# Henry Head and the Theatre of Reverie Tiffany Watt-Smith



Fig. 1: Henry Head and W.H.R. Rivers working in Rivers's study at St John's College, Cambridge. Reproduced by the kind permission of the Wellcome Library, London.

In April 1903, in a book-lined study in St John's College, Cambridge, the psychologist W. H. R Rivers (1864-1922) and the neurologist Henry Head (1861-1940) posed for a photograph (Figure 1). Rivers, on the right, somewhat younger looking and smartly dressed, industriously held a scientific instrument. Head, on the left, bearded, older, sat with his eyes closed, his chin cupped in the palm of his right hand, his face tilted away from the camera, suggesting one lost in reverie. On the table, extended between the two men lay Head's left arm. Scattered around it were a number of laboratory devices for measuring sensation: the pressure-aesthesiometer (for measuring sensitivity to force applied to the flesh), the spring algesimeter (for measuring thresholds of pain), a pitcher of iced water, a box brimming with the softest jeweller's cotton wool and a series of fine wire 'hairs'. For this photograph, the two men fashioned themselves into a tableau vivant to illustrate an experiment which took place between 1903 and 1907. It began on 3 April 1903 when Head underwent an operation to sever the radial nerve of his left arm. During the four and a half years that followed, Head and his colleague Rivers tested the gradual and faltering return of sensitivity to Head's hand each week. Their aim was to understand the physiology of sensation which was considered to be 'one of the most obscure regions of neurology' at the time.<sup>2</sup>

This article explores Head's self-experiment, and the distinctive technique of introspection it required. By entering a trance-like state he called a 'negative attitude of attention', he believed that he was able to gain a privileged, unmediated access to his own sensory experience and to report the minute changes in his responses to different stimuli.<sup>3</sup> Head was not alone in regarding self-observation as a technique of the scientific observer, and his method, as I will go on to describe, can be positioned within a tradition of introspection used in experimental psychology in Europe and America between 1870 and 1920. But Head's 'negative attitude of attention' in the laboratory is also reminiscent of modes of aesthetic contemplation he described in the letters and scrap-books that documented his artistic pursuits - trips to art galleries and churches, reading and writing poetry, visits to the opera and, in particular, to the theatre. This article will explore the connections between Head's introspective practice and his descriptions of theatre-going, foregrounding his attempts to produce states of reverie as a technique for self-observation in both. Drawing attention to moments when Head's cultivated state of daydreaming in both theatre and laboratory failed – due to interruptions by others, self-consciousness about being observed, or the distractions of painful sensations – my discussion will explore what Christopher Lawrence and Steven Shapin have called the 'embodied human processes' through which scientific knowledge has been produced, and their 'vicissitudes'. At the same time, by exploring the entwined practices of selfwatching and reverie in psychological and theatrical contexts, this article complements current scholarly debates that address the problems of perception, attention, absorption and theatricality in scientific and wider cultural discourses at the end of the long nineteenth century.

I

# The 'Negative Attitude of Attention'

Head was born in Stoke Newington on 4 August 1861. Educated at Charterhouse, he went on to read Natural Sciences at Cambridge, where he encountered Walter Gaskell's work on evolution and functional physiology.<sup>5</sup> Upon graduating, Head took up a research position in the laboratory of Ewald Hering (1834-1918), at the German University in Prague, whose work on the role of the nervous system in

optical perception inspired Head's own interest in the physiology of sensation. Returning to Britain, Head decided to train as a physician, taking up a post at The London Hospital in Whitechapel. Later, he claimed his decision to enter a clinical rather than research setting was motivated by his ambition to explore the uncharted waters of human sensation: 'for the study of sensation', he reminded his scientific colleagues in 1912, 'man is necessary. For we must be able to hear from the percipient the consequences which follow stimuli'.6 In 1901, as a specialist in nervous disorders, Head embarked on his first experiments in sensory disturbance, using his patients – men, women and children, most usually working-class inhabitants of the East End – as subjects. These were patients who had sought treatment for a variety of sensory disturbances, from numbness of the limbs to the inexplicable occurrence of 'spontaneous sensation' (today known as 'phantom limb syndrome'). In a quiet room, screened from the rest of the hospital, Head blindfolded these patients and applied various stimuli to the affected body parts, asking patients to 'call out whenever [they] experienced a touch, a prick, or any other sensation'. 7 It was often a frustrating process. Poverty and itinerant ways of life meant that 'many cases disappeared entirely' and, moreover, Head felt his working-class subjects to be inadequate as self-reporters: 'at his best he answers "yes" or "no" with certainty' he wrote, but 'such patients can tell little or nothing of the nature of their sensations'. 8 In common with many of his contemporaries, Head believed the working classes lacked the capacity to discriminate between fine and subtle changes of feeling. As his biographer Stephen Jacyna has noted, Head, who was part of London's cultural elite at the fin de siècle, a member of the experimental theatre society the Pharos Club, and well versed in French poetry, believed 'that few people possessed the highly refined sensibility with which he was equipped'. 10

Thus, on 25 April 1903, aged 42 and in perfect health, Head embarked on an audacious self-experiment. 'I shall know a great deal about pain by the time this experiment is over', he wrote to his fiancée Ruth Mayhew. 11 At the home of a surgeon named Mr Dean, Head underwent an operation in which the radial nerve of his left arm was severed, a tiny sliver excised and the two ends sutured back together again with fine silk, ensuring the nerve fibres would eventually regenerate. When Head came to, he was 'delighted to find' that while 'deep sensibility' or sensitivity to being prodded or poked remained in his hand, it was now 'insensitive

to stimulation with cotton wool, to pricking with a pin, and to all degrees of heat and cold'. After testing the hand with a variety of stimuli, Rivers outlined the affected area with a sinuous black ink line and took the first of many photographs documenting the gradual, faltering return of sensitivity over the next five years. Head described the process to Mayhew in a letter dated 15 May 1903:

we sit at the large table with my left arm exposed between us, my eyes are closed and he touches or pricks it in various ways recording his stimulus and my answer. Otherwise, no word passes between us and the silence is only broken by the scratching of his pen and my ejaculations.<sup>13</sup>

Rivers tickled the skin lightly and then brushed it more forcefully with cotton wool, pricked it with needles and points of a compass, applied test tubes of boiling and iced water, and an uninterrupted electric current to it.<sup>14</sup> And while these tests were sometimes acutely painful (on at least one occasion, 'the pain was so excessively unpleasant that H. cried out and started away'), Head endeavoured to describe the sensations he felt sometimes with a simple 'yes' or 'no', sometimes pointing to the location of the sensation on a photograph of his hand, and at other times trying to describe the exact nature of the sensation with words such as 'burning' or 'stinging'.<sup>15</sup>

To report on these experiences, Head entered a trance-like state he called a 'negative attitude of attention'. 'I must detach myself from the idea that experiments are in progress,' he wrote to Mayhew, 'and with my eyes closed try to let my thoughts flow by like clouds on a windy day':

Suddenly, in this flowing sea of thoughts there appears a flash of pain, a wave of cold or the flicker of heat – It should appear with the suddenness of a porpoise, attract attention and again disappear leaving the untroubled sea to its onward flow.<sup>16</sup>

It was only by relaxing completely and entering this hazy, meditative state – which the two men variously termed a 'negative attitude of attention', a state of 'detachment', a 'quiet state of internal absorption' or a 'state of passivity' – that Head believed himself able reliably to identify and report the sensations aroused by the stimuli. Only when fully immersed in this quiet state of 'detachment', the two men argued, was Head freed from the inevitable self-consciousness of the experimental subject, and thus able to report the sensations he experienced with all the accuracy of a self-recording machine. Head and Rivers were not alone in compensating for the distorting effects of the subject's self-awareness in the

laboratory's face-to-face encounter. In *The Story of Mind* (1899), James Mark Baldwin noted that the results of reaction-time experiments were greatly affected when the subject became 'embarrassed' whilst trying to follow the experimenter's instructions correctly. For Head and Rivers, Head's awareness of being tested, and his unconscious desire to perform well as a subject could be circumvented if he transcended the feeling of being watched, replacing it with one of 'absolute freedom from all external appeal to responsible action', a condition, as the two men observed rather woefully, 'which H. has never succeeded in producing surrounded by the multifarious interruptions of home'. 19

Head and Rivers undertook their work at a time when scientific psychology, with its appeal to an objective knowledge about the mind, was in its infancy. In 1897, Rivers established a psychological laboratory at Cambridge and in the same year a Readership in Mental Philosophy was endowed at Oxford. The following year, James Sully, Professor of Mind and Logic at University College London, opened an experimental psychological laboratory. Each was committed to the development of quantitative methods in the study of the human mind.<sup>20</sup> As Head himself put it, 'a man can no longer sit in his study and spin out of himself the laws of psychology by a process of self-examination'. In contrast to the intuitive introspections practised by eighteenth-century philosophers of mind Hume and Locke, Head identified his own introspective technique as one of the scientifically 'trained observer', that employed all the 'precautions and safeguards customary in a psychological laboratory'. 22 Wilhelm Wundt had pioneered scientific introspection at Leipzig in the 1870s, where a rigorous training, using specially adapted instruments and codified techniques, saw laboratory researchers practising innere Wahrnehmung ('inner perception') to examine the minute changes in their visual and aural perceptions.<sup>23</sup> Between 1900 and 1920, the British psychologist Edward B. Titchener took up Wundt's technique at Cornell, arguing that 'an introspective attitude and introspective capacity are not the common property of anyone who cares to exercise them', but techniques through which psychologists 'trained by long and arduous practice' learned to report changes in feeling free from meaning and inference.<sup>24</sup> While introspection had been abandoned by the time Wundt died in 1920, in 1903, when Head and Rivers embarked on their experiment, it was not entirely unorthodox for an introspecting scientific psychologist to regard him or

herself, like Head, as a 'trained observer', not merely making 'statements of personal opinion', but applying the principles of objectivity – which above all prized the non-interference of experimenters themselves – in the process of selfexamination.<sup>25</sup>

П

### Interiority and the Audience

Head's 'negative attitude of attention' exemplifies a transitional moment in the history of experimental psychology in its attempt to understand older psychological practices within an ascendant regime of mechanical objectivity. Yet, with his 'quiet state of internal absorption' in the laboratory, it may also be understood in the context of his experiences of being an audience member at the theatre. In both Rivers's study at Cambridge and in the plush velvet seats of the theatre auditorium, Head's efforts to achieve a state of internal reverie could be hindered by inevitable distractions, moments when his attention shifted without, to the encounters between experimental subject and scientific observer, or between actress and audience member – in which he was a participant. As I will go on to describe, these moments of self-consciousness not only nuance our understanding of Head's experimental technique, but also harbour its broader cultural significance. Far from regarding attention and distraction as two mutually exclusive states, Head's introspections in the laboratory and theatre highlight the fluidity between them. As Jonathan Crary has described in Suspensions of Perception: Attention, Spectacle and Modern Culture (2000), by the end of the century, attentiveness, distraction and reverie were understood to be part of a 'dynamic process', 'intensifying and diminishing, rising and falling, ebbing and flowing according to an indeterminate set of variables'.<sup>26</sup>

Among the papers Head kept until his death, now archived at the Wellcome Library, is a clipping of a theatre review by *The Times* critic A. B. Walkley. It describes a performance given in London in 1900 by the Italian actress Eleanora Duse (1858-1924).<sup>27</sup> Head may or may not have attended this production, but the neurologist certainly did admire the actress. According to Walkley, watching Duse perform was like watching someone 'acting for herself and by herself', her 'rapt

absorption' in her role so complete that 'she seems half startled by bursts of applause' and 'gets through the unavoidable business of "bowing her acknowledgements" with evident impatience'. 28 Duse was a formative figure in theatre's turn away from theatricality at the fin de siècle. A theatrical legend, she was famous for her rejection of exotic props and paraphernalia, refusing to wear makeup and for her capacity to blush when the character she was playing became ashamed. 'Revolted by the falseness of the theatrical milieu', writes Jonas Barish in The Antitheatrical Prejudice (1981), Duse shied away from theatre's need 'to externalise', to fix 'our gaze on surfaces', to engage with what George Bernard Shaw had decried as theatre's 'art of pleasing'. 29 'All London calls her no actress', Head scribbled enthusiastically in his scrapbook.<sup>30</sup> She is 'natural, simple, sincere, a real woman', in the midst of 'all this sham', wrote Walkley.<sup>31</sup> Duse's apparent intoxication – she seemed 'half-startled' by applause – provided a libidinous, even louche, frisson for her audiences, sending 'a faint shiver of pleasure' through them.<sup>32</sup> Yet, while Walkley delighted in the actress's own 'quiet state of internal absorption', he also reminds us that, like her blush, her flinch was theatrically produced. At the curtain call, the threshold of the theatrical fiction, Duse 'seems half startled by bursts of applause' (my italics): if, in theatre's art of surfaces, Duse appeared genuinely startled to discover her audience, it was also possible that her flinch was a feint, and like Head's pose for the photograph, was intended to simulate the appearance of complete mental absorption, blurring the boundary between theatrical fiction and authentic reverie.

Duse's performance of rapt absorption — what the art historian Michael Fried, in relation to mid-seventeenth-century painting, has termed the 'fiction of the aloneness of these figures' - recalls Head's own cultivation of a 'negative attitude of attention', and his urge to forget his own audience in forgetting 'that experiments are in progress'. Yet both actress and neurologist complicate the notion of reverie, because both were simultaneously absorbed in feeling, whilst monitoring themselves. In this regard, Head's experiment also bears comparison to the states of absorption associated with theatrical audiences in this period. As John Stokes has contended, a recurring topos in fictional representations of theatre at the *fin de siècle*, is one in which the actress 'becomes so involved in what she is doing that she appears "possessed" by it, controlled by and yet inhabiting her role as if in a dream';

in turn, this absorption makes her audience perilously over-attentive, producing 'an intoxicating or hypnotic effect'. 34 The auditorium, a place for watching live performances in the company of strangers, was also experiencing a transformation at the turn of the century. Theatre managers issued new codes of practice, insisting that audience reactions 'should manifest fairness, restraint and due deference for the performers' efforts'. 35 As theatre historians Jim Davis and Victor Emeljanow have argued, the rowdy and participatory spectators of the earlier nineteenth century gave way (at least, in the bourgeois theatres of the West End) to the demure, respectful and hushed audiences of the early twentieth.<sup>36</sup> Moreover, the naturalist aesthetic, with its conceit of ignoring the co-presence of spectator and performer through the device of a 'fourth wall', furthered the notion that the audience, like the actress, might transcend the social encounter in the auditorium to experience an uninterrupted emotional state, akin to that which Eleanora Duse seemed to enjoy on stage. Yet, the inverse of this ideal was also depicted in fictional and non-fictional accounts of theatre-going in this period, when emotional intoxication was a state audience members desired, but frequently found impossible to attain.

For Head, such aesthetic absorption was a coveted condition. 'I got it once' he wrote, whilst *reading* Ibsen's play *The Wild Duck* alone in a beer garden in Prague – 'the daily world around me seemed unreal, I felt as if I had gone through some colossal personal experience'. 'Tyet, when it came to actually going to the theatre, the 'daily world' more stubbornly persisted. On 11 December 1898, Head wrote of a trip to the theatre to see Forbes Robertson and Mrs Patrick Campbell in *Macbeth*, complaining that:

I was particularly unfortunate to be sitting in the neighbourhood of a man who explained the play to his woman friend. He began by stating it was a Scotch play and told her that he thought Macbeth was a Scotch king. When I asked him to be silent he apologised saying she had never seen the play and I told him the book of words was published. He was then quieter but she clamoured for explanations.<sup>38</sup>

Not only irksome whispering neighbours distracted his attempts to attain a 'quiet state of internal absorption' at the theatre, but so did the relationship between actor and spectator. In 1903, shortly before embarking on the self-experiment in nerve regeneration, Head saw Duse perform the title role in *Hedda Gabler*. On returning home, he wrote in his scrapbook, in language that echoed Walkley's, of the 'extraordinary feeling of emotional reality that Duse gives me'. <sup>39</sup> However, in the

same passage, he revealed that his feeling of 'emotional reality' was nonetheless interrupted – this time, by the confusions brought on by theatre's mimetic art. The character Duse portrayed reminded Head of a former patient: 'had the original I saw reproduced on stage been one of my patients? How did she come into my life? These were the questions that constantly cropped up in my mind.'40 In worrying about originals and reproductions, Head entered a slipstream of anxiety about the theatre that was as old as Plato – a worry about imitation, that Duse's anti-theatrical performance sought to circumvent, but instead seemed to exaggerate. So persuasive was Duse's performance that Head became irritated by the suspicion that the world of the hospital had somehow encroached on that of the theatre, a distraction that prevented Head achieving the 'colossal personal experience' he so much desired.

Both Duse's curtain call and Head's internal questioning disrupted naturalism's ideal scenario of an absorbed audience and an intoxicated performer who mutually experienced their own interiority. Duse was startled by her audience applauding, but also may have exaggerated her flinch for effect; Head wanted to cocoon himself in the inner world of his sensations, but was persistently drawn back into the theatre's face-to-face encounter, not only because of its irritating neighbours, but also by wondering about the provenance of Duse's performance. For the critic Walkley, such an oscillation between an absorbed inner state and selfconsciousness about one's participation in the slippery theatrical encounter was key to the audience's technique of observing. Like the trained psychological observer, the 'ideal theatrical spectator' must, Walkley wrote, 'estimate the quality of his pleasure – while it is coming in'. 41 In the eighteenth century, Denis Diderot had characterized the actor as one endowed with a peculiar capacity for doubleconsciousness, the ability simultaneously to experience feelings whilst watching himself having them. 42 Nineteenth-century discourses around acting drew heavily on Diderot's formulation of this paradox, but according to Walkley, the theatre spectator also entered into 'a rather complicated state, a state of double consciousness' in which he or she was neither 'wholly sympathetically absorbed' nor entirely 'dispassionate' about the fictional world, but juggled two kinds of focus - on the one hand absorption in the fiction, on the other, attentiveness to the mechanism that produced it.<sup>43</sup> In 1886, the British psychologist James Cappie wrote that attention was 'the bringing of the consciousness to a focus in some special

direction, without which meaningless reverie will take the place of coherent thought'; for Head and Walkley, reverie and attention could occur simultaneously.<sup>44</sup> Walkley, who believed himself to be an 'ideal theatrical spectator', claimed to be able to produce and sustain this 'rather complicated state' at will:

there is a French proverb which says that you cannot at once join in a procession and look out of the window. Yet it is a feat of that kind which the ideal theatrical spectator has to accomplish, for remember that he is not only taking in pleasure which is a complete self-surrender, he is also commanding himself so as to estimate the quality of his pleasure – while it is coming in.<sup>45</sup>

Like Head, who aimed simultaneously to feel his feelings and observe them too, Walkley believed his capacity for self-observation to arise from a superior sensibility and education: as Walkley put it, 'this by no means easy mental process requires not only an effort of the will, a special motive, but training and special aptitude'. 46 For less qualified spectators, the balance between absorption and attention might tip over, disrupting the spectator's pleasure. Paying attention to the effects of Duse's acting in the same way, he might have noted the sensations aroused by the spring algesimeter. Head claimed to 'know as a psychologist skilled in self analysis, that she produces in me an effect I can not otherwise obtain from acting'. 47 Yet, when Proust's hero, the young, eager and studious Marcel, goes to see his favourite actress, La Berma, in the Guermantes Way, such self analysis is woefully distracting. Like Head, Marcel yearns for a transcendental experience, but instead is bothered by 'a high pitched sound, an oddly questioning intonation'. 48 It is a voice inside his head, one that asks 'is that good? Is it admiration I am feeling?'<sup>49</sup> For Marcel, who like Walkley and Head, tries to appraise his feelings as they are coming in, self-conscious attention to one's own sensations, the urge 'to name things and our thoughts', results in a profoundly unsatisfying aesthetic experience.<sup>50</sup>

#### Ш

## Feeling Interrupted

In his recent biography, Jacyna has characterized Head's introspective technique as 'above all a retreat from the demands of the world into the inner life of Head's own sensations'.<sup>51</sup> At the same time, he admits to the difficulty of distinguishing between inside and outside, self and other, when Head himself 'was always aware that the

outer world only existed in so far as it impinged upon the mind'.<sup>52</sup> Head's descriptions of theatre-going drew attention to such impingements, to moments when the outer world left its traces and affects in the fabric of the neurologist's inward experience. In turn, these failures of reverie in the theatrical setting may be read alongside those Head experienced in his psychological experiment, revealing the ebb and flow of absorption, and attentiveness to being watched, even if the audience only comprised of one's own self.

Head's technique of entering a trance-like state for self-observation was designed to help him forget that he was being tested. Other precautions were taken too: 'under no circumstances was H. allowed to know at the time whether his answers were right or wrong. For if he was told he had answered wrongly, he was roused to an intense determination to do better', leading him unconsciously to guess at the 'correct' result.<sup>53</sup> The less aware Head was of being observed, and of observing himself, the more accurate his answers would be. Thus, in one session he repeatedly answered the compass test 'correctly', which the men associated:

with complete wandering of attention from the manipulations. When at the close R. asked whether there was anything to say about these observations, H. could have quite believed that nothing had been done. He was thinking about a book he had been reading and was completely absorbed, until recalled by R.'s question.<sup>54</sup>

As absorption passed into somnolence, Head's sensitivity to the stimuli increased: 'occasionally, especially after exercise in the open air, this condition of detachment would pass into sleep. We noticed that the answers seemed to improve up to the point at which H. ceased to reply.'55 Proust's narrator Marcel also recognized that sleepy or day-dreaming audiences were often the most receptive to sensory pleasures – for him, it was the 'society people' sitting languidly and indifferently in the theatre boxes who alone 'would have had the clarity of mind to attend to the play, if only they had had minds'.<sup>56</sup> However, Head's claim that he could produce and sustain such a state of responsive reverie at will was, on closer inspection, somewhat overstated.<sup>57</sup>

Head's letters to Mayhew reveal that in winter the coldness of the Cambridge study rendered him 'stubborn', unable to comply with the siren's call of his own 'sea of thoughts'.<sup>58</sup> At other times, his exhaustion (rather than sleepiness), the result of a busy week treating patients at the London Hospital, meant that the

sensation in his hand 'went all to pieces'.<sup>59</sup> One cannot help imagining that, when Head flinched in pain from the instruments that stung and burnt his flesh ('the pain was so excessively unpleasant that H. cried out and started away'), he, like so many heroes in novels, awakened 'with a start from his reverie'.<sup>60</sup> Would the heightened alertness to his body produced by a sudden and painful shock eclipse the 'inward absorption', and encourage a different kind of self-attention? Occasional reminders of the outside world – a knock at the door, a noise outside, or a stranger entering the room – would distract Head: 'R.'s servant entered our workroom in the middle of an almost perfect series of answers', and Head's reports 'at once became less accurate'.<sup>61</sup> Perhaps, as when he sat next to the whispering couple during *Macbeth*, the insistent murmur of the outside world brought Head from his 'quiet state of internal absorption' into an awareness of the world around him. Such distractions arose in his imagination too. Thus, on 27 November 1903, Head revealed to Mayhew that she too had trespassed into his thoughts:

no dearest, you did not guess the curious way in which you were with me as I sat with closed eyes on Sunday under the tests of J. Rivers, 'Vision qui derange et trouble l'horizon de ma raison' [sic]. Now have you guessed? If not, I will tell you tomorrow when we are together. <sup>62</sup>

These 'strange visions' – which, through Head's allusion to Paul Verlaine, the notoriously sensual poet and lover of Arthur Rimbaud, hint at an erotic fantasy too racy to be committed to paper – troubled the horizon of Head's 'reason', his ability to 'name things and our thoughts'. Later in the same letter, the intimations of an erotic fantasy dissolve into a more conventionally expressed 'longing', but nonetheless, Head's daydreams about his fiancée made him 'neglectful of the stimuli that flashed into consciousness so preoccupied was I with the warmth of your dear presence'. 63

These revealing moments of failure in Head's self-experiment, which recall those he experienced in the theatre, suggest that for Head, an enthralled 'interior absorption' was by no means a static condition, but a process that moved continually between attention and reverie, between contemplation, focus and distraction. The 'negative attitude of attention' spoke less of a withdrawal into an inner world, than of a mode of subjective experience that persistently oscillated between inside and outside, never quite inhabiting either fully. If, as Crary has argued, the expansion of interest in the problem of attention at the end of the nineteenth century was

symptomatic of an increasingly disenchanted perceiving subject, born out of a new awareness of 'the impossibility of the perception of presence, or of an unmediated visual access', then Head's self-watching is paradigmatic of the reimagined subjectivity this implied.<sup>64</sup> 'Attention' writes Crary 'will be both a simulation of presence and a makeshift, pragmatic substitute in the face of its impossibility'.<sup>65</sup> For Head, inattention in both the theatre and in the laboratory offered the possibility of a 'perception of presence' and the hope of an unmediated access to the remote landscape of interior feeling. Yet, as the embodied practice of the 'negative attitude of attention' revealed, such direct access to the dilations of sensory experience, akin to that Étienne-Jules Marey claimed for his machines to measure the rhythms of the pulse, or Wilhelm Röntgen claimed for the x-ray, would ultimately be frustrated.

#### Conclusion

Head died in 1940. His work on the psycho-physiology of sensation – a subject to which he dedicated numerous experiments and articles – had earned him a knighthood in 1927 and four nominations for the Nobel Prize in Physiology and Medicine. His painful self-experiment, however, and its distinctive 'negative attitude of attention', came quickly under scrutiny when the British physiologists Wilfred Trotter and H. Morriston Davies performed their own 'human experiment' in 1909, dividing cutaneous nerves in their knees, sterna, arms and thighs. These heirs to Head's experiment, who produced notably divergent results from their predecessor, also emphasized the importance of using a 'trained observer as subject', one capable of 'exceptionally delicate introspective analysis', but made no mention of any special state of reverie. 66 Instead, they acknowledged the subjectivity of their results, and compared their two individual responses in an attempt to approach the status of scientific knowledge. 'It is clear,' they wrote, 'that in the investigation of the problem of sensation by any method whatsoever, the value of the observations is never free from the serious qualification that no objective measure or record of a sensation can be made'.<sup>67</sup>

Head's 'human experiment' and its state of reverie may be consigned as an anomaly or even eccentricity, a fading practice at a time when the ideal of an objective observing gaze and quantifiable behaviour were looming large on the

horizon of psychological experimentation. Yet, by looking sideways to the techniques and problems Head's introspection shared with actors and theatrical audiences, his 'negative attitude of attention' also emerges as a distinctive and characteristic technique for self-watching at the beginning of the twentieth century, one that was manifested in both aesthetic and scientific contexts. Head's cultivation of daydream states in the laboratory and theatre highlighted the flexible relationship between states of attentiveness and reverie, and attested to persistent awareness of the theatrical encounter between beholder and performer in both environments. Distracted by Duse's similarity to a former patient, by the servant entering the room, or by thoughts of his fiancée, Head's 'quiet state of internal absorption' in fact enacted the fluid and 'dynamic process' of the newly conceived relationship between self and the world outside, pointing up the impracticability of unmediated self-presence.

This article has explored Head's experimental practice through the lens of his reflections on theatre-going, making visible aspects of Head's embodied laboratory processes and its affective economies usually obscured in accounts of his experiment. In bringing together psychological and theatrical modes of contemplation in this way, I hope to suggest a further territory on which the mutually enfolding discourses of science and culture in the long nineteenth century can be mapped.

\_

I am grateful to Carolyn Burdett, Louise Hide and the anonymous reviewer of this article for their attentive reading and insightful comments. I also extend my thanks to Nicholas Ridout and Thomas Dixon at Queen Mary, University of London who supervised the doctoral project on which this article is based. All references to Henry Head's personal papers refer to material held in the Contemporary Medical Archives Centre at the Wellcome Library for the History of Medicine, London, (PP/HEA).

<sup>&</sup>lt;sup>1</sup> Henry Head, 'Methods of Examining Sensation', in *Studies in Neurology*, 2 vols (London: Hodder & Stoughton, 1920), I, 12-34.

<sup>&</sup>lt;sup>2</sup> Gordon Holmes, 'Henry Head, 1861-1940', *Obituary Notices of Fellows of the Royal Society*, 3.10 (1941), 665-689 (p. 669).

<sup>&</sup>lt;sup>3</sup> W. H. R. Rivers and Henry Head, 'A Human Experiment in Nerve Division', *Brain*, 31 (1908), 323-450 (p. 345).

<sup>4</sup> Christopher Lawrence and Steven Shapin, 'Introduction: The Body of Knowledge', in *Science Incarnate: Historical Embodiments of Natural Knowledge*, ed. by Christopher Lawrence and Steven Shapin (Chicago: University of Chicago Press, 1988), pp. 1-21 (pp. 2-3).

- <sup>6</sup> Henry Head, 'The Afferent Nervous System', Page-May Lecture delivered at the Institute of Physiology at University College London, 1912, Wellcome Library for the History of Medicine, *Henry Head Papers* (PP/HEA), PP/HEA/B13, p. 5.
- <sup>7</sup> Henry Head and James Sherren, 'The Consequences of Injury to the Peripheral Nerves in Man', *Brain*, 28 (1905), 116-338 (p. 119).
- <sup>8</sup> Rivers and Head, 'A Human Experiment', p. 324.
- <sup>9</sup> Lucy Bending, *The Representation of Bodily Pain in Late Nineteenth-Century English Culture* (Oxford: Clarendon Press, 2000).
- <sup>10</sup> Jacyna, Medicine and Modernism, p. 7.
- <sup>11</sup> Letter from Henry Head to Ruth Mayhew, 21 July 1903, PP/HEA/D4/15/512.
- <sup>12</sup> Rivers and Head, 'A Human Experiment', p. 325.
- <sup>13</sup> Letter from Henry Head to Ruth Mayhew, 15 May 1903, PP/HEA/D4/14/495.
- <sup>14</sup> Head, 'Methods of Examining Sensation', Studies in Neurology, I, 12-34.
- <sup>15</sup> Rivers and Head, 'A Human Experiment', pp. 334, 368.
- <sup>16</sup> Letter from Henry Head to Ruth Mayhew, 27 November 1903, PP/HEA/D4/16/547.
- <sup>17</sup> Rivers and Head, 'A Human Experiment', pp. 345, 352, 343.
- <sup>18</sup> James Mark Baldwin, *The Story of the Mind* (London: Newnes, 1899), p. 146.
- <sup>19</sup> Rivers and Head, 'A Human Experiment', p. 354.
- <sup>20</sup> Geoffrey C. Bunn, 'Introduction', in *Psychology in Britain: Historical Essays and Personal Reflections*, ed. by G. C. Bunn, A. D. Lovie, and G. D. Richards (Leicester: BPS Books, 2001), pp. 1-33 (pp. 1-3).
- <sup>21</sup> Quoted in Jacyna, *Medicine and Modernism*, p. 123.
- <sup>22</sup> Head, Studies in Neurology, I, 12.
- <sup>23</sup> Kenton Kroker, 'The Progress Of Introspection in America, 1896-1938', *Studies in History and Philosophy of Biomedical Sciences*, 34 (2003), 77-108 (p. 78).
- <sup>24</sup> Edward B. Titchener, *Lectures On The Experimental Psychology of The Thought-Processes* (New York: Macmillan, 1909), pp. 276-277, quoted in Kroker, 'The Progress of Introspection', p. 82.
- <sup>25</sup> Rivers and Head, 'A Human Experiment', p. 324.
- <sup>26</sup> Jonathan Crary, Suspensions of Perception: Attention, Spectacle and Modern Culture (Cambridge, MA: MIT Press, 2000), p. 47.
- <sup>27</sup> For more on Duse, see, Susan Bassnett, 'Eleonora Duse', in *Bernhardt, Terry, Duse: The Actress in her Time*, ed. by John Stokes, Michael R. Booth and Susan Bassnett (Cambridge: Cambridge University Press, 1988), pp. 13-63; John Stokes, 'The Legend of Duse', in *Decadence and the 1890s*,

<sup>&</sup>lt;sup>5</sup> L. S. Jacyna, *Medicine and Modernism: A Biography of Henry Head* (London: Pickering and Chatto, 2008), pp. 40-43.

- ed. by Malcolm Bradbury and David Palmer (London: Arnold, 1979), pp. 151-72; William Weaver, *Duse: A Biography* (London: Thames and Hudson, 1984).
- <sup>28</sup> A. B. Walkley, 'Eleonora Duse in *La Dame aux Camélias*', *The Times*, 16 June 1900. Clipping found in Henry Head's personal papers, PP/HEA/E4.
- <sup>29</sup> Jonas Barish, *The Antitheatrical Prejudice* (London: University of California Press, 1981), pp. 343, 329, 343.
- <sup>30</sup> Henry Head and Ruth Mayhew, 'Rag Book', Vol iii A, from August 1903, pp. 28-32, PP/HEA/E3/5.
- Walkley, 'Eleonora Duse in *La Dame aux Camélias*'. The proximity of absorption and erotic pleasure is also highlighted by Michael Fried in *Absorption and Theatricality: Painting and Beholder in the Age of Diderot*. In his description of Jean-Baptiste Greuze's painting 'Le Baiser Envoye' (1765), Denis Diderot writes, 'she is intoxicated; she is no longer there; she no longer knows what she is doing'. Fried expands on this point by suggesting Diderot describes 'self-abandonment nearly to the point of extinction of consciousness via sexual longing'. Michael Fried, *Absorption and Theatricality: Painting and Beholder in the Age of Diderot* (Berkeley: University of California Press, 1980), p. 60.
- <sup>32</sup> Walkley, 'Eleonora Duse in La Dame aux Camélias'.
- <sup>33</sup> Fried, Absorption and Theatricality, p. 109.
- <sup>34</sup> John Stokes, 'Varieties of Performance At The Turn of the Century', in *The Cambridge Companion to the Fin de Siècle*, ed. by Gail Marshall (Cambridge: Cambridge University Press, 2007), pp. 207-222 (p. 210).
- <sup>35</sup> Jim Davis and Victor Emeljanow, 'Victorian and Edwardian Audiences', in *The Cambridge Companion to Victorian and Edwardian Theatre*, ed. by Kerry Powell (Cambridge: Cambridge University Press, 2004), pp. 93-108 (p. 104).

- <sup>41</sup> A. B. Walkley, *Dramatic Criticism* (London: Murray, 1903), p. 34.
- <sup>42</sup> Denis Diderot, *The Paradox of Acting*, trans. by Walter Herries Pollock (London: Chatto & Windus, 1883). Written in 1773, published posthumously in 1830 as *Le Paradoxe sur le Comédien*, and first translated into English in 1883.
- <sup>43</sup> Walkley, *Dramatic Criticism*, p. 34. The influence of Diderot's *Paradoxe* on nineteenth-century discourses on acting can be seen in William Archer, *Masks or Faces? A Study in the Psychology of Acting* (London: Longmans, Green, 1888); and Henry Irving, *The Drama* (London: Heinemann, 1893).
- <sup>44</sup> James Cappie, 'Some Points in the Physiology of Attention, Belief and Will', *Brain*, 9 (1886), 196-206 (p. 201).

<sup>&</sup>lt;sup>36</sup> Ibid.

<sup>&</sup>lt;sup>37</sup> Head and Mayhew, 'Rag Book', Vol iii A.

<sup>&</sup>lt;sup>38</sup> Letter from Henry Head to Ruth Mayhew, 11 December 1898, PP/Hea/D4/3/89.

<sup>&</sup>lt;sup>39</sup> Head and Mayhew, 'Rag Book', Vol iii A.

<sup>40</sup> Ibid.

<sup>45</sup> Walkley, *Dramatic Criticism*, p. 34.

<sup>46</sup> Ibid.

<sup>&</sup>lt;sup>47</sup> Head and Mayhew, 'Rag Book', Vol iii A.

<sup>&</sup>lt;sup>48</sup> Marcel Proust, 'The Guermantes Way', *In Search of Lost Time*, trans. by Mark Treharne, 6 vols (London: Penguin, 2002), III, 47.

<sup>&</sup>lt;sup>49</sup> *Ibid*.

<sup>&</sup>lt;sup>50</sup> Ibid.

<sup>&</sup>lt;sup>51</sup> Jacyna, *Medicine and Modernism*, p. 125.

<sup>&</sup>lt;sup>52</sup> *Ibid.* p. 7.

<sup>&</sup>lt;sup>53</sup> Rivers and Head, 'A Human Experiment', p. 343.

<sup>&</sup>lt;sup>54</sup> *Ibid*, p. 353.

<sup>55</sup> Ibid

<sup>&</sup>lt;sup>56</sup> Proust, 'The Guermantes Way', p. 37.

<sup>&</sup>lt;sup>57</sup> Rivers and Head, 'A Human Experiment', p. 343.

<sup>&</sup>lt;sup>58</sup> Letter from Henry Head to Ruth Mayhew, 11 December 1903, PP/HH/D4/15.

<sup>&</sup>lt;sup>59</sup> Letter from Henry Head to Ruth Mayhew, 8 March 1904, PP/HH/D4/18/581.

<sup>&</sup>lt;sup>60</sup> Mary Elizabeth Braddon, *Belgravia*, vol. 66 (London: Willmer and Rogers, 1888), p. 377.

<sup>&</sup>lt;sup>61</sup> Rivers and Head, 'A Human Experiment', p. 353.

The original lines are: étrange/Vision qui dérange/Et trouble l'horizon/De ma raison (strange/visions which derange/and trouble the horizon/of my reasoning) from Paul Verlaine, 'A Clymène', in *Selected Poems, Paul Verlaine*, trans. by C. F. MacIntyre (Berkeley: University of California Press, 1948), pp. 73-74. Letter from Henry Head to Ruth Mayhew, 27 November 1903, PP/HEA/D4/16/547.

<sup>&</sup>lt;sup>63</sup> *Ibid*.

<sup>&</sup>lt;sup>64</sup> Crary, Suspensions of Perception, p. 4.

<sup>65</sup> Ibid.

<sup>&</sup>lt;sup>66</sup> Wilfred Trotter and H. Morriston Davies, 'Experimental Studies in the Innervation of the Skin', *Journal of Physiology*, 38 (1909), 134-246 (p. 138).

<sup>&</sup>lt;sup>67</sup> *Ibid*, p. 143.