physical treatment of acute war neuroses: some clinical observations'.

<sup>92</sup> On Wilder Penfield, see Wilder Penfield, *No man alone: a neurosurgeon's life*, Boston, Little, Brown, 1977.

<sup>93</sup> Wilder Penfield, 'Clinical notes from a trip to Great Britain', *Arch. Neurol. Psychiatry*, 1942, **47**: p. 1034.

<sup>94</sup> My emphasis. Arthur Salusbury MacNalty (ed.), *The civilian health and medical services*, 2 vols, London, HMSO, 1953–1955, vol. 1, p. 184.

<sup>95</sup> Further support for this view appears in wartime sources. The Maudsley Hospital, for example, had been re-located to Mill Hill and Sutton Emergency Hospitals. They reported in early 1940 that Mill Hill had 200 neuro-psychiatric beds, which were to be filled by normal civilian cases, "acute psychiatric casualties" resulting from air raids, psychiatric disorder among the fighting forces, and cases with effort syndrome and another psychiatric condition. See *Memorandum on the plan of work to be undertaken at Mill Hill emergency hospital under war conditions with special reference to research investigations*, 9 Feb. 1940, folder 257, box 19, series 401, RG 1.1, RAC. As late as 17 February 1941, R H Curtis of the London County Council at Mill Hill, could write: "I am afraid London just now is no place to which to invite a friend, but I am glad you are coming, all the same. I wish things were more nearly normal. It is a horrid thought that the Maudsley is still empty and that its work is all disorganized, in spite of the effort made—I think with a measure of success—to keep its spirit and research alive at Mill Hill and Sutton." Letter from R H Curtin to Daniel O'Brien, 17 Feb. 1941, folder 258, box 19, series 401, RG 1.1, RAC; Also in this folder, see the London County Council 'Report of air-raid damage', pp. 1-6, attached to the *Memorandum*, Daniel O'Brien to Alan Gregg, 14 May 1941. This report finds that "Since 7<sup>th</sup> September 1940, 106 incidents have been reported from the mental hospitals, 4 incidents having been reported from 3 mental hospitals and one district office from 18<sup>th</sup> April to the evening of 1<sup>st</sup> May 1941", p. 1. On p. 6, the report indicates that 279 beds were permanently removed from service because of enemy action, 951 had been removed temporarily, that eleven hospitals had sustained serious damage, and a further eleven had been slightly damaged. Included in these, were Mill Hill and Sutton Emergency Hospitals. Mill Hill had lost 40 beds, and 150 were temporarily unusable. At Sutton, 4 beds were permanently gone, and 91 temporarily. A comparable survey for hospitals in the provinces has not been located.



<sup>96</sup> Letter from John Rees to Alan Gregg, 2 Jan. 1941, folder 347 Tavistock Clinic, box 26, series 401, RG 1.1, RAC; on Rees, see Malcolm Pines, 'Rees, John Rawlings, 1890–1969', *ODNB*, vol. 46, pp. 323–4.

<sup>97</sup> Shephard, *op. cit.*, note 35 above, p. 181.

<sup>98</sup> The attitude was common. Walter Maclay (1902–1964), Medical Superintendent of the Maudsley staff and a visitor for three months in the United States in 1943, described his attitude thus: “In war time the problem of the anti-social effect of neurosis has come very much to the fore, whether the society concerned in the fighting services or the civilian community. In the last war this problem was appreciated too late and neurosis was, on the whole, considered as an excusing disability and the neurotic was accepted as a pensionable burden negative to war effort. In this war, from the outset, psychiatric method and organization was directed against neurosis as an excusing social disability: treatment was directed not only towards the individual neurotic problems but more towards social reinstatement.” Folder 259, box 19, series 401, RG 1.1, RAC. Such views make it difficult to see how the “reported” incidence of neuroses could have increased.

<sup>99</sup> ‘Fewer suicides’, *The Times*, 1 Sept. 1942, p. 5.

<sup>100</sup> Lyotard, *op. cit.*, note 6 above, pp. 10–47.

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