
Jevons in Australia:

How social liberalism realised an economist, 1854-1859

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Declaration of Originality

I, Jordan Heckendorf, declare that this work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself. I also certify that the thesis is an original piece of work and has been written only by me. Any assistance I received in my research has been appropriately acknowledged.

This thesis is within the recommended 20,000 words, not including the preface, acknowledgements, footnotes, or appendices.

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Abstract

William Stanley Jevons (1835-1882) was a nineteenth century economist. His early life in Australia (1854-59) altered his life trajectory and forged a social scientist. Many notable scholars have insinuated the importance of Jevons' time in Australia, including John Maynard Keynes (1936), but how this formation of his focus in political economy was undertaken, and how his colonial activities actually constituted his 'turn', has not fully been analysed with respect to his historical, intellectual or social context.

Trained in chemistry, and working at the Sydney Mint, Jevons' interests expanded wider, and were expressed in the colonial publications of the time. He published meteorological recordings, participated in the newspaper railway debates, and conducted a social survey of late-1850s Sydney. Through this participation in, and exposure to, the colonial political economy of New South Wales, Jevons would come to acquire and express a profound interest in the social science of the colony.

The colonial activities of writing, and his private reflections demonstrate the maturation of a man, and his development valuable skillsets. His sinecure position at the Sydney Mint granted him the ability to deeply reflect and acquire a visceral social liberalism, which altered his trajectory, and made him a more devoted social thinker. Without this time in Australia, Jevons' transition to a focus in political economy, may not have happened. The major agent of change during this period was his social liberalism. This thesis, therefore, argues that the mid-nineteenth century context was significant to Jevons' transition towards becoming an economist.

Sources and Acknowledgements

Most of the primary source material of the Jevons family is at Manchester University, and housed at the John Rylands Library. There also exists some material pertaining to his younger brother which resides at Seton-Hall University, New Jersey. Only some of what is available has been referenced in terms of where the physical originals reside, because over the years microfilm duplications and published versions of Jevons' material have been created, which for ease of use I have chosen to reference as a preference.

The Mitchell Library in Sydney has microfilm rolls containing many of Jevons' letters, his cashbook, and his journals for his time in Sydney. In addition, the late Professor Black published seven volumes of Jevons' papers and correspondence, and Jevons' widow also published a one-volume compilation of some of his personal writings. Consequently, the overlap between what is transcribed in published form, and that which is in archival original form, is considerable. I have used as much non-published material as much as possible, but Professor Black's volumes proved to be of enormous assistance, and by my own preference, are the chosen source of reference. I have sought fit to leave newspapers out of the end bibliography, as those that are primary sources are included in Appendix I.

I must thank all those who have helped me acquire sources, develop my thoughts and point me in the right direction. Megan Martin, of the Caroline Simpson Library, at the old Sydney Mint building, has been very helpful. I thank my supervisor, Mark Hearn for being patient and kind with my eccentric ideas, before directing me onto a more achievable course. To all those scholars who went before, I am indebted. I have truly stood on the shoulders of giants. Any work of this nature requires the reference of a wide scholarship, and had they not worked in their various fields, on their own particular projects, this contextualising of Jevons' thought could not have occurred. The examiners' recommendations have been helpful, and have led to more interesting asides in footnotes. I thank my family and friends who have been supportive. Finally, I thank my parents as without them this project would not have been possible.

Introduction: A Progressive's Sojourn

William Stanley Jevons was born in Liverpool to a middle-class family of ironmongers in September, 1835.¹ His early education consisted of governesses, his mother's tutoring before her early death, and attending the Liverpool Mechanics Institute.² He would later study at University College, London before segueing and qualifying as an assayer and after studying at the Paris Mint. Only nineteen on arrival in Australia, he would mature onto a new course during his time in the Antipodes. Australia would play a decisive role in altering his trajectory. As such, this thesis examines Stanley Jevons' 'speech-acts' during his time in Australia. Through the chance referral of his cousin, Henry Roscoe, he was offered a position as an assayer in Sydney, and all the consequent beneficial opportunities that were to follow.³ His time in Australia would allow for many influences to be imbibed, and these would influence the mind of the young Jevons who matured among New South Wales' colonial scientists.

This thesis examines how this period impacted his thinking and life trajectory towards political economy. Long has the assertion been that Jevons' time in Australia was formative to his becoming a social scientist.⁴ According to this line of argument, his time in Australia writing on Australian political economy topics, and being in close proximity to other liberal-minded scientists, shaped the development of his thinking. Placing these acts in context, and examining his shift to economics will be done by weighing evidencing influences from this time from a select sample of his work, is yet to be done. This means of analysis is inspired by Quentin Skinner's historical contextualism and contextualising "speech-acts".⁵ Analysing how Jevons was moulded by his contemporaneous experiences in Australia, his own journal records and letters all count as records of his "speech-acts". The range of his surviving contemporary material consists of his published and unpublished journal entries, Jevons' private correspondence and his cashbook.⁶ Focusing on Jevons' own words, from his own contemporaneous (now primary) sources, is also good historical practise as it avoids the

¹ Rosamond Könekamp, "Biographical Introduction" in R. D. Collison Black (ed.) *Papers and Correspondence of William Stanley Jevons: Volume I, Biography and Personal Journal* (London: The Macmillan Press Ltd., 1972), 2

² See pages 64, 143 and 164 for mention of W. S. Jevons and his cousin, Henry Roscoe in Herbert J. Tiffen, *A History of the Liverpool Institute Schools: 1825-1935* (Liverpool, London and Prescott: C. Tinling & Co, Ltd., 1935)

³ Rosamond Könekamp, "Biographical Introduction" 1-52

⁴ John La Nauze, *Political Economy in Australia* (Melbourne: Melbourne University Press, 1949), 26-44; Michael V. White, 'Jevons in Australia: A Reassessment' *Economic Record* (March, 1982), 32-4; Samuel Bostaph, and Shieh, Yeung-Nan. "W. S. Jevons and Lardner's Railway Economy." *History of Political Economy* 18, no. 1 (1986): 49-64.

⁵ Quentin Skinner, "Meaning and Understanding" in *Visions of Politics. Volume I: Regarding Method* (Cambridge: Cambridge University Press, 2002), 57-89

⁶ See M632 and M2633, Mitchell Library, Sydney

historian's fallacy and the tendency to presume a telepathic relationship with a subject, which itself is ahistorical. An empathetic literal reading of the sources has been the approach taken.

As will become clear, the 1850s context is key to understanding Jevons' time in Australia. In 1851, the themes of progress, liberty and material improvement were brought together in an emporium celebrating Britain's empire. Materialising in the Crystal Palace showcases at Hyde Park's Grand Exhibition, these exhibitions displayed all manner of imperial, technological and global exuberances.⁷ In the streams of crowds a 15-year-old Jevons was presumably a witness in awe at the material wonders. Indeed, this was just what his Liverpudlian father, Thomas, thought when he wrote enquiring about his son's London activities:

'We have missed your usual weekly letter last night but suppose you were too much tired on Sunday Evening with your usual walk to the Crystal Palace ... Did you hear the great Organs that are to be put up in it ... One of them is the invention of Colonel Thompson and has been built for his own room...'⁸

The young Jevons — like most else loyal to Empire and its young Queen — was assessing his environment for means to improve it, and better its inhabitants by imbibing a utilitarian ontological sense, coupled with certain literary digressions. The coverage of the exhibition demonstrates this, as news from the Crystal Palace displaced that of religion in importance.⁹ God may have been the watchmaker, and the universe His creation, but it was ordered by the discoverable, and understandable laws, that Her Empire, in tandem with gentlemanly science, was helping to uncover.¹⁰

It was in this Victorian era of purported global progress that Jevons would find meaning and impulse, as well as the epistemological understanding from which he could justify his work.¹¹ This was the British, contextual background, but his scientific work and social-scientific commentary was also influenced by a peculiar turn of liberalism — one that was more socially-aware.¹² Uninhibited, and reasonably free to pursue whatever interested him, a new-found liberal impulse would be expressed during his time in Sydney. Derived from more than just his liberal, northern English roots, Jevons expressed a form of liberal-humanism that would

⁷ Asa Briggs, *Victorian People: A Reassessment of Persons and Themes 1851-67* (Harmondsworth: Penguin Books Ltd, 1971), 51

⁸ *Papers and Correspondence of William Stanley Jevons: Volume I*, 23

Thomas Perronet Thompson was a radical, liberal politician of the time, who himself was a political economist. The link between non-conforming religion and non-conforming politics is outlined in Robert Tombs, *The English and Their History* (New York: Alfred A. Knopf, 2016)

⁹ Asa Briggs, *Victorian People*, 32

¹⁰ Asa Briggs, *The Age of Improvement 1783-1867* (London: Longmans, 1959), 66

¹¹ Richard D. Altick, *Victorian People and Ideas: A Companion for the modern reader* (New York, W. W. Norton & Company, 1973), 73-113;

¹² George Nadel, *Australia's Colonial Culture: Ideas, Men and Institutions in Mid-Nineteenth Century Easter Australia*, (Melbourne: Angus and Robertson, 1957), 152-160

compound off the liberal-progressivism in the Australia. It required more than a universalist, and mechanical reasoning to make an economist.¹³ A clearer ontological and psychological foundation was needed. It required a newly-inspired change in self-direction, which Jevons would write about in Australia. Even if the essence of Progress and mechanical science during this era was synonymous, the impulse to better humanity was a new and viscerally felt *raison d'être* that went beyond empiricism and metaphysical naturalism for the young Jevons. His liberalism of temper aligned with his liberal activities and social proximity whilst in the colony.

The formative nature of the Australian half-decade has been stressed in scholarship, but the 'opportunity benefit' is difficult to calculate. Judging by his 1850s letters to Henry Roscoe, Jevons retained a long-standing desire to continue his chemistry studies.¹⁴ It also seems probable that William Stanley, had the Mint opportunity not arisen, would have followed the trajectory of brothers into commerce or industry.¹⁵ Undoubtedly, Jevons as his family's second main breadwinner, a comparative salary would have been needed, and without the publishing access or the positive freedom that such an opportunity offered.¹⁶ Australia obviously provided some kind of intellectual cauldron, yet as with all histories a counterfactual alternative is impossible to discern with any confidence.¹⁷ Even so, his time in Australia does show evidence for prodigious activity. Arguably, it is the context of a Shakespearean alteration of course. The three Victorian witches of Thought, Work and Progress produced not a Scottish downfall, but a liberal-humanist who captured the social science crown.¹⁸ As will be shown, the colony did cast a liberal spell upon this chemist and it did tempt the young Jevons onto an alternative course. Quite a spell it was as Jevons would explicitly write about his desire to better humanity, by what one historian has described as his "vague liberal-humanism" that "had nothing to do with fame or fortune."¹⁹ Margaret Schabas has argued that this was either tangential or in sync with his mathematical temper.²⁰ Yet, even though Schabas wrote that it "took his five years in Australia to come to terms with his life goals and abilities", she leaves only five pages to Jevons' Australian interlude, and did not elucidate as to what activities or contexts actually constituted

¹³ Harro Maas, *William Stanley Jevons and the Making of Modern Economics* (Cambridge: Cambridge University Press, 2005)

¹⁴ Margaret Schabas, *A World Ruled by Number* (Princeton: Princeton University Press, 1990), 15

¹⁵ R.D. Collison Black, "The papers and correspondence of William Stanley Jevons: a supplementary note," *The Manchester School* 50, no. 4 (1982): 421.

¹⁶ Jevons notes the difficulty of getting published in the newspapers, on his return to England in the 1860s. M2632, *Jevons Family Archive Microfilm*, Mitchell Library

¹⁷ These three factors: his desire to continue chemistry; the necessity to support his sisters and younger brother, Thomas; and the difficulty in publishing on his return to London, make his Australian interlude seem relatively formative to a counterfactual scenario whereby Jevons did not go to Australia.

¹⁸ An allusion to the Three Witches in Act One of William Shakespeare's play, *Macbeth*. Indeed, Jevons records seeing *Macbeth* at the Victoria Theatre. M2632, *Jevons Family Archive Microfilm*, Mitchell Library

¹⁹ Margaret Schabas, *A World Ruled by Number*, 17

²⁰ *Ibid.* 15-19, 22

this impulse.²¹ In this thesis, it will be argued that this social liberalism was the common strand that would thread his activities in the colony, it provided the necessary impetus for historical change in Jevons' life, and key examples of this tendency will be analysed and placed into the wider 1850s context.

Harro Maas has emphasised that a mechanically universal way of working the world (i.e. 'mechanical metaphors') aided his transition to social science.²² However, it too, leaves aside the evidence of his grappling with purpose, trajectory and influences. These self-reflective and active written pieces surface historically-constituted actions of thought. Neglecting them is historical abnegation as through these acts the terms of his scientism become clear. Analysis conducted without them only provide after the fact justification for his action, rather than explanation for his volition.²³ It took more than "a world ruled by number" to make the man. Mathematics, liberal-humanism and a sense of personal and societal progress pervaded the content of Jevons' antipodean writings, but it was arguably the social liberal component that altered his life trajectory. This is something that Schabas and other Jevons scholars have little focused upon. Jevons' liberal-humanism would be put to practical use during his time in Sydney, and this is evident in his writings, a selection of which will be analysed. His colonial activities bespeak to his contemporaneity of habits and attributes, as much as his exceptional genius. He would be drawn to political economy from his own freely, expressed urges to deify Man. He was a universalising, liberal humanist and he came to be such in Australia from utilitarian urges felt, and extrapolated upon, in Australia.

Any study of Jevons' Australian interlude must provide the necessary agent of change in his biography. There was a wider shift in liberal thinking during this period too. Social liberalism was evident — even if in critical or sometimes satirical form — in the primary literature of the mid-nineteenth century.²⁴ Drawing causation for the ephemeral, down to the social level to that of individual human action can only be done with respect to contemporaneous historical sources. Indeed, at the Great Exhibition, some years before his arrival in Australia, Jevons' mind would be fixed upon the science of chemistry, and the analytical power of mathematics. But only years later, like other thinkers of a liberal temper, social conscience called for a change of liberal politics. This is the reason why Australia was formative to Jevons' later intellectual accomplishments, as his becoming an economist was a function of this social conscience. John Maynard Keynes outlined the beneficial nature of Jevons' time in Australia, arguing that it was

²¹ *Ibid.* 15

²² Harro Maas, *William Stanley Jevons and the Making of Modern Economics*

²³ Margaret Schabas, *A World Ruled by Number* 14-19

²⁴ Jevons was impressed by the Brontë sisters. Jevons lists the books he read at the end of his diaries. See M2633, *Jevons Family Archive Microfilm*, Mitchell Library

a period of “slow gestation” that was “abundantly fruitful.”²⁵ Indeed, Keynes was wooingly elegiac in his 1936 biographical essay when he wrote:

‘...his long period of solitary thought and slow gestation in Australia, at an age when the powers of pure originality are at their highest, had been abundantly fruitful. For soon after his return, the outlines of his principle contributions to knowledge were firmly fixed in his mind. The last third of Jevons’ life after he was thirty was mainly devoted to the elucidation or amplification of what in essence he had already discovered.’²⁶

Keynes was correct to say it was formative, but incorrect to claim that his time in New South Wales was in any way ‘solitary’, even if the act of thinking was described as a solitary act.²⁷ Jevons was not in a colonially imposed solitude, yet this false notion has been argued by one Australia historian.²⁸ He “had genius and divine intuition and a burning sense of vocation” during “the decade of his youth”, but one that was rooted in his time.²⁹ It is the argument of this thesis that Jevons was far too active to be considered a ‘solitary’ figure. His activity within the colony is too well-documented within his own sources to justify the solitary claim. Most notably, his alignment with progressive-liberal politics, and his exposure to the socially liberal literature of the time drew him out into the wider expanses of Sydney and New South Wales.³⁰ What he wrote about his professed desire to be alone, was in fact quite different to what he actually did. Furthermore, Keynes’ waxing prose created another debate over the extent to which his key contribution to economic theory was first hinted to have been produced *in* Australia. This is a debate that pits a wishful and speculative reading between the lines against a sceptical, hard-ball empiricism.

In terms of Jevons prophesying his later developments in economic marginalism, there has already been half a century intermittent academic debate.³¹ This essay shall relegate mention of social liberalism possible influence upon this debate until Chapter Three, and then only briefly touch upon what social liberalism might add to the speculative side. The last worthwhile

²⁵ Keynes’ source for Jevons primary material Jevons’ wife’s volume. Harriet Jevons, ed, *Letters and Journal of W. Stanley Jevons, edited by his Wife* (London: Macmillan and Co., 1886)

²⁶ This essay was originally read before the Royal Statistical Society on 21 April, 1936, but was later published in John Maynard Keynes, *Essays in Biography* (edited by Geoffrey Keynes) (New York: Norton Library, 1963) pp. 255-309

²⁷ *Ibid.*, 259

²⁸ Graeme Davison, “The Unsociable Sociologist—W. S. Jevons and his Survey of Sydney, 1856-8” *Australian Cultural History* No. 16 (1997/98): 127-150.

²⁹ John Maynard Keynes, *Essays in Biography* 304

³⁰ ‘A Social Survey of Australian Cities, 1858’, Microfilm CY1045, Mitchell Library, Sydney

³¹ John La Nauze, *Political Economy in Australia* 26-44; Michael V. White, ‘Jevons in Australia: A Reassessment’ 32-4; Bostaph and Shieh, *History of Political Economy* 18(1) (1986), 49

contribution to this debate was a 1982 article by Michael V. White.³² Unlike Michael White's 1982 article, and its social context subsection, this thesis will more comprehensively integrate Jevons' social and historical context in its answer to the 'was Australia formative?' question. Indeed, this essay's main contention is that Jevons' activities made him more socially scientific, but with a jointly waxing and utilitarian liberalism fanning the flames. White's work is informative and already makes a strong case for Jevons' time in Australia, but more needs to be added in terms of how his transition was historically constituted. White has more recently extended the bibliography of Jevons' published work in Australia beyond what would have been available to Keynes when he wrote.³³ Extending the bibliography has been a recurrent task and was completed in the time of John La Nauze, Harriet Jevons, W. S. Jevons' son Herbert, or indeed Keynes.³⁴ The impression that Keynes would have received from Mrs Jevons' compilation undoubtedly influenced his Jevons-Australia argument, even if the volume was limited in its scope of Jevons' Australian writings.³⁵ His time in Australia will be placed under the microscope of historical analysis, and examined using previously unpublished material. By optimising White's updated bibliography of Jevons' work, focusing on little used or yet-unanalysed publications, the significance of Jevons' Australian period can be better understood. There remains no smoking gun to indicate that economic marginalism was discerned in Australia, but there is a wide scattering of ingredients that makes the speculation seem plausible and enriching to the historian, especially when considering his intellectual influences.

Jevons has been studied since his tragic death by drowning in 1882.³⁶ Twentieth century scholarship has focused mainly on his later life and work in logic, philosophy and economics. Due to the enormity of the wider Jevonian scholarship, this essay will only selectively place in the history of economic thought and analyse his published contributions. A small sample of Jevons' Australian material demonstrate the link between his liberal humanism and his biographical shift in trajectory, and demonstrates a neglected influence on his mind. The absence of interest in his Australian period, generally, has been palpable, as few have ever have touched upon Jevons' life in New South Wales. Michael V. White has spent decades writing on

³² Michael V. White, "Jevons in Australia," 32-4

³³ This chronology has been recreated in Appendix I, but with the addition of one article that White missed in his compilation: W. S. Jevons, 'Red Tape-ism & the Newcastle Lifeboat' *Empire* 22 November, 1856 p. 4. See Michael V. White, 'A revised bibliography of publications by W. Stanley Jevons' *History of Economic Review* (Winter, 2010) 51, p.106-23 and Takutoshi Inoue and Michael V. White, 'Bibliography of Published Works by W. S. Jevons' *Journal of the History of Economic Thought* (Spring, 1993) 15(1) pp. 122-147.

³⁴ John La Nauze's own Jevons papers are held at the Mitchell Library, New South Wales. Jevons' widow, Harriet produced a one-volume compilation of Jevons journal entries and letters spanning the full duration of his life. Herbert Jevons, and his daughter would donate their collection of Stanley Jevons' papers and journals to the John Rylands Library.

³⁵ Harriet Jevons, ed, *Letters and Journal of W. Stanley Jevons, edited by his Wife* (London: Macmillan and Co., 1886)

³⁶ Rosamond Könekamp, "Biographical Introduction" 51

W. S. Jevons, but nothing approaching an historical biography³⁷ He added to John La Nauze's work by increasing the number of recorded listings of Jevons' published output in the colony quite considerably.³⁸ Richard Howey's *The Rise of the Marginal Utility School* posited that Jevons in the colony briefly described an "impulse to accomplish" in Australia.³⁹ Harro Maas and Bert Mosselmans have both construed recently Jevons' influential role in making, in Lionel Robins' phrase, 'modern economics'.⁴⁰ Maas, in particular, has posited that Jevons learned to employ certain 'mechanical metaphors, not least to his work in political economy. His work has placed Jevons in a wider mechanistic tradition of thinking. Mosselmans, has stressed a possible link between chemistry and cost-benefit optimisation, aligning with the mechanical commensurability of Maas' mechanical metaphors.⁴¹ I will be sidestepping these scholars' theorising, as their scope is too large to adequately cover here. The theoretical application of "mechanical metaphors" will be further explored in Chapter One, but will be shown to be too narrow for Jevons' Australian activities, and the historical company he kept is more tacit in its explanatory power.

Jevons was devotedly modern, in the sense that he decompartmentalised traditional bodies of knowledge, and asserted the universal applicability of common laws towards a common understanding. Unlike modern Renaissance men, like Galileo, Jevons' thinking was etched into the liberalism of the mid-nineteenth century.⁴² Jevons' actions can be etched explicitly into the contemporaneous, liberal-progressive and scientific thinking of his day. He was more than ruled by Reason. He was a social liberal and especially enamoured by the Brontë sisters, whose life he yearned for. In Chapter Two, the way social company, and literature knitted a liberal community together will be elucidated. Indeed, Rosamond Könekamp described her grandfather as a "typical Victorian".⁴³ Social conscience for street urchins and social criticism of urban wastages fuels even our own imagination of this period. New South Wales was also governed by a generation who would cede concessions to a new socially liberal generation of rabid democrats.⁴⁴ Jevons was close to this coterie whilst in the colony. His prodigious activity

³⁷ Michael V. White, "Jevons in Australia," 32-45

³⁸ Michael V. White, 'A Revised bibliography of publications by W. Stanley Jevons' *History of Economics Review* (Winter, 2010) Issue 51, pp. 106-23.

³⁹ Richard S. Howey, *The Rise of the Marginal Utility School, 1870-1889* (New York: Columbia University Press, 1989) p. xvi

⁴⁰ Harro Maas, *William Stanley Jevons and the Making of Modern Economics* (Cambridge: Cambridge University Press, 2005); Bert Mosselmans, *William Stanley Jevons and the Cutting Edge of Economics* (London: Routledge, 2007) See X for Lionel Robins' use of the term 'modern economics' in reference to the 1870 marginal revolution in economics.

⁴¹ Bert Mosselmans, *William Stanley Jevons and the Cutting Edge of Economics* (London: Routledge, 2007)

⁴² Walter Isaacson, *Leonardo Da Vinci: The Biography* (London: Simon & Schuster UK Ltd, 2017)

⁴³ Rosamond Könekamp, "Biographical Introduction" 51

⁴⁴ Even if Jevons, and other nineteenth century liberals, had certain qualms about extending the franchise.

makes him a key source to the social history of Sydney, yet Australian historians have only used him sparingly.

No historical account of Jevons' time in Australia has gone into any historical or biographical detail.⁴⁵ Indeed, Australian historians have usually just utilised Jevons' a witness source in their social histories. This is unsurprising given that most of the Jevons papers are physically located in the United Kingdom, and his most poignant observations — the work most quoted by Australian historians — were twice published in the *Sydney Morning Herald*.⁴⁶ Closer examination of the Jevons' Australian interlude has seemingly escaped the attention of Australian historians. Indeed, this is probably also due to his covering multiple disciplines (chemistry, meteorology, logic, economics etc.) that most historians are ill-prepared to conduct a historical analysis on. The most used Jevons source is his 1858 observations of Sydney neighbourhood "The Rocks" in his *Remarks upon the Social Map of Sydney*.⁴⁷ Mention of this written commentary, which describes the social fabric of late 1850s Sydney in an observational cross-section, has been used by historians ever since its first appearance, and Jevons' name appears in a wide range of Australian histories.⁴⁸ Yet the larger question of the colony's impact on Jevons — the man who made valuable witness to Australian historians — has only been of interest to economic historians.

If "all history is the history of thought" then the past is replete with the actions and thoughts of many thinking individuals. Indeed, in accordance with Ralph Waldo Emerson, "There is no history, only biography."⁴⁹ If this is the case then an individually-rooted intellectual biography is the best means of conducting an historic study of an individual life, and individual actions are the ontological foundation for such a methodology. By analysing a 'high-Victorian individual', one can validate Brigg's characterisation of the period, as well as assess the impact of the colonial context on an individual.⁵⁰ The impact of thought, can best be discerned by the action it inspires. Indeed, as in the words of an anonymous contributor to the *American Scholar* relates: "The case of Jevons is not unique in history. In fact, we may assume that the

⁴⁵ There is yet to be written a full biography of Jevons.

⁴⁶ It has appeared in multiple forms since first being partially published in the *Sydney Morning Herald*. A full transcription of his social survey is reproduced in Appendix II. See W. S. Jevons, "The Social Cesspools of Sydney. No. I – The Rocks" *Sydney Morning Herald*, 2 and 'A Social Survey of Australian Cities, 1858', Microfilm CY1045, Mitchell Library.

⁴⁷ *Ibid.*

⁴⁸ See David Goodman, *Gold Seeking: Victoria and California in the 1850s* (Sydney: Allen & Unwin Pty Ltd, 1994) 35; Gordon Greenwood, *Australia: A Social and Political History* (Sydney: Angus & Robertson Ltd, 1969) 92-3; Ken Inglis, *Australian Colonists: An exploration of social history 1788-1870* (Melbourne: Melbourne University Press, 1993) 146; Grace Karskens, *Inside the Rocks: The Archaeology of a Neighbourhood* (Sydney: Hale & Iremonger Pty Ltd, 1999) 154, 156, 157-8, 159, 186, 187-8; Lucy Turnbull, *Sydney: Biography of a City* (Sydney: Random House Australia Pty Ltd, 1999) 106-7.

⁴⁹ Ralph Waldo Emerson, "History" in *Essays: First Series* (1841)

⁵⁰ Briggs, *Victorian People* 23-59

gulf between the individual mind that does its own thinking and the common mind that rules society first opened up at the moment when Adam took his first bite out of the fruit of knowledge.”⁵¹ By focusing on the writings of an individual, certain individual motivations and patterns of thought can be discerned. These, when compared with the greater, already-analysed patterns of the whole period can instruct interpretation.⁵² Indeed, since the genesis of self-agency, the actions of individuals were realised and have since been quite discernible.

Historical context for an individual’s speech acts is the methodology for inferring meaning and impetus from an individual’s thoughts. Historical relativity — constituted in time and place — will be the measure of Jevons’ work and thought. According to Barbara Caine, this is the essence of an historical biography, knowing the intellectual ‘horizons’ of one’s specimen.⁵³ Where intention is not explicit, or the terms and the grammar used is “vague”, then contextualism is the next methodical means by which to interpret historic sources.⁵⁴ In this sense, the author is very much not dead, but lives on in the words, grammar, deeds and historical context, that beyond reasonable doubt, can be ascertained. The past is recoverable through the lens of historical sources. The past intentions and desires of dead individuals is discernible through their words. The impact of Jevons’ stated social liberalism must be discerned by the action it inspires, and inversely the constraints of his thoughts can be inferred by the upper limits of his activities, discerned through evidential absence.

This whole method and way of doing history is conducive and applicable to William Stanley Jevons’ intellectual growth and inspired action between 1854-59. ‘Progress’ was the primordial and collective speech-act of the mid-nineteenth century. Indeed, it was significantly aligned with the largely ‘progressive’ political ideas of English Non-conformists, which the Jevons family were clearly aligned with.⁵⁵ Using methodological individualism, and Quentin Skinner’s contextualism, a focused examination of this larger progressive structure can be undertaken. Jevons’ speech-acts were informed by his colonial context, and through these contextualised speech-acts — such as his writings on the railway controversy — one may see the transition towards his future, primary vocation: economics. This is not to embark upon the course, criticised by Arthur Schlesinger Jr., of “tidying up” historical events, “imposing order on events and giving them meaning”.⁵⁶ Rather, this method is the best means by which some semblance of order can be inferred and extracted from the chaos of the loud superfluous historical noise,

⁵¹ Clovis. "Ironies and Intimations: Jevons and the Establishment." *The American Scholar* 34, no. 1 (1964): 109-11.

⁵² Ludwig von Mises, *Theory and History: An Interpretation of Social and Economic Evolution*, edited by Bettina Bien Greaves (Indianapolis: Liberty Fund, 2005)

⁵³ Barbara Caine, *Biography and History: Theory and History* (New York: Palgrave Macmillan, 2010)

⁵⁴ This is inspired by the work of Quentin Skinner and others in the Cambridge School more broadly.

⁵⁵ Robert Tombs, *The English and Their History* (New York: Alfred A. Knopf, 2016)

⁵⁶ Quoted in Richard Aldous, *Schlesinger: The Imperial Historian* (New York: W. W. Norton & Company, 2017) p. 387

or the eerie echo of historical silence. The noise of a subject's context must be considered, but so too should their own words. An empathetic reading of a subject's own words is the best means to enter a now dead mind.

The hurly-burly of Jevons' Australian surroundings will never be totally known, but the partial glimpses that his journal entries and letters provide are the best possible way of entering his mind. The way he wrote of his position in the colony is instructive, and these private writings illustrate a personal thought process. They also can be funny, sad or cringeworthy in their obvious lack of self-awareness. Jevons sometimes displayed a youthful ill-awareness to his surroundings and their social cues, which one can infer from his puzzled reflections on the day's events. He also sometimes has a particularly viscous assertiveness that sometimes can take the reader into a state of chuckling humour, as one enters back into the mind of a young man of 150 years ago.⁵⁷ The youthful arrogance of his criticisms of colonial authority show a young man of confidence — even if this was only some of the time.⁵⁸ His many colonial publications demonstrate his composure of mind, and his willingness to lay out his personal scientific findings, and fend off spurious attack if necessary. Therefore, these primary source materials are rich in Australian detail, but most importantly, they consist of the musings of a man in intellectual training. My only misfortune is that I could not relay more of it here.

It is the intention of this essay to provide greater historical depth, and to best capture the best factor driving his transition to social science through Jevons' personal writings. It is not disputed in the literature that Australia was five years well spent. What is unknown are the following: How much can be attributed to his time in Australia for the development of economic marginalism, especially if the evidence must be gleaned indirectly? How solitary was Jevons during his time in Australia? How significant is social liberalism in explaining Jevons' transition to social scientific concerns? Indeed, the first question has been pursued, the second question has been answered weakly, and only curtly rebutted. The third question will be the main thrust of this essay and will be used to address to differing extents the other two have been approached.

This thesis does not aim to be comprehensively exhaustive as to Jevons' time in Australia. The particularly pronounced ability of Jevons to write so prodigiously in the press must be considered a factor in his intellectual trajectory.⁵⁹ Previous work on ordering what Jevons wrote, when and why this was significant to his development is something that will have to be

⁵⁷ Jevons' journal reflections of his time traipsing around Windsor is humorous, in that he is shocked to discover a girl will not show him the slightest amount of interest, and he is mistaken for a travelling salesman. See R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 254

⁵⁸ M2632, *Jevons Family Archive Microfilm*, Mitchell Library

⁵⁹ After his return to London Jevons notes the difficulty of writing for the London publications.

somewhat ignored here, except for what it tells us about Jevons' contextual liberalism. His honing away at a viable way of thinking and practising on the practical issues of the colony was a function of his liberalism. His course was forged not by "mechanical metaphors", but by a liberal alteration of his life, which made him a social scientist.⁶⁰ As commensurable as mechanical metaphors may have made his transition, they did not have the propulsive power. This will be elucidated in Chapter One. In Chapter Two, this essay will argue the impact of his social and literary influences in fomenting this social liberalist temper in the young Jevons. In Chapter Three, Jevons' sense of liberal-humanism will be used to inform his Australian, and future writing in political economy. Whether Jevons significantly developed his thinking on marginalism in Australia will be discerned further in Chapter Three. Chapter Three will also outline the evidence for Jevons' supposed development of an economic way of thinking in New South Wales, and will weigh the merits of the countervailing arguments with respect to Jevons' liberal-humanist sense. His shift towards a focus in economic questions is undisputed, but the extent, and by a means of liberalism, that he developed his primary economic contribution in New South Wales will be assessed from his surviving sources, namely his political economy contributions in Sydney.

⁶⁰ Harro Maas, *William Stanley Jevons and the Making of Economics*

Chapter 1: The Metaphors He Worked By

‘You will perceive that *Economy*, scientifically speaking, is a very contracted science; it is in fact a sort of vague mathematics which calculates the causes and effects of man’s industry, and shows how it may best be applied. There are a multitude of allied branches of knowledge connected with man’s condition; the relation of these to political economy is analogous to the connection of mechanics, astronomy, optics, sound, heat and every other branch more or less of physical science, with pure mathematics.’¹

William Stanley Jevons wrote the extract above in a letter to his sister, Henrietta, where he made the so-called mechanical metaphor inference of social cause and effect, implying the mutual compatibility of the hard sciences and political economy. Indeed, the universal commensurability of knowledge, as well as its metaphysical naturalism, are the key insights that Jevons is relaying to his sister. This slipping between usages of classical mechanics with his other intellectual pursuits has been outlined by Harro Maas as the process by which Jevons shunted from one pursuit to another.² Maas has argued that Jevons’ ‘mechanical metaphors’ were contributing factors to Jevons’ lifelong, and historically constituted, cognitive framework. The quotation above is probably one of the best encapsulations of said idea, written in Jevons’ own hand. Undoubtedly it has informed both the work of Maas and Schabas, and their respective interpretations of Jevons’ mind. Yet, it also places Jevons’ mind in a certain place.

Jevons was in generations of company in thinking in terms of universally applicable, mechanical terms. The mid-nineteenth century saw a major expansion in both the amateur and professional practise of the scientific method. This scientism of mind undoubtedly bled much wider, and became a part of popular discourse. Yet, the way that these mechanical metaphors were presented by Jevons in Australia, or were ranked with respect to Jevons’ clearly stated social liberalism, has never been analysed. Indeed, Maas and Schabas only very briefly cover Jevons’ colonial interlude. This is a problem as conceptualising Jevons’ thinking solely in terms of mechanics, or indeed mathematics, come short and faces a major methodological hurdle, which is the neglect of historicism. The world ruled by mathematics or universally applied mechanical reasoning do not provide any sudden, or major alteration in Jevons’ life trajectory, and as such any satisfying historical causation in a future Jevons biography. It assumes a passive movement from one area, and easy reception into another. Yet,

¹ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II, Correspondence 1850-1862*. (London: The Macmillan Press Ltd., 1973)

² Harro Maas, *William Stanley Jevons and the Making of Modern Economics* (Cambridge: Cambridge University Press, 2005)

in denoting an intellectual change, what is more explicit and causative is Jevons' practised liberalism. His liberally-informed written work, his self-stated expressions of thinking, these require less parsing of mental intentions or extrapolating upon from general, modern scientific characteristics of mind. They are more explicit and actionable statements, and less ephemeral. Self-statement *coupled with* sustained action, seems more real than implicit, general intent. Jevons' work in Australia, especially his non-meteorological work denotes this. Being "powerfully good in the world" was the motive his published work in the colony was the actualised expression of that desire.³

Indeed, there is some contradiction in what Jevons says, in terms of what excites and motivates him. No doubt that from the time he first would meet Mr Francis Miller and Sergeant Trickett at the quay on 8 October, 1854 until departing Sydney for Melbourne in March 1859, Jevons' life would be transformed. Working in the colonial context was key to that transformation. However, the extent to which Jevons desired to work universally in multiple fields is disputable. In a letter he writes: "I don't imagine I am altogether taken up by Meteorology."⁴ Indeed, Jevons was quite often bored by his work at the Mint. In that same letter Jevons writes:

'We get on quietly at the Mint; there is very little to do and my necessary work would not occupy more than 2 or 3 hours, if I liked, just at present, but of course we attend nearly the full office hours and employ ourselves as well as we can. I have lately been writing a rather long paper on Mint Gold assaying from a "Methodical" point of view; i.e. it is about the employment of *comparative determination*, and the means of eliminating slight errors in the process &c &c, but I do not think anything will come of it just now, as it is awfully dull and stupid.'⁵

New South Wales not only allowed a young man to experiment and mature, it helped him discover a new motivation for acting. It seems reasonable to suppose that the idea of universal applicability of method and knowledge is not enough to its being received, desired or even actioned. Jevons was methodical in his work, and would continue to make meteorological recordings and complete his assaying obligations at the Mint, but his pursuits extended wider, and these were inspired by a realised sense of liberal-humanism. This is a broad, politically-informed critique of society, harnessing utilitarianism and significantly undertaken by the religiously predisposed opponents of perceived Tory stasis. Jevons even wrote as much in an 1882 letter to the now-Premier, Henry Parkes:

'I thank you very much for your kindness in sending me recent publications relating to New South Wales. I have read them with much interest especially the account of the railway over the Blue Mountains, a district which I slightly explored,

³ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*

⁴ *Ibid.* p. 247.

⁵ *Ibid.*

partly in company with the earlier railway surveyors, & which has always since been powerfully impressed upon my imagination...

I have ever retained a pleasing recollection of my early days at Sydney, where the beautiful climate & other surroundings, beneficent & perfect health necessarily made me happy. I have always felt indebted to you for the kindness with which you used to publish my first efforts in science and political economy. The function of railway finance on which I wrote in the “*Empire*” is one which still...occupies my thoughts.’⁶

Far from his home and loving family, Jevons worked and grew intellectually. Indeed, Jevons’ relish for industry, observation and experiment propelled him along a five-year journey of activity, and the chronology of his published work is demonstrative of this.⁷ He was among many like-minded thinkers, and the temper of the colony at large was geared towards enlightened scientific progress.⁸ Indeed, Governor Denison and the Deputy Master of the Sydney Branch of the Royal Mint were both instrumental in forming the Philosophical Society of New South Wales.⁹ However, Jevons’ prodigious activity was evident more through his own private reflections, especially through the *Empire* that was somewhat demagogic liberal newspaper, edited by Henry Parkes. The role of the Mint has been speculated as providing a necessary sinecure for Jevons’ maturation, and indeed the goings-on of the Philosophical Society can be viewed as tangential, as Jevons’ real transformative work occurred from a distantly postured place as liberal correspondent. Indeed, a brief overview of his work demonstrates this logico-empirical commentary from a liberal mind. It was expressed distantly, but by a reflective and the sometimes-venomous pen. A greater recognition of context and Jevons’ own words is therefore paramount.

In an article in the *Empire*, Jevons excoriates the ill-reasoning of a contributor who dared to defend the desirability of trade projection.¹⁰ Such ill-reasoning was not suffered gladly by Jevons. Nor was he sympathetic or did he display any form of written agreeableness when someone ‘mistook his logic’ in Waugh’s *Magazine for Science and Art*.¹¹ Indeed, Jevons excelled in his intellectual improvement and encouraged others to do so, for their own betterment. Jevons’ self-improvement philosophy was indeed conducive with a form of liberal-progressivism that was then dominant. Even still, his biting and dextrous displays in the press did not mean that Jevons was mean-spirited and nasty. He was sympathetic to those within

⁶ ‘William Stanley Jevons to Sir Henry Parkes, 18 June 1882’

CY1600 (A988): 77-80, Parkes Papers, Mitchell Library

⁷ See Chronology in Appendix I which extends on the work of Michael V. White.

⁸ One can judge this by looking at the membership of the Philosophical Society that was published in the *Sydney Morning Herald*, 14 June 1856.

⁹ *Ibid.*

¹⁰ W. S. Jevons, “On the Resolutions passed at the Protection Meeting,” *Empire* 8 April 1857, 5.

¹¹ W. S. Jevons, “Rev. Mr Scott’s Criticisms,” *The Sydney Magazine of Science and Art* 2 no. 13 (June 1857): 17-18

his close proximity, and dared, somewhat successfully, to be empathetic to those further afield whom he knew and observed, particularly Robert Hunt, and those who had to live amid the awful conditions at The Rocks. The young Jevons must have been instilled by his father the advice “to be good and honourable as well as to strive to make himself of use & value in the world.”¹² as this is what he would counsel his siblings with, as they all mourned their father’s death, and whilst Jevons was distantly working in the colony. Jevons would write in another letter:

‘My whole second nature consists of one wish, or one *intention*, viz to be *powerfully good* in the world... To be *powerfully good*, that is to be good, not towards one or a dozen, or a hundred but towards a nation or the world, is what now absorbs me.’¹³

Jevons yearned to improve the world around him, even if this was by means that he thought were best. His own way of doing that was classifying and observing the world he saw. In addition to this, Jevons wrote a theory of music, that ordinally ranked artistic forms into types and levels of complexity. Indeed, in an impressive theory of music, which he wrote whilst in New South Wales, Jevons of music having a moralising or useful function. It was “to establish an intermixture of classes that would raise the morality of the lower classes...”.¹⁴ In the first academic piece on Jevons’ music essay, Mosselmans and Mathijis drew some similarities between Jevons’ credo and that of Alexis de Tocqueville.¹⁵ Indeed, the similarities are palpable. Like Alexis de Tocqueville, for example, William Stanley Jevons had “only one passion, the love of liberty and human dignity”.¹⁶ Accordingly, Jevons’ theory of music — which, like de Tocqueville Jevons was also a traveller, and in his journal and letters tried to make sense of his Australian colonial surroundings with the acuity of an outside observer. However, Jevons’ time in Australia was not equivalent of an aristocratic European Grand Tour, nor was Jevons the son of the aristocracy. This would be an uncharitable way of describing Jevons time in Australia, although one that has been made.¹⁷ The love of liberty and individually expressed virtue by means of self-improvement, as a way of measuring to encourage ‘the general improvement’, was indeed quite a popular trope of middle-class Britain. For Jevons, this yearning become almost a religion unto itself.

¹² See M2632, *Jevons Family Archive Microfilm*, Mitchell Library

¹³ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume I*, p. 307

¹⁴ Bert Mosselmans & Ernest Mathijis, “Jevons’s Music Manuscript and the Political Economy of Music” in *Economic Engagements with Art: Annual Supplement to Volume 31*. History of Political Economy (Edited by Neil De Marchi and Craufurd D. W. Goodwin) (Durham and London: Duke University Press, 1999) p. 150

¹⁵ *Ibid.*

¹⁶ Quoted in Henry Ergas, “Tocqueville, Hancock, and the Sense of History” in William O. Colman (ed.) *Only in Australia: The History, Politics, and Economics of Australian Exceptionalism* (Oxford: Oxford University Press, 2016) p. 85

¹⁷ This interpretation was heard by this thesis’ author when conversing with an historical interpreter at The Rocks.

The relegating of traditional religious questions to secondary status, in a kind of dualistic appendage to the material main of observable reality, was something that is evidenced in Jevons' case, during his time in New South Wales. Whilst nominally Unitarian, Jevons would operate under the parameters of a secular scepticism that was tied to a mechanical view of the world, and was improvable — for both individuals and society. Hence his traditional religion was sidelined for a more universal, and beneficent system. Jevons, therefore, saw mathematics as the common denominator that underlay all of these fields, but it was newly tethered to liberal-humanism. Indeed, through this new ideology, the science of the social sphere became his calling amid an environment general liberal progress. It is therefore telling that Jevons' mechanical conception of the world was intertwined with his progressive, liberal humanism. Rather than vague, it is was contemporary (even if Jevons thinks otherwise) and it was viscerally felt. This is evident later in a letter to Henrietta:

‘I have an idea, which I do not object to mention to you, that my insight into the foundations and nature of the knowledge of man is deeper than that of most men or writers. In fact, I think it is my mission to apply myself to such subjects, and it is my intention to do so.’¹⁸

Whatever caused his liberal-humanism; whether that be his father, his religion, the imperial progress of the British Empire, or utilitarian applications of scientific thinking he was undoubtedly ingulfed in that prism of mind whilst he was working, observing and writing in New South Wales. All would meld together, into a grand ontological vision and way to improve the world in an unsurprising way:

‘But does it not strike you that just in the Physical Science there are general & profound principles deducible from a great number of apparent phenomena, so in treating Man or Society there must also be general principles and laws which underlie all the present discussions & partial arguments? Is it not worth years of labour to dive into these inmost & obscurest principles, and after obtaining some good clue to follow it out with all the intense pleasure of mental success into a multitude of useful conclusions? Man is said to possess *free* will but however this be, he is at least a phenomenon in which *effect* is always connected with *cause*. All the investigations of Social Science must proceed on the assumption that there are causes to make people good & bad, happy & miserable, rich & poor. As well as strong & feeble. It follows that each individual man must be a creature of *cause* & *effect*.’¹⁹

The way in which these metaphors and ontological claims were constituted during Jevons' time in Australia has not been examined, yet the way it is entwined with a mid-Victorian sense of

¹⁸ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 321

¹⁹ *Ibid.* p. 361

general improvement is self-evident. This neglect is probably due to oversight. Yet, these acts of speech can be used to understand Jevons' own mind and manner. It is because they were presented in political, epistemological and local form that can only be interpreted by examining Jevons' colonial context, and the intellectual speech-acts that he conducted therein. Ideas in context provides a richer understanding of Jevons' colonial interlude, and his surviving writings partially open a previously lost mind.

Jevons evidently became more philosophically reflective, and devoted to his newly 'discovered' creed. He expressed universalising, liberal-humanist concerns. Even if Jevons naively thought his liberalism was original, it was still evidently within the working framework of the wider social liberalism of the mid-Victorian period. In terms of religious belief, Jevons also exhibits certain strains of moral secularism informed by Benthamite Utilitarianism, but never so much as to warrant the description of atheist. His religious practise undoubtedly was partially informed by his constituted his Unitarian upbringing, but his reflective pontification occurred later.²⁰ Even if he downplayed sectarianism and preached secular toleration, he still reserved some space for the idea of belief. His never becoming fully atheist meant that a certain level of dualist separation from the logical, mechanical world of the studied material world existed. In an 1857 letter to his sister, Jevons writes of where his ordinate religious preferences lay, with respect to his religious tolerance for Catholics, when he wrote: "M^{rs} Miller here may be called a complete bigot against Catholics, and when hearing them abused right & left I feel inclined to say they are not all bad but sometimes good."²¹ Jevons' expressed universal love of Mankind, and his liberal tolerance for the general improvement for humanity, placed him above petty and ill-founded sectarianism, towards a toleration of his own design, even if this meant the toleration of Pius IX's followers.²²

Furthermore, Jevons elsewhere writes that he was "never at all troubled by such religious differences as you refer to." Jevons vaguely held onto a loose Unitarian identity, but only because Unitarians "are *charitably* disposed towards others, and instead of blackguarding, quarrelling & fighting with them, would rather make common cause with them, as having all both the same subject & object in view."²³ Jevons describes his religious views as being:

'...so liberal and simple that the whole vast mass of different sects, including most of Unitarians, vanishes in the distance, and appearing only as a small object upon any religious horizon...and though a curious, interesting & certainly very

²⁰ Bert Mosselmans, *William Stanley Jevons and Cutting Edge of Economics* (London: Routledge, 2007)

²¹ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 277

²² This was a toleration, and charity, that Charlotte Bronte did not share with Jevons.

²³ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 258

complicated construction when closely examined, it is not to me of any importance compared with the other broad and vital questions which lie around.’²⁴

These other questions, of course, are scientific in nature, and were directed towards the general improvement of humanity, through the deployment of science towards the public benefit. Rosamond Könekamp wrote that Jevons’ “youthful religious opinions he expresses in the journal for 28 January 1857 go almost as far as deifying Man.”²⁵ But his “interest in Man as a social being in the widest sense and his belief in Man’s capacity to improve himself and his environment without limit through his own efforts were traditionally Unitarian.”²⁶ This is an interesting point, both Harriet Jevons and Könekamp have noted his continued Christian faith, never entertaining that his pontifications may prove an alternative religious ontology, which was namely a naïve and messianic liberal sense. They stressed his continued religiosity, even with further evidence of Jevons’ downplaying of religion is evident. In an 1862 journal entry Jevons writes how “amusing to look back on times when I revered [sic.] christ^v like most others...”²⁷ It was quite true that science, and the language of nineteenth century science — namely the metaphors of mechanics that shaped the nineteenth century, and a general collective exoneration of liberal Progress — would be conceived of in areas that in the twentieth century as not being the domain of science. Yet, before the modernist turn in the early twentieth century there was an enormous confidence in proclaiming that a certain kind of material perfectibility is possible. This even filtered over into Jevons’ conception of music, where Man is centred among other natural expressions of artistic beauty, in the same column as “general scenery”.²⁸ Jevons seems to be either quantifying love by the similarity of original ranking, or grasping at commonality of held philosophical principles, namely a commensurability between aesthetics and the material world. Love, improvement and a calculated sense of decency was the result of this young utilitarianism. Indeed, an illustrative example of this thinking is in an early Australian letter to Henrietta, where Jevons writes:

‘It adds no doubt an element of *friendship* to my love to you as a sister, but you will understand me properly when I say that it is apart from and does not *increase my love* upon which Lucy has even a greater claim than yourself. One proof is that we both like Music in an extremely similar manner...I found several lumps of insoluble true substance, meaning by this a few fundamental principles of *truth* and *goodness* which are sufficient for any man, & are the only guides I have followed.’²⁹

²⁴ *Ibid.* p. 258

²⁵ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume I*, 29

²⁶ *Ibid.*

²⁷ *Ibid.* p. 99

²⁸ Bert Mosselmans & Ernest Mathijs, “Jevons’s Music Manuscript and the Political Economy of Music”

²⁹ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 241

Jevons' religious sensibility was less marked by crisis inducing liberalism, but rather a utilising the humanistic language of liberalism, charity and beneficence that would affect his very being. He viewed himself as having a greater ontological independence than others. He obviously entertained doubts about organised and traditional Christian doctrine when he could not rationalise the teeth and claws of God's own creation: those tools "adapted to kill & pain another".³⁰ In a letter to his brother, Thomas in 1858 Jevons implores him to grasp the self-evident:

'Read a book on Natural Theology and it will prove by cases of extreme probability that every part of the universe exhibits what is called Design and that we may infer the existence of some Mental thing which is termed the Deity. But discarding now every human addition, I dispute the sufficiency of these arguments as the foundation of a religion. The existence of evil is a defect completely marring the whole design of creation, is as theologians suppose, God was the Designer & his objective of perfect beneficence.'³¹

The wide array of activity in New South Wales exhibit this tendency in Jevons. Jevons' criticisms of Health Inspector Aaron, and his reportage, are two examples of his acted expression of this a preachy liberal humanism.³² Even if his theoretical, or reflectively expressed deification of Man was strongly stated, and his later sympathy for Hunt was sincere and personally expressed, his sparring for the public good was done with the pen, and from a written distance exhibited a differing shade of Victorian liberalism. This is where some misunderstanding of Jevons has developed. The language used in these Inspector Aaron-mentioning pieces express this liberalist criticism further, and demonstrate that a universal application of mechanical reasoning is not enough to explain Jevons' shift to economics. Jevons' practise of science was aligned with a form of mechanical materialism, and was wedded to a utilitarian calculus, but these factors alone are not sufficient in analysing Jevons' altering interests. Empiricism was a continuation of a long tradition, but social liberalism and Jevons' newspaper commentaries were what was new. Yet it was Jevons' explicitly stated liberal humanism — added as another layer of mind — which was to give impetus to his altered his course away from chemistry. Jevons was not just calculating, he was making moral evaluations.

These intertwining influences in the colony ought to be viewed as being under the under purview of the primordial, Victorian speech-act of "progress. Schabas' description of Jevons' liberal-progressivism as a "vague liberal-humanism" does not consider the explicit calls towards this credo that Jevons acts upon, nor how it aligns with the 1850s generally. Jevons' liberal-humanism aligned with the context of the 1850s social liberalism, both in its literary or

³⁰ 'William Stanley Jevons to Thomas Jevons, 10 September 1858' Box 14, Folder 115, Seton Jevons Family Papers, Seton Hall University Library

³¹ *Ibid.*

³² These will be outlined in Chapter Three.

and physically practised forms. It was in this period that liberalism shifted from laissez-faire economics to growing social conscience that demanded more effective government intervention. Maas' reading of Jevons' thinking in terms of a grander classical mechanical way of viewing the world, that has wide applicability between fields of inquiry and does not consider what gave impetus to Jevons' changing interests. It was in the colony that he jumped from one study to the other, but his desire and capacity was delivered by liberalism and the colony, and largely in that order.

As Michael White argued, William Stanley Jevons' general trajectory was altered in Australia due to this universalism and commensurability of informed ontology.³³ However, his thinking was fired by something more than a universal way of perceiving the world, i.e. mechanically. Instead, Jevons was fired by a newly unleashed intellectual fuel, that was utilised wider than a received mechanical way of seeing the world—this includes his practical chemical assaying—and after much reflection he would leave Australia, poised towards political economy. This was raised as a possibility by Margaret Schabas, however, in her 1990 book she never gave it more than a few lines extrapolation.³⁴ That is a shame, as his time in Australia was where the embers of his liberal-humanist sense was freely expressing itself, and it was the burning desire would stoke his future. Indeed, a socially aware liberalism was far less vague, and much more directed and purpose driving than either Maas or Schabas account for. Even a small cross-section of his writings, and his historical context in Australia demonstrate, the reach of this new wave of 1850s liberalism.

The effect of an Australian-found scepticism and liberal-humanism would be that informed his future speech acts. This progressive liberal sense was not just a function of Jevons' mind, or its' intellectual pedigree, but was the proximate and practical reality, and also realised by his fellows in Sydney.

³³ Michael V. White, "Jevons in Australia: A Reassessment" 32-45

³⁴ Margaret Schabas, *A World Ruled by Number*, 14-9

Chapter 2: Wide Literary Company

‘No one can rise above the common level if he do not cherish within him an almost secret soul to animate and guide him. Partial solitude is necessary for earnest thoughts. I might give many instances to prove this; I will only notice one which is closely applicable viz. *Charlotte Bronte*, who had few or no friends except her sisters & lived in a quiet retired home.’³⁵

Considering that Stanley Jevons was born in September, 1835, it can be stated that the 1840s and 1850s were Jevons’ formative decades, as he physically matured into an adult during this time. By the time he departed Sydney in 1859 he was 24 years of age, and had become a well-read contributor to public, intellectual life. The mid-nineteenth century also coincides with a larger shift in the literary, intellectual discourse of England, which Jevons was exposed to, and undoubtedly affected him. Socially critical novels, more expansive humanitarianism—both inside and outside of government, the decline of Romanticism, and the rise of social realism as the predominant artistic movement. Changing the English-speaking world towards ‘Realism’, these novels shaped the way that people conceptualised the world of their senses. It was an effect of a changing culture towards a social liberalism which began to replace the older, and dogmatically laissez-faire, variety. As New South Wales would welcome a young, reflective and enterprising Liverpoolian into its fold, it would also be the place where Jevons read, and involved himself within this wider movement, and participate in his own way. From his position at the Mint in Sydney, and greater New South Wales more generally, Jevons’ manner, temper and purpose that was distinctly liberal and progressive in its social consciousness.

This ‘realist’ cultural depiction, or socially liberal temperament or way of thinking is demonstrated through his 1858 social survey of Sydney.³⁶ From his diary entries one can see his reading log, and the germination of the early thoughts that would go into this task.³⁷ In observing, and ‘mapping’ out the urban environment he was consciously assessing the happiness and material condition of the people who inhabited these

³⁵ ‘William S. Jevons to Henrietta Jevons, 4 August 1858’

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 337

³⁶ See Appendix II.

³⁷ See diary reading lists at the end of his yearly diaries. Available in M2633, *Jevons Family Archive Microfilm*, Mitchell Library.

spaces.³⁸ He was measuring the current state of the society, and in the process questioning the efficacy and effectiveness of the government's actions. Jevons' description of the Rocks is visceral, as he also excoriates the Government's chief Health Inspect, Aaron, on his apparent neglect of duty and humanity in deeming such squalid conditions acceptable in his reports on The Rocks, and neglecting the lead danger in the Tank Stream.³⁹ Jevons describes the human excrement, and the foul stench it produced. He spoke of the vices of prostitution and violent criminality. Jevons, also in the Social Survey, is rather typically Victorian in his descriptions when he prudishly and euphemistically describes prostitutes, but also scathing when the slips from virtue are of a non-sexual, physically or mentally improvable nature. He also questioned why The Rocks could be such a den of villainy when it was in such a good location with adequate airflow.⁴⁰ It is these comments which links him to the wider trends of the time, and indeed, this was the way of communicating that was prevalent among the bourgeois literary figures, and intellectuals of the time. These were the ways of writing, and the beliefs held at the time by respectable members of society. Jevons' intellectualism is important as Jevons himself expressly desired to be one such figure, and he states this whilst in Australia.

In his pursuit of socially documenting Sydney's inhabitants, he was making conditions 'real' for his readers, as well as aligning with these larger trends. He was also being influenced by the social and institutional reality around him. The dynamic environment surrounding this individual, and his own attempts to map it is significant because of this. For understanding Jevons, his comments on The Rocks demonstrate his abiding by mid-Victorian norms of action. His much wider range of influences, themselves the actions of individuals, had a real impact on Jevons as a thinker, and is something that has not yet been emphasised. Jevons read and wrote quite widely. In his close physical proximity to others Jevons was never really alone. As will be further explored in this chapter, in both a physical sense, and a wider literary sense Jevons was no solitary. In this chapter Jevons' social links in the colony, and his literary links will be used to show his connectedness and his alignment to literary forms of social liberalism, and how he replicated its character in Sydney.

³⁸ 'A Social Survey of Australian Cities, 1858' Microfilm CY1045, Mitchell Library

³⁹ W. S. Jevons, "Lead Poison in the Sydney Water" *Empire*, 5 October 1857, 5

⁴⁰ See Appendix II

Besides the wider literary zeitgeist, another influence that influenced Jevons' socially liberal mindset was his proximity to others and his social links within Sydney itself. Jevons' social environment played a role on his thinking, especially his working friendships with fellow assayers, Robert Hunt and Francis Miller. Indeed, this has been neglected by Davison who has argued that Jevons was solitary and asocial whilst living in Sydney.⁴¹ In an extract from his personal diary dated 27 May, Jevons writes: "Had a long discussion with F. B. M[iller] on Taxes. I am for the total abolition of all indirect taxation by Customs, excise &c &c."⁴² Indeed, Jevons would spend most of his time in Australia living with Miller and his wife where it is likely that many such conversations relating to current events, and questions of political economy were mainstays. What is noteworthy, even if Jevons yearned for the life of intellectual solitude, is the extent to which the institutions, and the friendships he enjoyed, had on fomenting his thinking during his time in Australia. Jevons was never without company for long, and he often travelled with others. Harro Maas has written that the idea that Jevons was "someone who spent his time in Australia in isolation" as "misleading".⁴³ This was a jibe from Maas which undoubtedly was in response to Graeme Davison's 1998 article.⁴⁴ The misguided Keynes-Davison argument of Jevons being 'solitary' must be laid to rest here by a sampling of Jevons' speech acts.⁴⁵ They also go to demonstrate the wider context that any future biography will have to grapple.

Even in the face of reasonably clear incidental evidence that Jevons was himself physically traversing quite widely throughout Sydney, Maas never elucidated how Davison was wrong. Jevons was not only living with company, but he was also working, networking or 'careering' in wider circles. He travelled to differing parts of New South Wales, to the goldfields — on more than one occasion, and was in contact with other assayers and scientists not directly affiliated with the Mint.⁴⁶ What is noteworthy, is the common religious non-conformity, family pedigree of progressivism, and Jevons' own alignment with Parke's newspaper, the *Empire*. These examples illustrate a willingness be influenced, and a desire for company by Jevons. The ubiquitous claim

⁴¹ Graeme Davison, "The Unsociable Sociologist," 127-150.

⁴² *Papers and Correspondence of William Stanley Jevons Volume VII* p. 115

⁴³ Notably, Maas does not explicitly mention Davison's article by name. Harro Maas, *William Stanley Jevons and the Making of Modern Economics*, 29.

⁴⁴ Graeme Davison, "The Unsociable Sociologist," 127-150

⁴⁵ This argument dates back to Keynes' essay. John Maynard Keynes, *Essays in Biography* (edited by Geoffrey Keynes) (New York: Norton Library, 1963) pp. 255-309.

⁴⁶ Notably, Jevons with Robert Hunt and Professor John Smith took some of the earliest wet-plate photographs of Sydney and its surrounds.

that in public meetings Jevons likely exhibited a reserved manner seems to neglect the wider evidence. Indeed, any introversion in public forums is probably the main reason for the mislabelling of Jevons as solitary. The most known example where Jevons exhibits this tendency, which quite possibly was a symptom of introversion, is Jevons' attendance of his first Royal Philosophical Society Meeting, where Professor John Smith presented one of his scientific papers on his behalf. Jevons was obviously constrained by his youth, as much as any dislike of public presentation. Both are not necessarily functions of a solitary nature. Indeed, in writing he could be viscous to his interlocuters, but when presenting his ideas in person he quite possibly could have been subsumed by a certain level of timidity because of his youth. From this instance, he was likely a man who presented his ideas more than his personality, especially when this opportunity came to publicise his latest findings. Indeed, his personal reflections occurred in his letters and diaries tell of a certain psychological dissociation. Much has been made of Jevons' precociousness in youth, or his alleged 'solitary' manner, his youth and his genius,⁴⁷ but only Davison has gone further and inferred from this a kind of asocial person.⁴⁸ Introversion of manner — and a reasonably high level of socialisation for someone with a degree of introversion — does not warrant the descriptor of loner. Jevons longed to be an intellectual but this came about only in the colony, when he switched from his initial trajectory of practising chemistry like his cousin, Henry Roscoe. Nonetheless, apart from the range of recorded instances of Jevons being in contact with other people, from his own journals, it seems more likely that Jevons was just young and of an intellectual bent. This intellectualism — the expressions of his liberal-humanism — are the source of this misunderstanding.

Jevons' role models were the famous, socially-conscious writers of the time, and he himself records reading both Brontë and Dickens novels during whilst in Sydney.⁴⁹ Jevons even replicated quotes from E. C. Gaskell's *Life of Charlotte Bronte* such as: "A solitary life cherishes mere fancies until they become manias".⁵⁰ If he was shy enough to be considered socially aloof (his diarised whereabouts and social interaction details

⁴⁷ Megan Martin has written of Jevons' preciousness, as well as referred to it in conversation with this thesis' author.

⁴⁸ Graeme Davison, "The Unsociable Sociologist," 127-150.

⁴⁹ See diary reading lists at the end of his yearly diaries. Available in M2633, *Jevons Family Archive Microfilm*, Mitchell Library

⁵⁰ E. C. Gaskell's *Life of Charlotte Bronte* Vol. I p. 21. See William S. Jevons, *Papers and Correspondence of William Stanley Jevons: Volume I, Biography and Personal Journal* (Edited by R. D. Collison Black & Rosamond Könekamp) (London and Basingstoke: The Macmillan Press Ltd., 1972) p. 178

dispute this), it wasn't because he was asocial. Rather, he was doing what he thought he should do in order to improve his faculties. This was all in the hopes of one day being an established literary figure, or intellectual himself. Jevons does write about his compatibility with 'partial solitude' which he views as being a necessity for this pursuit:

'No one can rise above the common level if he do not cherish within him an almost secret soul to animate and guide him. Partial solitude is necessary for earnest thoughts. I might give many instances to prove this; I will only notice one which is closely applicable viz. *Charlotte Bronte*, who had few or no friends except her sisters & lived in a quiet retired home.'⁵¹

Evening emulation does not imply a universal lonesome manner. If working with one's mind, and wishing to live the self-improving scholarly life is a banishment into solitude, then most intellectual figures must be said to be solitary, with the exception of David Hume who must have been mindless. From his young age Jevons was reflective on death, as well as the improvement of life. This is one instance whereby what Jevons pronounced was different to what we can infer his actions were.

What follows is an elucidation of why this is so, and the following evidence dispute some of the major points missed by Davison. The Keynes-*cum*-Davison, 'solitary' inference has been applied to Jevons' time in Australia, based partly on Jevons' own writings and Keynes' essay, and doesn't hold with respect to either the evidence, or Jevons' evidencing social liberalism. Yet a precedence was set to describe Jevons' time as solitary, which must be altered.⁵²

The argument that Jevons was one to shun the company of others misses three broad points. Firstly, Jevons at this time was young — he was only nineteen on his arrival in the colony. Secondly, despite his age Jevons was conversing in reasonably distinguished scientific social circles. This was both: through his official employment at the Mint; and through his contributions to the Philosophical society, the *Empire*, *Sydney Morning Herald*, and other publications. This meant that whilst his assaying, or work on the Social Survey of Sydney might have led to an initial solitary manner, he was not a loner by any stretch of the definition. In the formulation and writing down of his thoughts, Jevons was actually conversing intelligently with others from his wider

⁵¹ 'William S. Jevons to Henrietta Jevons, 4 August 1858'

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 337

⁵² John Maynard Keynes described Jevons as 'solitary' and Margaret Schabas has recounted how his initial time spent in London, pre-1854, was marked by loneliness. John Maynard Keynes, *Essays in Biography* (edited by Geoffrey Keynes) (New York: Norton Library, 1963) pp. 255-309.

intellectual horizon, some of whom were beyond the sea. This leads to a third point. In terms of his social connections, Jevons was probably as well-connected or social as anyone else. Even if his relatively inward manner meant that he did not gregariously participate during distinguished, formal occasions with the colonial elite he was still social. His refusal to read his own paper when it was presented to the Philosophical Society, choosing to instead sit at the rear whilst it was being read, demonstrates that he was not asocial, but rather he had a fear of public speaking.⁵³ Considering that Jevons was between the ages of nineteen and twenty-four during his time in Australia (1854-59), and that the average age of the attending members of the Philosophical society was indeed well above Jevons, it is not surprising that Jevons was distant on this occasion.⁵⁴ He was also presenting at a meeting that was chaired by the Governor of the colony. The age differential compounded with the nerve-inducing factor of differing social rank must have, indeed, affected him.⁵⁵

More broadly, Davison's claim does not make sense. Jevons' living arrangements meant that he was never living alone. From May, 1855 onwards, Jevons would live with fellow assayer, Francis Miller, and his wife at their house at Petersham. Before this he was living with his assaying assistant, Charles Booth. He wrote for Parke's newspaper, he attended regattas with members of the Mint social circle. He also attended other significant colonial events, and he travelled to the goldfields, again, in the company of other Mint employees. These instances are many, and variously recorded in his diaries for the years he was in Australia, and they are quite explicit, sequential and hard to misinterpret. By inferring that these recorded social interactions represent a certain level of camaraderie among Jevons and his regular activity companions were of at least cordial nature, then it seems he was not solitary. Solitary, or asocial behaviour would imply far less social interaction than what is evident, and that itself is a rather low threshold to overcome. Jevons' liberal progressivism also partially conformed to the liberal-radicalism of Henry Parkes' paper, the *Empire*, even though he was critical of

⁵³ The main events whereby his 'shyness' is on display is his participating in the Philosophical meetings.

⁵⁴ This meeting occurred on 8 July, 1857. William Stanley Jevons, "On a Sun-gauge or New Actinometer" *Sydney Morning Herald* 14 July 1857, 3

⁵⁵ Elsewhere Jevons notes that his interests did not lie in social gatherings because of his desire to prepare for a future intellectual life. He did not see the social functions of the colony as being conducive to this aim. However, he did socialise closely with his colleagues, particularly the Francis Miller and his wife, with whom he lived with for the duration of his time in Australia. See Harriet

democracy. Indeed, Jevons even went with others to see Parkes speak, and applauded his defence of the funding of scientific institutions, and his own salary.⁵⁶

As noted in Chapter One, Jevons began contributing to the *Empire* early on during his time in Sydney. In a segment dated the 31 October as a part of an 1855 letter to his father, Jevons writes how he had “thought of myself” of publishing his meteorological readings in a Sydney newspaper and that his was “intending at first to put them in the Empire if they would have them in opposition to some very stupid ones there are in the Sydney M.H.”⁵⁷ Jevons ends the letter by noting his assay assistant Charles Booth is living “very comfortable about two miles from the Mint in the same direction as me”.⁵⁸ It could be said that Jevons’ sense of empathy and humanity went beyond mere material social interaction, to something more caring. Jevons’ liberal-humanism was indeed manifest by his concern for his colleagues and friends. Jevons maintained social links with those in the colony at large, even towards a rival assayer who of course, was in the same pursuit of knowledge and progress as he. “Called at Hodgsons to show him my Aluminium.”⁵⁹ This was an expensive and difficult metal to alloy, and a common scientific interest, but in some more viscerally emotive ways was Jevons empathetically wedded to his assaying co-workers.

Nor could Jevons be considered a loner when he had a fruitful friendship with Robert Hunt. Both Hunt and Jevons were responsible for some of the earliest wet-plate photographs of Sydney, and their joint Middle Harbour expedition in November 1858 is another example of sociability.⁶⁰ Jevons travelled to the Sofala and the ‘southern diggings’,⁶¹ with others from the Mint on two separate trips.⁶² Nor can Jevons be considered solitary considering he wrote that he preferred to go boating with Miller on Sundays than go to Unitarian service.⁶³ It seems as though his disposition for goodness and colonial venturing would have made it difficult for him to be a loner.⁶⁴ It is true to say that was he ‘alone’ whilst he was intently working during his time at the Mint, but

⁵⁶ M2632, *Jevons Family Archive Microfilm*, Mitchell Library

⁵⁷ R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 198

⁵⁸ M2632, *Jevons Family Archive Microfilm*, Mitchell Library

⁵⁹ ‘Diary entry, 6 January 1856’ See footnote R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 357.

⁶⁰ ‘William S. Jevons to Lucy Jevons, 8 November, 1858’

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 352-355

⁶¹ M2632, *Jevons Family Archive Microfilm*, Mitchell Library

⁶² *Ibid.*

⁶³ *Ibid.*

⁶⁴ Graeme Davison, “The Unsociable Sociologist,” 127-150.

only when working or writing was he alone. For the rest of the time was extending out socially to Charles Bolton, Maurice O'Connell and Frank Fuller.⁶⁵ Indeed, Jevons ranged quite widely through New South Wales including: Bathurst, the Illawarra district, Maitland the Hunter Valley, Braidwood, even extending down to the Victorian gold fields. His travelling widely and his lone walks are most famously what would constitute his social survey, and these were trips of the mind for the purpose of liberal-humanitarianism. He was recording the world in print, and grappling with newspaper controversies, so that he could improve the world. He was classifying the world around him within the framework of human improvement, coupled with a curiosity about the world he was in. Far from being asocial, or observing the inhabitants of Sydney from his Mint office window like some estranged, moralising god, Jevons was a part of the community, and curious about its goings-on.

It seems reasonably clear that Jevons was not solitary, and indeed was interacting with others in both a social and intellectual fashion. However, Jevons was not spared from the hardships of tragedy, nor the bitter melancholy of death. In rather poignant succession, two deaths — both directly or tangentially linked to literary non-conformity — were deeply troubling both Jevons and his fellow assayer, Robert Hunt.⁶⁶ Both Jevons's father, Thomas, and Hunt's two sisters would die in two differing scenes of tragedy. Thomas Jevons Senior passed away from cholera whilst visiting Rome and Hunt's sisters died in the Dunbar shipwreck, when during a stormy night it ran into the rocks at South Head, drowning almost all on board.⁶⁷ Jevons wrote of both of these in grief-stricken reflections about the former, but also with a consequently empathetic form of understanding for Hunt's later loss. Jevons' father was his last surviving parent, and Hunt's sisters were his only remaining family, and surviving ties linking him to his own past generations of religiously dissenting, and abolitionist family. The Mint employees were closely acquainted with each other, and tragedies could only bring Jevons and Hunt closer together. Notable is the proximate, or smallness of world that the Mint was host to. Severn, another assayer was a nephew to painter Joseph Severn, the painter who held John Keats as he died in Rome.⁶⁸ The intersecting of these influences are, of course, the most ephemeral and abstracted, but with these occurring

⁶⁵ 'William S. Jevons to Lucy Jevons, February 1859'

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 364

⁶⁶ Robert Hunt was also a great nephew of Leigh Hunt as well as the grandson of John Hunt. Both were abolitionists.

⁶⁷ All passengers were killed, and only one crewman survived the shipwreck of the Dunbar, 20 August 1857.

⁶⁸ Henry Severn would become a successful artist in his own right, as well as an astronomer in New Zealand.

around the same time, and within confined space, they can be viewed as being formative. Jevons wrote to his sister how he was reading Byron, thinking about music and conducting science all at the same time.⁶⁹ The interaction between religious dissent, social liberalism and the collecting together of a new generation who were curiously and expressively reflective about the world is interesting, and more so considering the religious non-conforming backgrounds that most of the assayers came from.⁷⁰ As noted by Schabas, Jevons' liberal-humanism began to be viscerally expressed after this point. Consciousness towards one's own ontology, amid the tragedy of death, may possibly have been raised by the others, similar to the way that this affected Jevons.

What is noteworthy about Jevons' curious activity is the way in which he committed to tasks wholeheartedly, even if he did not complete all of them. This activity, working at the issues of the day, and all the while building up a skill-set, that would predispose him for the task of his later life. Youth, inexperience and constraints of his intellectual horizon must also be stressed. But most importantly, he worked within the close company of others, and many of this close acquaintances were of similar background, and exhibited similar ideological pretensions as himself. Within his contemporaneous social and literary horizon, liberty, social conscience, and curious enquiries were present. From a historicist view, they were directly within sight, and there are explicit links placing these influences there. Jevons was never alone, he was in the company of his proximate acquaintances, the social scientific sphere, and the written conversations he had with his family, and what he read during his time in Australia. The world was alive. It was real, and it was all perceived in his mind. Being all the while spurred on by social liberalism. It presents itself in his writings, and according to one scholar, a symbiotic relationship during this period grew, between amateur weather recordings and personal journal keeping.⁷¹ Indeed, it illustrates the intersection between the literary, the act of writing, and deeper ontological sense, and commensurability between the weather, the act of writing, and a poetic or religious ontological sense which the poets typified. If the wider environment and the widespread practises of a period is said to impact speech acts, then it housed the

⁶⁹ 'William Stanley Jevons to Henrietta Jevons, 3 May 1856'

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 225

⁷⁰ I thank Megan Martin for this point.

⁷¹ Alexandra Harris, *Weatherland: Writers and artists under English skies* (London, Thames and Hudson, 2016)

granting of a generationally bestowed, and the intersectional bestowal of a renewed and visceral sense of purpose.

The company Jevons kept was a constant presence if the evidence is more widely understood and interpreted. Staying at the Millers he was comfortable, and Jevons dreamt of being more, and becoming a better man.⁷² He dreamt of public beneficence through intellectual means. Interpreting these lyrical reflections and introspective declarations as a barometer of his actions seems overegged, considering that Jevons also was involved, and interest in the lives of those around him. Indeed, a described typical 1855 working day at the Mint does not easily conform with the ideal of the quiet, retreated intellectualism of the Brontë sisters. In October, 1855 Jevons wrote:

‘My days work now is
8.15 get up
8.45 get breakfast
9.0 observations, & off to town in omnibus (all the way
9.45 get to laboratory & commence weighing hard
12.30 weighing finished
1.30 5 minutes for lunch.
4.30 assays finished & weighed up.
5.0 reports made out
5.15 home by omnibus.
6.0 dinner.
8.0 tea, play harmonium
9.0 observations. Read newspapers &c till go to bed.’⁷³

Even though Jevons was working at the Mint, he reflected on the desirability of a quiet life. To claim that this made him beyond socialising seems wrong. Jevons was also much interested in Mint-oriented social gossip which he heard through this social circle.⁷⁴ He would also visit the lending libraries, and go the Victoria Street theatre in his leisure time. He was only alone when he was thinking through normative questions, writing or compiling his observations. When the

⁷² Miller was also like Jevons, in the sense that he had a religiously non-conforming background. In Miller’s case it was Quakerism.

⁷³ ‘William S. Jevons to Thomas Jevons, 29 October 1855’

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 195-196

⁷⁴ “The raciest bit of gossip which has delighted our ears for some time...”

‘...that when M^r & M^{rs} Miller were seeing the “Tempest” recently...Robert Campbell Esq M.P. ex-Colonial Treasurer, and one of the first men of the Colony had a regular fight in the dress boxes with a distant relation of his about a family quarrel, and the other man having seized him by the hair of his head. They were separated with some difficulty and the affair was ventilated for several hours at the Police Court, M^r Campbell having been summoned by the other man but getting off rather the best in the end.’

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 279

days wound down, and he was alone in his room, that was the place where he was on his own to think, and to ponder Man's place in the world:

'I cannot well describe to you how comfortable I find myself here [Double Bay] in most respects. My rooms are perfectly adopted to my wishes barring a few physical imperfections. As I sit here writing about 10 30 PM. With the French Window open and the uncleared bush & blue sky in front of me, there is no sound to disturb my thoughts but the occasional short wash of the water on the beach, and the extremely faint but continual and uniform roar of the distant ocean breakers on the coast. This low roaring sound is very peculiar & not unpleasant; I used to hear it in the quiet of the night even at Petersham and here it is very distant.'⁷⁵

Jevons also wrote of the esteemed members of the society around him, not least his superior, Captain Ward. His commentary of his fellow Sydneysiders evidences a certain level of naïve, if not biting, cynicism as to how the society, and the Mint, were being governed. In an 1856 letter to his cousin, Henry Roscoe Jevons writes:

Cap^t Ward, in fact, is little more than a military man, very determined & arbitrary as well as businesslike, and very clever in a sort of a way. But I cannot perceive that he has any degree of general knowledge, or ability and he carries his business transactions to the verge of honour, because he always does everything for the Government, and he has, as I said before, given his soul to the Government in a manner nearly equivalent to giving it to the Devil himself. In his behaviour he is generally civil and attentive but very distant and I don't think there is a soul like him. The old Governor General is very much the same sort of a man being also a Captain of R. E. [Royal Engineers] but he is really scientific and a better man I think in several respects. He and Cap^t W. with Dr Smith, too, have started a Phil. Soc. To which I & some others of the Mint belong, but on the whole it is a decided failure as yet and one feels too much under the thumb of the RE's and as if the public were graciously permitted to sit at a distance and hear them talk, which is not the right thing in a Scientific Society where all should be on an equal footing.⁷⁶

Instead of a loner, perhaps one could more adequately describe him as an introvert whose interests laid with the discussion of ideas and observations in smaller-set contexts. It is notable for those with a certain genius streak to be working alone.⁷⁷ Yet just as it is a pretty ahistorical claim to denote causation in Jevons' actions because of his adherence to broadly modern precepts of mechanical science, it seems a bit tepid to insinuate that one must be isolated to produce genius. That Jevons states in his diary that he preferred his Sundays be spent boating with Miller, rather than attend

⁷⁵ 'W. S. Jevons to Henrietta, 4 April 1857'

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 278

⁷⁶ William S. Jevons, *Letters and Correspondence* Vol II. 249

⁷⁷ Walter Isaacson, *Leonardo Da Vinci: The Biography* (London: Simon & Schuster UK Ltd, 2017)

Unitarian service, should bely the charge of him being solitary. The evidence from his diary indicates a reflective, and liberally tolerant attitude to religion, even verging on secularism. However, he continued to pay subscription to Sydney's Unitarian Chapel as evidenced by an entry in his cashbook.⁷⁸

To conclude this chapter, and its inferences to wider, contemporary influences, it seems reasonable to discount the solitary claim as missing two key points. Firstly, Jevons had close as well as distant relations with people in the colony. Secondly, some of his close relations remained overseas, or in the literary influences he imbibed.

⁷⁸ Accessible in M2633, *Jevons Family Archive Microfilm*, Mitchell Library

Chapter 3: The Politics of New South Wales

Political Economy

You will perceive that Economy, scientifically speaking, is a very contracted science; it is in fact a sort of vague mathematics which calculates the causes and effects of man's industry, and shows how it may best be applied. There are a multitude of allied branches of knowledge connected with man's condition; the relation of these to political economy is analogous to the connection of mechanics, astronomy, optics, sound, heat and every other branch more or less of physical science, with pure mathematics.¹

From the moment of William Stanley Jevons' arrival in Australia, the colony of New South Wales was alive with questions to do with political economy. The colony, in this eventful decade had been granted internal self-government. With the Gold Rush-induced rise in population, the most dramatic and sudden change in political temper since 1788 had occurred. New South Wales had achieved colonial self-governance, and coupled with the technologies that were unleashed on the British world of this period, there was plenty to question as to how this new-found autonomy ought to be applied. Jevons was a part of this process. Intimately close to the political workings of the Legislative Assembly, the Mint was only two building south of the parliament, and was close to this self-governing colony's political structure. Indeed, free trade was "the closest modern England ever came to a national ideology"² and for New South Wales, it was no different. It was here that Jevons was materially sustained as his thoughts took hold.

It is not evident that Jevons 'discovered' economic marginalism in Australia.³ Intellectual discoveries are rarely ever whole-cloth in nature, and just as Keynes hinted they require a certain amount of inspired germination. It is evident that Jevons' time in Australia provided something to the effect of a gestational period, and his work on political economy was a function of a social consciousness not solely of his own, but from his imbibed sense of liberal-humanism. The railway debate has been insinuated as key early economic writings, but his social survey and newspaper criticisms display a certain cognisance for his fellows that represents an imposed calculating method of beneficence. Australian commentators have periodically extolled the role of Australia, for dispensing Jevons with his opportunity for genius.⁴ His thinking on economics was the fragment of the already established discourse at

¹ 'William Stanley Jevons to Henrietta Jevons, 1858'

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*, 321

² Robert Tombs, *The English and Their History*, 558

³ Ivan Grattan-Guinness, "'In Some Parts Rather Rough': A Recently Discovered Manuscript Version of William Stanley Jevons's 'General Mathematical Theory of Political Economy' (1862)." *History of Political Economy* 34, no. 4 (2002): 685-726.

⁴ Tim Soutphommasane "Forging a marriage of convenience" *Australian*, 19 June 2010.

this point, but even his time in New South Wales was still formative in a more general sense. White is correct, even if his work evidently has not been read by some journalists, who historically read Jevons' sunspot theory back to Australia, even when evidence was lacking.⁵ Jevons' motivations were reasonably clear, even if the means by which he came to his later ideas are not. His critical liberal sense of social conscience permeated both his colonial speech acts and his motivations were against the then-held direction of the colonial authorities. He was indeed thinking, and 'was subversive' in doing so, especially when this was against the policies of the Governor, the patron of the Mint.⁶ He was openly hostile to government-sponsored railway expansion and the Crown land allocation.⁷ These were policies that were supported by the then New South Wales Governor Sir William Denison, and newly self-governing colonial government.⁸ Much like in later life, when Jevons complained of having to teach John Stuart Mill and others that he considered outmoded, Jevons was willing to criticise aspects of the social sphere and widely-accepted practises, partially by his own mathematical insights.⁹ Here, in this chapter, Jevons' thinking will be placed in its social and geographical context, which will compliment White's work.

Jevons was exposed to issues of politics and political economy before Australia, but he lacked an intimate connection that he would later have. In a January 1853 journal entry Jevons comments on the Protectionists' capitulation to the popular doctrine of free trade around the time of Lord Palmerston's death.¹⁰ This is undoubtedly evidence of Jevons' early curiosity. There is also the fact that Jevons' mother was studious in a wide array of subjects, including Smith's *Wealth of Nations* and according to Rosemond Könekamp "taught even to the young" even to the young William Stanley, who "received his first lessons at the age of about eight..."¹¹ Jevons, shortly before his own death would write to Henry Parkes stating that he "had always felt indebted to you for the kindness with which you used to publish my first efforts in science and political economy".¹² Indeed, Jevons even wrote to his cousin that he was "becoming quite accustomed to the pen as a weapon of offence & defence" but that "My organ the 'Empire' has passed away in bankruptcy" "and I am now reduced to that milk & water affair the "Herald" which too has not yet learned to appreciate me" "whereas Parkes always gave me large type

⁵ Michael V. White, "Some Difficulties with Sunspots and Mr Macleod: Adding to the Bibliography of W.S. Jevons. (Henry Dunning Macleod, William Stanley Jevons)(Essay)." *History of Economics Review* 38 (2003): 33

⁶ An anonymous international relations scholar applauds Jevons' outsider status, and positions himself as in a similar situation. See Clovis. "Ironies and Intimations: Jevons and the Establishment." *The American Scholar* 34, no. 1 (1964): 109-11.

⁷ W. S. Jevons, 'The Public Lands of New South Wales' *Empire* 4.

⁸ See Appendix I.

⁹ See in Michael V. White, "Jevons in Australia: A Reassessment" *Economic Record* (March, 1982) pp. 32-45

¹⁰ R. D. Collison Black, ed., *Papers and Correspondence of William Stanley Jevons: Volume I*, 86

¹¹ Rosamond Könekamp, "Biographical Introduction" 6

¹² 'William Stanley Jevons to Sir Henry Parkes, 18 June 1882' Parkes Papers, CY1600 (A988) pp 77-80, Mitchell Library, Sydney

next after the leading article...”.¹³ Könekamp insinuates that Jevons’ path to economics wades through a path that was later trod by Alfred Marshall. In a Könekamp footnote, which references one of Keynes’ Alfred Marshall references, Marshall is quoted as saying “[after] looking at the faces of the poorest people...I resolved to make as thorough a study as I could of Political Economy.”¹⁴

Harro Maas argued that “the romantic myth of Jevons becoming enlightened about his true mission in life and then deciding to return to England to found political economy on a sound scientific basis” as being “without merit.”¹⁵ Whilst the idea that Jevons whole-cloth discovered economic marginalism, or formulated a scientific form of political economy in New South Wales, is too optimistic a reading of his speech-acts. Jevons’ “The Railway Discussion” article mentions certain marginal units, namely units of labour per foot of railway constructed, within the framework of discussion on the most optimal route for the over-mountain railway.¹⁶ At the time of this first article, the question of how the colony would extend a railway line to Bathurst and beyond was obstructed by how to best navigate the geographical barrier of the Blue Mountains. The participants of this openly published discussion in the colony’s newspapers—Jevons included—were openly grappling with this optimisation challenge. It is verging on being ahistorical to read into Jevons’ past, items that he would later come up with, and this has essentially been the result previous scholarship. Grattan-Guinness has analysed the drafts of what Jevons’ 1862 article that is Jevons’ earliest work on marginalism.¹⁷ From a historicist perspective, this is where Jevons’ marginalism must be said to originate. Nonetheless, Australian politics generally, still can be said to have had an influence.

Sydney in the 1850s was a liberal and radical-enriched political world. Jevons’ position in Sydney was near the centre of the political goings on. Working at the Mint on Macquarie Street, Jevons was intimately close geographically to the New South Wales Parliament, whose Legislative Assembly was experiencing its chaotic first few years of local self-rule. Writing to his elder brother, Herbert, he states that “we have been very much amused & interested in the proceedings of the Legislative Council in its last few days of existence.”¹⁸ Peter Cochrane notes that men like Parkes were so versed in “the folklore about liberty in the early American colonies” that this affected the politics of Sydney strongly. Cochrane notes that it was because

¹³ ‘William Stanley Jevons to Henry Roscoe’

R. D. Collison Black, ed, *Papers and Correspondence of William Stanley Jevons: Volume II*

¹⁴ Rosamond Könekamp, “Biographical Introduction” 17. See also footnote 1 where Könekamp quotes Keynes, *Essays in Biography*, 137.

¹⁵ Harrod Maas, *William Stanley Jevons and the Making of Modern Economics*

¹⁶ W. S. Jevons, ‘The Western Line of Railway, and The General Policy of Government Railway Extension’ *Empire* 10 February, 1857, 3

¹⁷ Ivan Grattan-Guinness, “‘In Some Parts Rather Rough’” 685-726.

¹⁸ ‘W. S. Jevons to Herbert Jevons, 17 December 1855’

R. D. Collison Black, ed., *Papers and Correspondence of William Stanley Jevons: Volume II*, 205-206

the political class were so widely read about the politics of other parts of the wider British world.¹⁹ Jevons, when he was in Australia was no different, but in addition he was drawn to Parkes' politics in particular, even if Jevons was himself no "*pure democrat*".²⁰ Not long after his arrival, Jevons informs his cousin, Henry Roscoe, of the political situation in New South Wales with elucidating details from his own perspective:

'Politics here are in a very singular state; Responsible Government was Inaugurated as they grandly express it about six months ago ever since which unfortunate event the colony has been perpetually in agonies of Ministerial Crisises. The new Responsible Ministers have resigned or been kicked out two or three times already, three elections have taken place in Sydney within about 8 months and our new Parliament has debated for weeks together without passing a bill.'²¹

It is no wonder, given the disfunction of early New South Wales self-government, that there were heightened debates on matters of colonial policy. Jevons would participate in these, and the parliament's close proximity to the Mint no doubt encouraged this:

'It is all carried on nearly next door to us at the Mint and we sometimes turn into the gallery of an evening to have a bit of fun and hear the Ministerial and Opposition benches abusing each other. People here however are so very orderly & quiet that they seem to do quite as well without a government; even the third contested election in the year cannot excite them to a breach of the Peace. This is all very absurd no doubt but I am afraid that there is something more serious in it. The opposition consists in fact of a lot of clever but blackguardly *pure democrats* with Parkes, the editor of the Empire, Dr Lang (of whom you may have heard) and members for Sydney, altogether called the "*bunch*", at their head. The respectable party had the first chance of forming a government and had a small majority, but they have all along made such a mess of it, that the other party gains at nearly every step, although their own ministers were, to be sure, kicked out in no time because they appointed as Attorney General and Minister of Justice one of the most notoriously bad men in the colony. It will of course be the ruin of the country for democracy to gain, and we should all turn into dirty Americans (which God forbid) I don't see anyway of getting out of the scrape but by dissolving our Parliament and electing a fresh one altogether. A nice Inauguration of Responsible Government and a new Constitution this.'²²

Jevons even goes so far as to accuse, privately of course, his superior, Captain Edward Ward of defending the cronyism and corruption of the colonial status quo:

¹⁹ Peter Cochrane, *Colonial Ambition: Foundations of Australian Democracy* (Melbourne: Melbourne University Press), 7

²⁰ See second quotation below.

²¹ 'W. S. Jevons to Herbert Jevons, 17 December 1855'

R. D. Collison Black, ed., *Papers and Correspondence of William Stanley Jevons: Volume II*, 205-206

²² 'William Stanley Jevons to Henry Roscoe, 21 October 1856'

R. D. Collison Black, ed., *Papers and Correspondence of William Stanley Jevons: Volume II*, 247-248

‘A day or two since he came in great military state and dissolved them and in a few months we shall have the new Parliament. It is to be hoped the Governor will be more moderate with the new *lower house* whatever they do, or there will be a jolly row. The affair is very discreditable I think to the whole council, for why did they not appoint honest men for the committees or what need had they to adopt their reports when evidently full of lies. Capt Ward made several speeches, chiefly in defence of the great contractor here, Mr Rundle.’²³

Jevons was exposed to the intellectual goings-on of the colony during this time, and his place in the public sphere went beyond expression of religious doubts and vague liberalism. He was clear, scathing and venomous. On 21 July, 1855, Stanley Jevons’ article, ‘The Railway Discussion’ was published in the *Sydney Morning Herald*.²⁴ The Sydney-Parramatta railway was completed in September 1855.²⁵ This, and his later article in 14 April 1858 entitled, ‘A Cure for the Revenue’ are both evidence of Jevons’ thinking on issues political economy.²⁶ Perhaps it is noteworthy the incorporation of marginal units of analysis, in considering each of these policy problems that the colony was facing. These articles are the most cogent, and explicit example of Jevons writing in the frame of an economising, social scientific commentator, as opposed to plainer criticism or observation. They demonstrate Jevons weighing up alternative routes that the prospective trans-Blue Mountain railway would take, as well as alternative courses of government action. They quite distinctly mark Jevons as thinking of the opportunity costs of government action, and very closely hint at marginal units of analysis.

Jevons, in two separate instances, behoves his reading audience to see the unseen cost of actions, by demonstrating in his printed works the folly of one particular political economy action or other. Jevons thought the colony would be unable to ever recoup the costs ever being repaid, and the fanciful enthusiasm for railway expansion, in another. In a letter to the editor of the *Empire* Jevons complains of having the refute the ‘sophistry’ of such ill-thought out articles on trade protection, and that “readers” “need not for the future occupy themselves, except for amusement...” with such commentaries.²⁷ Jevons writes in an article that appears under the title ‘To the Readers of the *Empire*’:

I have myself spent a deal of time this morning in trying to get through W. B. Allen’s letter in the *Empire*, in which by industriously leaving out all considerations of capital invested in woollen manufacturing, viz. in the building used as a manufactory of the expensive machinery, engines, etc., imported from England, as

²³ ‘W. S. Jevons to Herbert Jevons, 17 December 1855’

R. D. Collison Black, ed., *Papers and Correspondence of William Stanley Jevons: Volume II*, 205-206

²⁴ William Stanley Jevons, ‘The Railway Discussion’ *Sydney Morning Herald*, 21 July 1855, p. 3

²⁵ Detailed in John Gunn, *Along Parallel Lines: A history of the railways of New South Wales* (Melbourne: Melbourne University Press, 1989)

²⁶ William Stanley Jevons, ‘A Cure for the Revenue’ *Empire*, 14 April 1858, p. 4

²⁷ William S. Jevons, “To the Readers of *The Empire*” *Empire* Monday, 30 March 1857, p. 3

well as the current expenses of fuel for the engine and a hundred other things, and by assuming the only cost to the colony of 72,800 yards of tweed to be the wool consumed and £15 per annum per man, “for imports in medicine, tea, sugar &c. &c.” he proves as he very likely might in this way, that the gain on 10,400 suits of woollen clothes made by colonial tailors, from the abovementioned 72,800 yards of tweed, would be £11,629. 3s. 7d.!!!²⁸

Indeed, when economic calculation was written by someone who espoused a protectionist position, their wrongfulness was a function of their not having done enough to improve themselves, or progressed to the better position of free trade. Jevons next makes the sharp, written remark that this protectionist contributor would be better suited elsewhere in the colony’s division of labour:

‘I lapse into silence myself after the expression of hope that W. B. A. will for the future devote himself to some occupation more remunerative to himself and the public also, for whose good he will come prepared with the conclusive results of experiments upon his own productive powers in the various occupations of shepherd, storekeeper, agricultural labourer, and wool weaver or slubber, etc.

Yours and W. B. A.’s obedient servant,

O’²⁹

Jevons had a clarity of incisive critique and repeatedly criticised the governing class throughout all his clashes with others in the press, and did not shy away from battering his opponents by means of his pen. Charity did not extend to those who were making illogical or fallacious arguments. He was extremely vocal about when he tempered disagreement with, what can only be inferred, his intellectual inferior. In a letter to the *Empire* he set in his sights even the Governor-General over the issue of railway extension:

I still have in my memory that extraordinary declaration of the Governor-General’s, that a railway need not necessarily be capable of paying any profits, since indirect benefits to the population may repay its cost. This I maintain to be completely false in principle, for the reason that the money returns of the railway, though not the object of its construction, as in private concerns, furnish, when the fares are adjusted to the *maximum paying rates*, an exact *measure* of the benefits conferred, direct or indirect. It may not be always necessary or desirable to exact the highest paying rents, as is at present the case with the Post Office, but if a sufficient number of persons do not find it to their advantage, on any arrangement, to afford fares of sufficient amount to repay the cost of the railway, it evidently proves that the latter actually does not repay its cost by benefits, direct or indirect, to these or any other persons.³⁰

²⁸ *Ibid.*

²⁹ *Ibid.*

³⁰ William S. Jevons, “Western Line of Railway, and the General Policy of Government Railway Extension” *Empire*, Tuesday, 10 February 1857, p. 3

Jevons believed in the power of self-improvement, and the impact this could have on one's own prospects and the temper of the society around them. This indeed aligns with the thesis of Margaret Schabas' *A World Ruled by Number*. In an 1858 letter to his brother, Thomas, he explains the link with mathematics:

‘Literature as a whole is the product of the imagination of man, and the later additions are scarcely superior or even equal to the first works. But Science which contains the knowledge of nature of all existing and actual things which man's reason enables him to investigate, is rising up as the great jewel of imaginative writings.’³¹

Literature here refers to classical literature of Greece and Rome, and therefore does not necessarily proscribe the impact of the contemporaneous and socially critical literature of the English authors Charlotte Bronte or Charles Dickens. Jevons elsewhere admonishes his admiration for Lucy, a character in Charlotte Bronte's *Villette*, which further indicates his liberal sensibility, if not a socially-aware Christianity-cum-liberalism. This is not to say that Jevons was particularly pious during his time in Australia. He was not, but rather preferred to spend his Sundays boating, on the Miller family skiff.³² In a 1859 letter, dated 30 January, to his sister Henrietta Jevons writes of the individual usefulness of individuals, when considered in terms of scalability, opportunity cost and the wider division of labour:

Suppose a man in early years to be as struck with the value of railways as to determine to devote his life their construction, and suppose him to live for sixty years. Suppose him to have moderate money means at his disposal. Should he buy a spade and a barrow, and set to work at once digging away at a railway cutting? Or would he do better to abandon for some years all care about rails, sleepers, embankments and locomotives, and learn nothing but mathematics, mechanics, natural philosophy, reading writing, and even French and poetry? In the first case he would remain all his life a common ‘Navvie’; in the second case, favourable talents & circumstances, and what is more important, a peculiar well directed industry would make him a ‘Stephenson’. Now as regards the real extension of railways, a Stephenson is as valuable as perhaps a 100,000 navvies, for it is he that has led the whole theory and practice of railway making in various parts of the world. This single man is probably more industrious than most but does not labour much above the average, yet see what education and reflection & determination can accomplish. I need not refer to other names, such as Watt & Adam Smith to show how one man can even in a mere mechanical sense render himself worth millions of men, and it requires only a little more refined consideration to perceive that eminent men in every branch of knowledge & practical life, are really as

³¹ William Stanley Jevons to Thomas Jevons, 9 October 1858. Jevons-Seton Papers, New Jersey

³² *Papers and Correspondence* reference. William Stanley Jevons to Thomas Jevons, 9 October 1858. Jevons-Seton Papers, New Jersey

valuable as Watt, Stephenson or Adam Smith, although they do not produce material wealth.³³

The assayers themselves were discussed indirectly in the Legislative assembly in January 1857. Jevons, in a section of a letter to Herbert, dated to the 22nd day of that month writes:

I think I told you in one letter that we were in fear of having our salaries cut down when the estimates were voted by the Legislative Assembly. Miller & I attended in the gallery on the occasion, in some degree of trepidation, but the debate took a very favourable turn and we heard ourselves styled by the fiercest leaders of the opposition, as “highly skilled men”, “men whom it would be impossible to replace”, “gentlemen of the highest scientific attainment” (from Parkes, whom I favour with my reports) and they finally voted the whole estimate in lump. 25 per cent has been taken off the *temporary increase* of every salary and the remainder made permanent so that my salary is now fixed at £630 [per annum], but in nearly every other Government department, further reductions have been made in the most arbitrary manner.³⁴

Like Jane Austen filters some of herself into the character, Emma in the novel *Emma*, Charlotte Bronte does likewise with Lucy in *Villette*. Jevons was receptive to the latter’s liberal instincts, and especially the character, Lucy, as this is explicitly self-stated by Jevons to have been inciteful. In a letter to his sister, Jevons writes of his conducting with the Lucy character. Part of the ontology of mind that Jevons held, therefore, can be said to be derived from liberal-humanist, realist literature. Namely, the contemporaneously published, and to this day read, novels of the mid-nineteenth century. It seems reasonable to state that this humanly-minded literature, plus Jevons’ incubation in the colony had some effect on Jevons’ own character development, and towards an economics focus.

It is plausible to argue that had it not been for Jevons’ time in Australia, he would may still have become as deeply enamoured with political economy in a broader sense. Jevons wrote prodigiously in the press, an unlikely thing to have been replicated in London. Whilst historians of economic thought have argued over the extent to which his contributions to the railway controversy ‘made him an economist’, White has hinted at Jevons’ integration into the business-intellectual milieu” of Sydney.³⁵ A broader take on Jevons’ time in Australia and his environment, and way his liberalism affected him still needs to be completed. The sheer depth and volume of material, makes this a task for a future biography. Jevons’ wider social world, in this rambunctious colony will have to be a task for the future. As a sample it is significant to

³³ William S. Jevons to Henrietta Jevons, 30 January 1859. See William S. Jevons, *Letters and Correspondence of William Stanley Jevons: Volume II, Correspondence 1850-1862* (Edited by R. D. Collison Black) (London and Basingstoke: The Macmillan Press Ltd., 1973) p. 360

³⁴ *Ibid.* p. 260

³⁵ Michael V. White, “Jevons in Australia: A Reassessment” *Economic Record* (March, 1982) pp. 32-45

note that the breadth of this milieu geographically by cross-referencing Philosophical society membership by the 1856 Sands Directory data, and the creation of large social maps, years after Jevons' own social sketches.³⁶ One can position almost every member into the small urban enclave that Sydney then was. However, more broadly, it is evident that the general shift towards a focus in political economy did indeed occur during his time in Australia, irrespective of the railway controversy's impact. The historical context of the 1850s helped shape the actions of this individual. Jevons's path towards a focused interest in political economy was forged in Australia, and this is why the historical constitution of his time there is important and meaningful. The world that Jevons walked through ought to be reconstructed, and this will be something for a future project.

To conclude this chapter, it is not possible to backread Jevons' key contributions further back than 1862 if one wishes to remain historicist. However, Jevons did display prodigious activity whilst he was in Sydney, and his contributions align with the wider British world's emphasis on progress, science and increased social conscience. This was spread through the literature of the time, and Jevons was just as much affected. Indeed, in any understanding of Jevons, considering a wider array of historical influences is necessary to bring together Jevons' competing groups of modern-day scholars, and can show that Jevons' transition towards economics had much more to do with his context, literary influences and social relations, and their symbiotic relation with Jevons' "speech-acts" than has previously been stated.

³⁶ *Sands Directory, 1858-59*, City of Sydney Archives

Conclusion

William Stanley Jevons' time in Australia was extremely formative for his transition towards the social science of economics. It has been argued in this thesis that this transition was driven by Jevons' liberal humanism, and this was founded and practised in the colony.

Chapter One argued that Jevons' liberal humanism has more causative value than a blunt mechanical metaphor explanation. Indeed, a socially aware sense of humanism is far less vague than a general mathematical sense.

Chapter Two argued that Jevons' social liberalism meant that Jevons had a reasonable sense of empathy, was sympathetic to his contemporaries, was quite socially active within the colony, and that all three make the claim he was solitary a weak claim. In fact, his manner was modelled and practised on what he believed was that of an intellectual, or literary. His desire to live the intellectual life, coupled with his young age, has been used to denote a solitary figure, whereas more plausibly he was just reflective and studious.

Chapter Three argued that his liberal humanism gives plausibility to the possibility that he developed the rudiments of economic marginalism in Australia. Whilst there is nothing explicit in his diary to prove it, it seems like there was a desire to calculate the betterment of his fellow man, and their abilities. The language of utility was known to Jevons, as were the skills of assessing social conditions, compiling datasets, and the desire to see general improvement. These were also conducive to a contemporaneous social liberal temper, especially among supporters of Henry Parkes.

In conclusion, Jevons' social liberalism made him a social scientist, and it was made visceral in Australia, and it drove many of his reflections and commentaries. If he did develop economic marginalism in Australia, even though there remains no smoking gun, it was because of his social liberalism. Jevons was a part of a new wave of liberal thought, and if the three Victorian witches did in fact brew the rudiments of economic marginalism — as means, motive and desire were present — it was due not to an Eye of Newt, but to his “vague liberal-humanism”, as coined by Schabas. This was one part of thinking, albeit a domineering one, and they helped inform his actions in Australia.

Jevons' Australian interlude was significant for this reason, and the records of his actions in Sydney go towards understanding the life story of this extraordinary individual. Finally, this thesis has indicated that a more comprehensive biography of Jevons' life is desirable. As a sample of his life, his time in Australia demonstrates Jevons' speech acts as a part of the larger Victorian play.

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Appendix I: Chronology of W. S. Jevons' Australian Published Work and Select Activity, 1854-62

Table 1: Chronology of W. S. Jevons' Australian Published Work and Select Activity, 1854-62

1854	29 June	Sails for Sydney on the ship <i>Oliver Lang</i> .
	6 October	Arrives in Australia.
1855	14 May	The Sydney branch of the Royal Mint is formally opened.
1856	May	The Philosophical Society of New South Wales is formed.
	13 June	W. S. Jevons is elected as a member of the Philosophical Society of New South Wales.
	21 July	W. S. Jevons, ' The Railway Discussion ' <i>Sydney Morning Herald</i> p. 3
	*22 November	W. S. Jevons, ' Red Tape-ism & the Newcastle Lifeboat ' <i>Empire</i> p. 4
1857	10 February	W. S. Jevons, ' The Western Line of Railway, and The General Policy of Government Railway Extension ' <i>Empire</i> p. 3
	26 February	W. S. Jevons, ' Meteorology and the Herald ' <i>Empire</i> p. 3
	30 March	W. S. Jevons, ' To the Readers of The Empire ' <i>Empire</i> , p. 3
	8 April	W. S. Jevons, ' A Comparison of the Land and Railway Policy of New South Wales ' <i>Empire</i> p. 6.
	27 April	W. S. Jevons, ' Meteorology of Australia ' <i>Empire</i> p. 5.
	4 May	W. S. Jevons, ' On the Resolutions passed at the Protection Meeting ' <i>Empire</i> p. 5.
	24 June	W. S. Jevons, ' The Public Lands of New South Wales ' <i>Empire</i> , page 4.
	8 July	W. S. Jevons, ' On a Sun-gauge or New Actinometer ' is published in <i>The Sydney Magazine of Science and Art</i> .
	14 July	W. S. Jevons, ' On a Sun-gauge or New Actinometer ' is later published in <i>Empire</i> p. 3. (Reprinted by the <i>London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science</i> (fourth series) (14) 94 (November, 1857) pp. 351-6)
	6 August	W. S. Jevons, ' Remarks ' published in <i>Empire</i> p. 4
	11 September	W. S. Jevons, ' Meteorology of Australia ' <i>Empire</i> pp. 4-5
	19 September	W. S. Jevons, ' The Eclipse ' <i>Empire</i> p. 4
	5 October	W. S. Jevons, ' Lead Poison in the Sydney Water ' <i>Empire</i> p. 5
	14 November	W. S. Jevons, ' Gunpowder and Lightning ' <i>Empire</i> p. 3
	November	W. S. Jevons presents "On a Sun Gauge" to Philosophical Society. (Reprinted by the <i>London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science</i> (fourth series) (14) 94 (November 1857) pp. 351-6)
	29 December	W. S. Jevons, ' Railway Economy ' <i>Empire</i> p. 4
	9 December	W. S. Jevons, ' On clouds -- their various forms and producing causes ' <i>The Sydney Magazine of Science and Art</i> , 1 pp. 163-176
	December	W. S. Jevons presents ' on the Cirrous cloud formations ' to Philosophical Society.
	17 March	W. S. Jevons, ' Remarks ' <i>Empire</i> p. 4
	14 April	W. S. Jevons, ' A Cure for the Revenue ' <i>Empire</i> p. 4
	April	W. S. Jevons, ' On the Forms of Clouds ' published in the <i>London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science</i> (fourth series) 15(100), pp. 241-55.

	April	W. S. Jevons presents paper “ On the Forms of Clouds ” to Philosophical Society.
	10 June	W. S. Jevons, ‘ The Royal Prerogative of Mercy ’ <i>Empire</i> p. 4
	June	W. S. Jevons, ‘ Rev. Mr Scott’s Criticisms ’ <i>The Sydney Magazine of Science and Art</i> 2 (13) pp. 17-18
	3 August	W. S. Jevons, ‘ New Facts Concerning the Interior of Australia ’ <i>Empire</i> p. 5
	27 September	W. S. Jevons publishes review of <i>Sydney Magazine of Science and Art</i> , 1, in <i>The Sydney Morning Herald</i> p. 8.
	7 October	W. S. Jevons, ‘ The Social Cesspools of Sydney. No. I – The Rocks ’ <i>Sydney Morning Herald</i> p. 2 (Jevons’ “Social Survey of Australian Cities” was completed in this year and was reprinted in 1929 as ‘Sydney in 1858: A Social Survey’ by the <i>Sydney Morning Herald</i> on 9, 13, 16, 23, and 30 November.)
	29 October	W. S. Jevons, ‘ Canoon Digging in a Scientific Aspect ’ <i>Sydney Morning Herald</i> p. 3
1859	January-February	‘ Meteorological Observations in Australia, Being a Continuation of those Published in Waugh’s Australian Almanac for 1859 ’ published in <i>The Sydney Magazine of Science and Art</i> , 2, pp. 161-7.
	March	‘ Meteorological Observations in Australia, Being a Continuation of those Published in Waugh’s Australian Almanac for 1859 ’ continues on from the first, and is published in <i>The Sydney Magazine of Science and Art</i> , 2, pp. 173-81.
	*March	“ Remarks on the geological origin of Australia ” <i>The Sydney Magazine of Science and Art</i> , 2, pp. 89-93
	*March	“ Earthquakes in New South Wales ” <i>The Sydney Magazine of Science and Art</i> , 2, pp. 93-94
	March	Jevons leaves Australia and returns to England, via America.
	3 May	Jevons’ article “A Notice of the Geology of the Australian Gold Fields” is published in the <i>Proceedings of the Literary and Philosophical Society of Manchester</i> , 1 (16), pp. 134-6.
	May	In, presents the paper “On the Semi-Diurnal Oscillation of the Barometer” to the Philosophical Society. Reprinted in <i>London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science</i> (fourth series) (May 1859) 17:115 pp. 313-23.
	15 November	Begins Bachelor of Arts degree at University College, London.
1862		Continues to a Master of Arts at University College, London.
		Jevons presents “ Brief Account of a General Mathematical Theory of Political Economy ” which is later published.

Appendix II: Jevons' Social Survey of Sydney

The following is a transcription of William Stanley Jevons' social survey of Sydney. He made these descriptions of the various Wards of the colonial town, in conjunction with the Woollcott and Cox pedestrian map that was commonly owned at the time. Jevons transposed his observations into this piece of descriptive text, as well as colouring in, with differing cross-checking pattern, parts of the map to denote differing social class occupancy, which he completed in 1858. It is transcribed, with an extremely light editorial hand, from the original manuscript, which is held in the Mitchell Library. Reference was also made to what can only be assumed to be John La Nauze's typewritten transcription of said original manuscript. This can be found unofficially among Megan Martin's collection at the Caroline Simpson Library, the Sydney Mint, Macquarie Street.

Remarks upon the Social Map of Sydney, 1858.

In this map an attempt has been made to represent the variations of social rank, the separation of these ranks into districts; also to show the centralization of business or industry into certain parts of the town distinct from the residential districts, and the collection of all those kinds of industry which are similar in origin or purpose round their own peculiar centre or centre[s]. The lines of intercommunication the chief places of resort, the offices of the public authorities, the wharves where the sea & land communication join, the grounds provided for public recreation and other purposes are also marked, and in fact the whole internal organization or machinery of the city in question is as far as possible exhibited.

The inhabitants of this town are first considered with regard to their residence; they are supposed to be divided into three social ranks of which the first (coloured red) includes all who may be termed gentlemen & ladies, including mercantile men, clerks, & other chief employes [sic.], professional men, chief shopkeepers, independent gentlemen etc. The second class, (coloured blue) includes most mechanics & skilled artisans [sic.], shopkeepers, shopmen etc. The third or remaining class (coloured black) comprises labourer, and the undefinable lower orders.

The part of the town occupied by the residences of each of these class[es] is shown on the map by the appropriate colour the intensity of which indicates the comparative density of this class of population. Two or more colours may of course be superimposed on each other when it is necessary to show a mixed population. When the distribution of these classes on the map is contemplated in connection with the other data exhibited on the map, several conclusions may be observed. The first class is divided between a town-centre & suburban districts. The town-centre is in the neighbourhood of the chief business centres, the chief government offices & the [parks? Parliament?]; it is chiefly on elevated land. The first class districts follow somewhat the trend of the high land and are generally very distinctly separated from the lowest class residences. A large proportion of the first class residences are country villas or mansions situated quite beyond the limits of the town and of this map.

Second class residences are more numerous and equally diffused, but are most thickly placed in intermediate districts at a short distance from the central parts of the town. Thus Woolloomooloo, Surrey Hills, Strawberry Hill, Redfern, Chippendale, Glebe, Pyrmont, Balmain & the upper part of the Rocks form the principal second class residential districts of Sydney. There are however several thickly populated ones beyond the limits of the map such as Newtown, Paddington, Camperdown etc.

Third class residences collect about a few distinct centres, or form a part of the town peculiar to themselves, generally in the lowest & least desirable localities. In general third class residences appear of considerable age showing that the land had been long located. Durands Alley, the Rocks, the lower end of Sussex Street, the north part of Chippendale & Market land are the chief and worst third class quarters.

Transcribed from both a privately held transcription held by Megan Martin, curator of the Caroline Simpson Library, Sydney Mint Building and 'A Social Survey of Australian Cities, 1858' Microfilm CY1045, Mitchell Library.

As regards industry & business, it will be seen that the trade in food is the most widely diffused (as marked by the strong black lines, the width of which signifies the coming partial [comparative?] activity of business i.e. the number of shops engaged in the trade), extending through all the residentiary districts, those of third class included.

The trade in clothed has a strongly & narrowly defined centre supplying chiefly superior qualities of clothing but there appear to be subordinate centres supplying the inferior qualities. There are very few ramifications of the trade. The trade in articles of refinement is confined to a small & very central space with only one or two ramifications.

The Banking or Monetary centre comprising the Banks chief Mercantile houses, stockbrokers etc., is very well defined & form of course the principal Centre of the town. The four centres named above do not quite coincide.

Physicians chiefly reside in the first class town residentiary district but to some extent distribute themselves amongst the meaner & more thickly populated parts nearly irrespective of class distributions. Boarding houses are of many classes & kinds, and are distributed accordingly among the more central parts of each class of district or around the marine centres. The legal profession has a centre of its own determined chiefly by the position of the court.

Manufactures are but little developed in Sydney. The carriage of goods into the interior is chiefly by means of drays and the accommodation of carriers, & their horses or cattle, the sale of food, the manufacture of harness drays, carts etc., form a fully distinct business district centering [sic.] at the Haymarket. Industry connected with horses, cabs etc., is rather diffused, but the residences of cabmen etc., are chiefly in third class districts.

It may be observed that in the original laying out of Sydney a great mistake was made; a large extend of land surrounding Farm Cove, extending thence to the high ridge of Hyde Park & including both promontories of Fort Macquarie & Lady Macquarie's Chair were reserved for parks or other public purposes. The whole of this would be extremely valuable as affording both wharves for marine trade and a good central position for the other trades: at present the main part of Sydney is much confined on the east side by this reserved land and the shipping is driven to the inferior wharfs near Miller's Point etc. The part of the town reserved should have been that steep and to some extent useless & objectionable part included between Sydney Cove & Darling Harbour extending to Millers Point and Dawes Battery.

Riley Estate and Surrey Hills

Oct. 2nd 1857

This is a part of Sydney which possess a peculiar and by no means picturesque appearance. It is principally built upon hills or rather a low range of land, which is a southerly extension of that which forms Hyde Park. Instead of hard white sandstone we here find thick leads of a fine blue white a slate coloured shale often as hard and easily splitting as to resemble flag stone but soon weathering into soft clay. This shale overlies the sandstone and the range afterwards pursuing a westerly direction forms the connecting hills of Grose Farm, Camperdown & Petersham. As might be expected such a soft and little durable rocks is soon worn down by the weather into [XXXXXXX] smooth swelling slopes and rounded summits, between which the drainage excavates small vallies [sic.]. The surface of the ground is extremely unfertile and formed of a hard dry clay, so that the [appearance] of those parts of the town built on shale is very bare & unprepossessing, but near on the [XXX] of the slopers, good earth and flourishing gardens, prevail. Such clay or pipe clay as can be obtained near Sydney fit for making bricks or pottery (as at Camperdown) probably consists of the alluvial debris of these hills of shale..

As the drainage of the parts of the town in question must be an easy matter, and as they are elevated, a salubrious character might be expected of them. They are as yet only very partially occupied although building has been proceeding lately at so rapid a rate that probably twice as many houses now exist there as five years ago. Those parts longest and most thickly built up, curiously enough are the more remote owing probably to the injurious effects of legal difficulties. The whole space is divided up by three long paralleled streets (Bourke, Crown and Riley) forming the straight continuations of the streets of the same name in Woollloomooloo. The South Hd. Road which is the N. boundary runs diagonally on in the Old Botany Road which forms the Eastern boundary; some of the cross streets also are oblique and variously crooked owning probably to their having been formed before any uniform plan was adopted.

The houses of older date may chiefly be divided between the first & third classes on into gentleman's and labourer dwellings. The former are completely in colonial style, of two stories, with large verandahs [sic.] & surrounded by flouroushing [sic.] gardens, planted with Norfolk

pinces, figtrees [sic.] bamboos, aloes & other peculiar plants. The further parts of Crown Street & Bourke Street & the neighbourhood of Botany Road chiefly around with these villa residences & have a very peculiar & pleasing [appearance]. The small cottages are chiefly of brick or weatherboard & are in many places very wretched; the inhabitants assume corresponding characteristics although not to the same degree as in more crowded parts of the town. The patch of buildings named Marylebone & divided into Marlbor & High Holborn Street etc, is composed of these third class cottages with the exceptions of one or two pretty first class homes. The other old cottages chiefly lie between Bourke Street & Botany road. Near the South H.R. are also a certain number of first or 2nd class houses of former days. Recent erections are springing up very rapidly in the form of rows of two storied brick or stone houses of small size but of neat [appearance] of pretty good construction. A great number of detached wood stone or brick cottages of one storey + with verandah [sic] are also to be seen, & form not unenviable if small abodes. The houses are on the whole likely to be less crowded than in Woolloomooloo + to have fair back premises with a separate entrance.

Between Goulburn Street and the S.H.R. however & a multitude of small cottages arranged in narrow lanes which are often most oddly constructed of timber were probably imported & put up soon after the gold discoveries; it is to be hoped that they may not last long.

There are perhaps about half a dozen small manufactories in this part such as a flour mill, tannery and builders shops. There are a few shops belonging to dealers in food & clothes scattered over nearly the whole of the area, and often of respectable size. The South Head Road between Darlinghurst gaol & the junction with Liverpool street is a business thoroughfare of great pretensions & is already nearly built up with a line of good sized shops. It is evident that as the Surrey Hills, and the Paddington and Waverly suburbs increases in size the South Head Road from the physical position will become central & important as regards trade of manufactures. At present the whole district is a residentiary one, the second class of occupants prevailing and appearing likely to drive out both the first & third; of the first class there are very few or no new house erecting. Some inferior cottages near Marylebone of 2 storeys, with small dirty rooms (prob. 4) were advertised to let at 10s. per week, & in another part near Burton St, some neat new cottages of rather larger size could be had at 15s. per week.

Just to the south of Surrey Hills is a patch of alluvial flat land occupied by Baptists & other market gardens or by the villa residences spoken of above, but with this exception the neighbourhood is entirely shut in by the dreary and flats & hills of Botany Country, which are still the property of Government. In some places the sand hills are making incursions, & one hill is overwhelming Marylebone of which several old wooden houses are buried up to the eaves.

The part of Sydney bounded by King George and Druitt Streets is of mixed operative & residentiary character. York is much occupied by wholesale stores or by petty manufacturies [sic]. Clarence & Kent Streets contain only the residences of labourers, or small trades men or artisans [sic], while Sussex Street which lies close upon the Maritime part contains numerous shops, smiths shops, timber yards & similar places of business. The waterside is formed into a number of wharfs belonging to private owners & a large quantity of produce is here landed from small coasting vessels; some of the principal comodities [sic.] seem to be timber (cedar, ironbark, bluegum, etc) coals, corn, potatoes, wool, bones, skins and tallow, shell-lime, firewood, shingles, fencing materials etc and there is of course exported from Sydney for distribution along the coast

The residences in this part are mostly of very low character usually consisting of small two or three roomed cottages of considerable age, and now much dilapidated. Bricks are the most common material but perhaps one fourth part of the whole are built of weatherboards & are in very bad condition. Clarence & Kent Streets are almost entirely fronted by such cottages while a few parts, such as that between Druitt St and Watts Lane are densely crowded with them. The Streets having been levelled & much cut down since these old houses were erected, they often stand high above the street & are reached only by steps. The interim of the six blocks of land forming this district are to a considerable extent occupied by small bad conditioned cottages to which there is access by irregular alleys or openings; there are a few distinct courts of two storied cottages. But it cannot be said as a general thing that this part is densely populated, much space being left as dirty irregular shaped yards. There are no proper back entrances as in Wool. & elsewhere. The residences of this neighbourhood are mostly those of the third class, including many of vicious low character; there is a certain proportion of the

second class & a few houses of the first class which are perhaps exceptional. Labourers, draymen, seamen, hawkers, journeymen, policemen, etc chiefly inhabit this part, but there is a remarkable number of lodging & boarding houses, which generally consist of small dirty cottages, and are really brothels or little better. During the day women of repulsive [appearance] and the worst character may be seen hanging about the doors, awaiting the night debauch.

Between York Street & George Street is a block occupied by the back premises of the shops fronting the latter street and by other industrial establishments chiefly. The Market takes up another corner & is surrounded of course by valuable business premises. There are also several chapels. This area therefore, contains three or four elements, such as maritime trade, general wholesale & retail trade, manufacturing industry, & lastly a third class residentiary element, which lies chiefly in the centre. With the exception of the Rocks, & of Durands ally not part of the city stand down in the social rank than this residentiary area. The furniture of such small cottages consists usually of a table, a few old chairs, a gridiron a small sofa, generally used at night as a bed, and perhaps a side table and cupboard or shelf. Privies are I think often very scantily supplied in this neighbourhood..

Woolloomooloo

Sept. 30th 1858.

lies on a valley like slope which rises very gradually to the south from the flat shores of Woolloomooloo bay, and is bounded on the West South & East sides by the high continuous ridge of land forming Hyde Park, the line of the Old South Head Road & the rocky mass of Darlinghurst. On the west the elevation of the bounding ridge is something less than 100 feet, on the other sides from 150 to 200 feet.

This distinct area is divided into two parts by the important thoroughfare of William street, which with the Southern boundary the old South Head Road form the only easterly outlets of Sydney, and consequently possess the whole traffic of the suburbs lying to the Eastward. William Street is occupied by many residences of a superior class (£200 - £300) by a few of inferior size and by various retail shops which are rapidly increasing in number. Woolloomooloo is laid out in two series of straight rectangular & generally equidistant streets of considerable breadth, which are now being formed and raised to a proper level. Whenever in some future year the whole of these streets shall be completed and well paved and sewered, Woolloomooloo, especially its upper parts, will be surpassed by but few districts of similar social characteristics for regular orderly appearance and general sanatory capabilities.

The part of Woolloomooloo lying between William Street and the S H Road is almost entirely residentiary, chiefly of 2nd order but in some parts especially towards Darlinghurst with an intermixture of 3rd. The houses are mostly newly built upon small allotments [sic.] of land, and in perhaps a majority of cases are not all uniform with adjoining houses in plan. The materials are nearly always brick, with only a few of rubble stone, & still fewer of wood or iron. A large proportion of the houses have two stories & four rooms, with perhaps a detached kitchen behind. Many however have only one storey with 2 or 3 rooms and often the second storey contains a single attic room. There is in no case a third storey (excepting William Street) or cellars

The main streets [running] due N. & S. and the Cross streets, at right angles are unexceptionable, but being placed rather widely apart, the main streets at a distance of 100 yards, centre to centre, and the cross streets (William, Stanley and Liverpool,) at almost twice that distance, a series of very narrow back streets have been formed of which a part is altogether shut in at each end as in the figure. These back streets originally perhaps intended only to afford a second back entrance to the principal houses are rapidly becoming built up by additional smaller houses; in time they will form crowded, dirty lanes, removed from the public view, difficult to drain or ventilate, and little better than closed courts. It would be much better to place the main streets both (direct and cross) at a uniform distance of about 150 yards, with secondary parallel streets of less width running completely through them at intermediate distances.

The occupants of Woolloomooloo are chiefly those tradesmen & workmen shopmen clerks etc employed in Sydney. It is essentially a residentiary district. The direct main streets have a few detached shops, chiefly grocers, small miscellaneous dealers, chemists and cloths shops. A very few manufacturing processes are carried on.

Each house has a small yard enclosed by split fencing and at the end is a privy. Many houses have no back entrances. A comfortable cottage of 4 or 5 rooms may be had for 18 or 20 s. per week.

A small block of land enclosed between College Street, Stanley Street, Young street, and Liverpool street is densely crowded with small or moderate sized houses apparently of some age. Fronting Hyde Park in Burdekin Terrace, of first class houses but, immediately behind are many of third order, and of very unhealthy appearance.

Lower Woolloomooloo lies to the North of William Street bordering the flat shores of the Bay. It is of much the same character as the upper portion of Woolloomooloo, containing residences for the most part of the second class, with some of the first and a few of the third. Dowling, Forbes, Bourke & Palmer streets especially near William street are fronted by many first class houses, neatly built in rows, but the crowded part about Riley and Crown streets is chiefly of second and third class character. North of Woolloomooloo Street the houses are pretty uniformly of the second class. This last portion is only a perfectly alluvial flat only a few feet above high water, and one piece of land is uninhabitable from the spreading over it of the drainage of a large part of Woolo. which flows down a natural creek. The flattest part of Woo. must certainly be unhealthy from the damp, miasmatic air which must lie upon it at night, but this bad area terminates almost with Woolo street where the land commences to slope upwards. A distinctive character of the blocks of land between Woollo and William Street, is the thick population of the second and third class which inhabits the system of back lanes running behind or across the principal streets as in fig. [see figure] These back lanes are very regularly laid out so as to be quite out of sight of ordinary passers by, and are but very narrow. They are to a great extent built up by small 2 or 4 roomed cottages so as to render the population here very densely aggregated. Almost the whole buildings of this neighbourhood are of very recent date, perhaps not exceeding 15 years, so that at present they have not the unwholesome dilapidated appearance of similar buildings in other places. At present the inmates are almost entirely respectable tradesmen and others of the second-class.

Woolloomooloo.

Below Woolo. Street the back street are differently formed and are wider and more open, so as to lose their objectionable character. They are not yet fully built up.

On the East Side of Woolo the only outlet is by William Street, the steep rocky range of Darlinghurst & Potts Point enclosing the rest. Along the slope of this range several long streets have been formed, almost devoid of any cross streets. Dowling street is the last main street, Judge street, Duke Street, and Brougham Street are parallel back streets of small width; the former two are pretty closely occupied by small second class houses. Along the shore of Woolo Bay is a small maritime trade, chiefly in firewood, lime, and timber; there is also a sawmill (Fairfax's) and a few other kinds of industry are carried on.

Brothels are said to exist in the flat parts of Woolo. And some house of the first class bear no good name, but it is uncertain how far such statements can be received

Camperdown

about equal proportions of second and first class residences. Bishopthorpe is a newly built second class addition to this part. Hence I walked along the vilest part of Parramatta Road to Camperdown which is a considerable well designed suburb built upon a square allotment of ground about a mile from Sydney. It is separated from Sydney by the government lands of Grose Farm, & is surrounded on the other sides by unopened lands belonging to private

owners. Camperdown is a place of some age comparatively few of the cottages having been built in the last few years. It is doubtless sustained to a considerable extent by the traffic along the Parramatta Road the main line of communication with the interior previously to the construction of the Railway. The timely subdivision of an estate into suitable and cheap allotments was probably its origin.

There is not a single resident in Camperdown of the first social rank; the majority are of the second with a large sprinkling of the third. Many of the dwellings are mere log huts sufficiently squalid in their external appearance. There is a corresponding number of the inhabitants of low character. A few manufacturing trades such as brick & earthenware making, cart making etc., are carried on in Camperdown or the immediate neighbourhood. Pig feeding (on offal from the slaughterhouses), orange packing and trading in horses and cattle are also among the employments of the place, which is thus proved to depend chiefly on the passing traffic. There are several public houses, of a certain age, and some dozen shops; it is noticeable that of six public houses within a quarter of mile of each other in Camperdown, three are closed and deserted. It is a place where sly grog-selling could easily be carried on. There is a small church and a small brick Catholic Chapel.

Durands Alley

that part of Sydney where the lowest & vicious classes most predominate and where the abodes are of the worst possible description, is the square block of land contained between George, Goulburn, Pitt and Campbell streets. Towards the first and last streets it is occupied by shops or business premises, among which are no less than seven public houses and/inns and two or three livery stables, or stableyards of large size. Adjoining the Hay Market and forming the first entrance to the business parts of Sydney, large accommodation is required for travellers, stockmen, carriers etc. from the country and for their horses and cattle teams. ?*****? horses are also stabled here I think.

Along the Pitt street face are a varied row of residences many of them bad but not strikingly so, while along Goulburn Street are few except small and often wooden cottages, evidently containing inhabitants of low character. It is however within this block of land that the bad features appear. Several lanes of irregular angular shape proceed into it bordered by very closely packed and chiefly brick cottages, the dirty low appearance of which defies description. Such is Durands Alley, some female inhabitant of which is punished almost every day at the Police Court for offences chiefly connected with prostitution. I walked through these miserable alleys which are quite shut from common view & almost form blind alleys. No more secure and private retreat for vice is afforded in Sydney.

The Rocks

The range of land upon which the most important parts of Sydney are placed, assumes a very steep character towards its northern extremity which forms the western side of Sydney Cove. At Fort Phillip the elevation is about 150 feet and thence to the shore of the Cove the horizontal distance is only about 450 yards or 1350 feet. (see section drawn to scale).

The greater part of the fall occurs between Cumberland and George Street and the incline is here so sharp that horses & carts cannot ascend, and flights of steps are erected in several places. All kinds of business are therefore precluded, and this rocky slope from its disadvantageous form and position has been given up entirely to cottages of the lowest order. All extraneous traffic too is shut out from these streets, partly because they actually or in effect closed at the north end & partly because of their steep slope and rugged-ness. Thus Fort Street and Princes Street are both abruptly terminated and merely lead to the houses which surround them. Cumberland Street indeed crosses the cutting or Argyle Street by a bridge and proceeds on in a devious uneven path to Dawes battery but it is quite useless for regular traffic. Along Harrington Street, Cambridge Street & Gloucester Street the passage of a vehicle is a matter of difficulty and they all end abruptly in the Argyle cut.

Thus with the exception of the lower parts bordering on George Street and of those near Charlotte place, residents and a very few trademen working at home occupy the whole of the neighbourhood. In Fort Street and Princes Street they are chiefly of the 2nd order with only a sprinkling of the 1st and 3rd; these streets are well formed and present a pleasing and order(ly?) appearance with the exception of a few small dirty cottages (1st order) the remnants of former times. Cumberland Street at its north end contains only houses of third or even fourth order; its southern extremity is chiefly of 2nd order but the intermediate and largest part is shown entirely of the first order. It is in the lower streets however that the peculiar features of the rocks are seen in all their horrible intensity. Small cottages constructed of stone or wood in convict days are here closely scattered almost without order, but partially formed in lines along the terraces of rock. Steep narrow passages sometime closely built up with small houses form the only cross streets. As sewers or drains of proper construction are quite unknown here, as the streets are without gutters except such as the draining itself forms, and as the transverse fall is very much sharper than the longitudinal fall, the drainage of each house or hovel simply trickles down the hill, soon reaching, as the case may be, the front or back of the next lower house. In many places filthy water is actually seen to accumulate against the walls of the dwellings, soaking of course beneath the foundations and the floors above which the family live. In other places this accumulation of filth is prevented by a drain constructed beneath the floors so as to lead the filth quite through the house. Many houses again are built but a few yards from a wall of rock over which various spouts and drains as well as a privy or two continually discharge foul matter of the worst description. What more unhealthy position for dwelling can possibly be imagined – surrounded by walls of filth exposed each morning to the sun's rays & maintained in a constant state of mistiness by the accretions of liquid filth.

The houses in this part consist wither of old rubble stone cottages of one story & 2 or 3 rooms, often plastered and whitewashed, or of more recent brick houses of two storeys. There are a few old wooden houses, of the most dirty appearance but these have often been abandoned as quite uninhabitable. Most houses have small and very dirty yards, without any back entrance, but in many places the small hovels are so closely and irregularly placed that all privacy is impossible. Horizontally, too, the irregularity is often so great that the eaves of one cottage [are] level with the foundations of the next.

The inhabitants of the rocks especially the females are in keeping with their habitations and their dirty clothes slovenly manner and repulsive countenances evidence their extremely low order. One a young but intoxicated woman, whose wicked dissipated face was further disfigured by a black eye and a bruised and swollen forehead, presented as striking a picture of the depth of vice as ever I saw, and a small thin shrivelled old dame, with a yellow brown face, and clothing of indescribable hue sitting in a poverty stricken room (in one of the dirtiest in the neighbourhood) illustrated probably a later stage of a life of wickedness.

I am acquainted with some of the worst parts of London, such as Jacobs Island, Golden Square, Lambeth, Drury Lane, Grevill Lane etc., and with the most unhealthy parts of Liverpool, Paris and other towns, but no where have I seen such a retreat for filth and vice as 'the Rocks' of Sydney. And it is the highest disgrace both to the municipal authorities and the landlords of the neighbourhood that not the slightest sign of amelioration appears. From these 'Rocks' the beautiful blue waters of the Harbour and the dark picturesque bushy shores [are] visible; a clear Australian sky is overhead, and dry invigorating breezes strike refreshingly upon the person, & find their way into the foulest dwellings. Few places could be found more healthily & delightfully situated but nowhere are the bounty & beauty of Nature so painfully contrasted with the misery & deformity which lie to the charge of Man.

A triangular group of small third class houses is contained within Elizabeth, Goulburn and Foster Streets. The houses are chiefly built in close rows of two stories elevation. There are also a certain number of detached cottages in a very dilapidated condition and of considerable age. This part is very thickly inhabited and of unsightly appearance; it is also very dirty and probably unhealthy, as its situation is low. About the neighbourhoods of Sherrifs Garden are numerous cottages of recent construction and of every variety of form; they vary from the extreme of neatness to that of dirtiness.

Comprise between Goulburn Street and the S.H. Road and behind the main range of shops of the latter, is a close group of recent small cottages, chiefly of four rooms. There are several objectionable small lanes badly laid out, but there is in general an appearance of cleanliness as in Woolloomooloo. The inhabitants are of the respectable tradesman and mechanic class.

Ultimo Estate

A small third class district lies between the head of Darling Harbour and Parramatta Street. It is formed by Victoria Street, Ultimo Road, Valentines Lane etc., and stands on rather uneven ground which slopes down into the flat shores of the harbour. The irregular streets contain only a few scattered and chiefly slab cottages entirely of the third class. They are old wretched and probably very unwholesome, from the surrounding moist and foul flat land. They are also entirely from the all active traffic.

Chippendale

A very thickly populated neighbourhood is that compressed within the angle of Parramatta Street and its offset Botany street; to a part of it at least the name Chippendale applies. Omitting the frontage to Parra.^a st. which is of course occupied by shops and public houses, and that to Botany street which contains a few first class houses, this area may be described as third class with only a moderate proportion of second class. It is divided into two parts by some open land and the enclosure of Mr. Tooth's brewery. The Northern part is formed by narrow lanes running at right angles to Parra.^a Str. And opening into it; they are entirely and decidedly of the third class, Kensington St. being however a little better. Linden Lane however presents a shocking sight it is primed by two long continuous rows of weatherboard cottages quite uniform and uniformly abominable throughout. Not one of these cottages presented in its interior the least sign of refinement or comfort, that I could see; some of them were deserted or occupied by persons so destitute as to appear deserted; but in most cases the bare filthy interior and the debased inmates well corresponded. I did not quite perceive why this lane was the resort only of the very poorest and lowest but so it was.. Close in the neighbourhood were other exactly similar rows of wooden cottages such as Paradise Row, Teggs Row, and the social character of the inmates appeared analogous; in the Directory they are chiefly described as labourers, shoemakers, butchers, carpenters, laundresses etc.

Through the waste ground in the centre of Chippendale runs a fetid stream of sewage matter giving off vile smells; yet this liquid is allowed to collect in a large milldam above the Brisbane Distillery from which it overflows and runs down past the slaughterhouses and the lower part of the Glebe into Black Wattle Swamp Cove. Nothing can contribute so much to the spread of disease as these streams and collections of foul water, which it is the custom even to pump up into water carts and spread all about the public streets.

A few buildings and shops of second and even first class are appearing in Abercrombie Place, and they exist in some degree south of Banks street, but on the other side this street there is little but third class dwellings.

The junction of Botany and Cleveland Streets is a place of some little business and there are many well built houses and shops. The whole of Chippendale is on flat ground apparently of some fertility. It is shut off from all traffic and has evidently been long appropriated to the abodes of the poorer classes. The regularity and closeness of the small cottages is strongly contrasted with the irregular and straggling arrangements in some of the most central parts of Sydney as between Kent and Sussex streets; but this is scarcely an advantage. Chippendale somewhat resembles the cluster of third class houses to the East of Haymarket.

Redfern –

is a large square block of land with a blackish sandy soil, formerly belonging to a Dr. Redfern, who opened it out profitably as a suburb of Sydney. Rather curiously it contains all classes of houses, the third class prevailing to the west near the Botany road, and many neat new first class houses lining Pitt street and Cleveland street. Botany street and the part near it have certainly a wretched and unpicturesque appearance, but are not so crowded by houses as to become unhealthy. Wooden cottages are very prevalent and of an age perhaps of 10 or 15 years; there are many log huts even yet remaining, indescribably disorderly and ugly in their appearance. East of George Street and South of Redfern Street however, the cottages are less thickly set and are much more neat and comfortable; wood is still a very general material, but a verandah covered by passion flowers or other creepers, and a small surrounding garden bright with a few simple flowers, so much to remove the bare cheerless aspect of these suburban abodes. In Pitt Street as I have said are many first class houses surrounded with Native Fig trees and Norfolk pines standing in handsome gardens.

The ground on which Redfern stands is slightly undulated, rising to the South; it is on the verge of the sandy region which extends to Botany Bay; from its southern extremity we overlook a large cluster of houses entirely built within about five years on the Waterloo Estate belonging to Sir. D. Cooper.

This sudden appearance of a whole suburban district is what can only be seen in a new and highly progressive country and in modern times. But nowhere perhaps except in Australia could be seen collections of such hastily erected frail and small habitations, devoid of even a pretence to ornament and in many or most cases belonging to, and built by those who inhabit them. Almost every labourer and mechanic here has his own residence on freehold or leasehold land and unpretending as it is to any conveniences or beauties, it yet satisfies him better than the brick built, closely packed and rented houses of English towns. An Australian second or third class suburb would not be taken for a permanent part of a town at all; it more resembles the wooden hits of a military encampment. In a great majority of cases the first plan only includes two small rooms, to which others are sometimes added afterwards; no two designs are alike and the materials are most various. I might enumerate many kinds of them, such as with 1. Slabs or logs of wood, 2. palings or split wood, 3. Canvas, 4. weatherboard, 5. Tongued and grooved boards, 6. plain or corrugated sheets of iron or other metal, 7. bricks, 8. brick and wood combined, 9. rubble stone, 10. lath and plaster, 11. ashlar stone work, etc. I have seen some houses into which broken iron stone, and glass bottles enter as a component, while both the old wood and sheet tin of packing cases is largely made use of, the latter especially for roofs. Split wooden shingles are almost always used for roofing, but corrugated or plain sheet iron patent zinc\ tiles, sheets of bark, or proper slates are also used. All these modes of construction may be seen in close successions and often even combined in one houses in such suburbs as Redfern and Waterloo Estate and the resulting mass of dwellings have the most comfortless and unpicturesque appearance imaginable.

The extreme smallness of these dwellings is another important point, which has doubtless much influence on the health of the inmates. So long as a small cottage is really in the country, and the free pure air pervades every part, little harm perhaps results; but when a great number of such small erections are crowded together and the ground becomes saturated with foul matter, the vapours of which pervade the air both within and without, the results must be serious. If also two small rooms in which a whole family of 5 or 6 persons sleep be closely shut up at night to deficiency of pure air must be very injurious.

Dec. 2nd '58.

Pymont, Glebe, Camperdown, Newtown

Crossing Darling Harbour by the newly erected and very respectable bridges which now reaches across it, I walked round Pymont which is a suburban village upon a point of land hitherto almost disconnected with Sydney except by water carriage. Hence it is entirely residential and almost devoid of any trade. With very few exceptions the houses are all recent and in good repair; they consist of small townlike cottages, small houses in rows, and a few which may almost be termed villas. The residents are of second class social rank, with very few

of the first class and not more of the third. The site is healthy and upon solid sandstone; water I should think must be very deficient. The position is now excellent as regards reaching the centre of Sydney so that it is well adapted for residences. Some trade and traffic will also pass through it as so[on] as the new road which is now being constructed across it to the Glebe and Camperdown is finished. The appearance of Pyrmont is very unprepossessing from the complete absence of Pyrmont is very unprepossessing from the complete absence of all trees * [see footnote below.³⁸] and from the bareness of the sandstone rocks cut away by many large quarries which supply the largest part of the stone used for building purposes in Sydney.

Many of the inhabitants are doubtless quarrymen, but some of these located in small straggling cottages near to the quarries. Passing over Black Wattle swamp cove by the embankment and bridge which are being constructed I reached the better parts of the Glebe and Glebe Point, comprising

The Glebe

is a thickly populated suburb chiefly of recent date. The part which I now describe is bounded on the East by the Blackwattle Swamp creek on the South by Parramatta Street and on the West by the Glebe Road. A somewhat distinct part of older state than the rest is that between Bery street and the Creek. It contains the slaughterhouses which supply Sydney with almost the whole of the butchers meat consumed within it; these border the creek, the waters of which bear away all the filthy refuse of the slaughter, becoming thereby thickened and coloured of the light coffee brown tint. The foul mud deposited in the channel, giving off a fearful stench render[s] this place as unhealthy and disgusting to one and all the sense as can well be conceived.

Yet on one side are a number of small streets or alleys, thickly built up with small cottages, situated but a few feet above the creek waters; they are almost entirely, as might be expected of the third class and of considerable age. The frontage to Parramatta street is chiefly occupied by wretched wooden buildings, and small shops. The remainder of the Glebe to the East of Bay street is of no very wholesome appearance being scarcely raised above the level of the creek and the flat shores of the cove, but to the west of Bay street the land rises and a marked and agreeable change takes place. Numerous small cottages or well built rows of small houses chiefly of brick or stone are here found. They are pretty newly built and are not unduly crowded while the main streets or at least the corners are occupied by substantial built shops of 2 or 3 stories. Bay street is wide and well placed for the limited traffic which must pass along it. In proceeding further away from Sydney the appearance of the Glebe still improves. There are innumerable small cottages of wood or brick probably built by the inmates, and though very little durable still for the present unobjectionable. Near the Angle of Parramatta and Glebe roads is a slight hollow rather densely covered by rows of small houses some of these are of third class rank but the rest of the Glebe belongs to the second with the exception of a certain number of first class houses bordering the Glebe Road. This is a pleasant wooded road leading to the rural first class suburb of Glebe point but from the sale of the lands on both sides of it, the first class rank in this part is not maintained. Excepting that the Glebe is almost entirely removed from business traffic and is contaminated by the slaughterhouses, it has much analogy with Woolloomooloo, containing a similar arrangement of the several classes, chiefly according to elevation. The frontage to Parramatta street is of course occupied by shops or public houses doing a large trade, since they are the first or last which the traffic along the Parramatta road meets with. The innumerable small houses recently erected with great haste and often of the worst materials must soon deteriorate and become both unsightly and unwholesome. There is an old corn mill in the Glebe but with the exception of such domestic work as dressmaking, tailoring, washing, shoemaking, etc there is no manufacturing industry carried on. There are a few retail shops, and some building yards.

³⁸ * In former days it would appear that almost all the trees in the neighbourhood of Sydney were cut down for firewood; hence the intolerably bare and unpicturesque appearance of many parts of the town, strongly contrasted with those few parts, such as the Glebe point, Domain, Barcom Glen. Etc. where the tall and somewhat elegant gum trees yet stand. Trees too are of some sanitary importance in affording shelter from the fierce summer sun.

From Camperdown I walked up a connecting road bordered by a few similar cottaged, to Newtown which is a large suburb of rather superior character. It is built so as to border the road leading over the elevated ridge which separates the flat swampy sands of Botany Bay from the stiff clayey lands and sandstone promontories of Port Jackson. This road leads to the village of Cooks River, to a considerable number of first class residences in the neighbourhood and there is also some traffic to the rural districts beyond Cooks River and some as far as George's River, including farms, market gardens, gentlemen's houses and wood-cutting stations. The High street as it may be called of Newtown has therefore an important appearance similar to that of many villages in the neighbourhood of London. There are good shops, inns, chapels, road side residences; there is a post office, a railway station, and the terminus of a line of omnibuses.

Passing further along the road there are many gentlemen's houses, and several first and second class residuary districts under district names such as Enmore, Sydenham etc are springing up. There are market gardens and fruit fields. There is only a small proportion of third class residents in the neighbourhood; these however much increase in the village of Cooks River where shell-burning is carried on. As a whole the appearance of the Newtown district is pleasing compared with either Redfern on one side and Camperdown on the other.

Sydney By Night

With a view to observe the social appearance of Sydney during that early part of the night which affords freedom to vice of several kinds, I perambulated most of the lowest parts of the city between 9 1/2 p.m. and 11 1/2 p.m. Although the outward appearance of the streets and the behaviour of the people does not afford more than very incomplete evidence of their social condition it is better than none and can be easily observed, and the comparison of various cities under similar conditions must afford many conclusions of interest.

Starting from the Exchange on November 10th 1858, I proceeded north along Lower George Street, an active business locality. Here most of the shops were open (9 1/2 p.m.) but the shopman who seemed generally to be the proprietor or his wife, was sitting or lounging about only half awake. Business, if there were any, was very sluggish. There were a few passers by and a few persons lolling out of the doors, but on the whole quietness and propriety reigned. There seemed to be few or no streetwalkers as would certainly be met in an English town. On reaching Argyle Street, I turned up it as far as Cambridge street along which I returned in a south-ward direction. This was not lighted with gas and by no means a smooth footway for a pitch dark night. Cold damp unwholesome smells assailed the nose combining with other disagreeable impressions of the place. But strange to say perfect quiet reigned here; every cottage was closed up and the blinds were drawn. In the higher parts of the Rocks, Gloucester and Cumberland streets there was a very little more stir, a few people gossiping at the corners, or moving homewards. Princes street was perfectly quiet excepting for the subdued murmur of conversation inside the dwellings which was in almost every part of the town audible. The interior of the dwellings too, with few exceptions appeared cheerful where a glimpse could be obtained. The family was generally round the central table or sitting about on chairs and sofa. The females were generally engaged in needle work, all were talking. In some cases the 'gridiron' or sofa-bed was prepared ready for sleeping in the rooms used as a parlour by day. Proceeding onwards by Charlotte Place into Kent street I ascended the steps into the row of small houses named Clarence Lane or Street; a mangleman at work here but otherwise all was quiet and closed up. In Margaret Place and Erskine street a few men were about the public houses, and a few in motion. I then traversed various parts of Sussex Ket and Clarence street. Little or no vice was apparent; nearly all the houses were closed; in some there were no lights; in many there was the murmur of goodhumoured conversation.

Of the public houses throughout the town I will now speak for all. They were all open but mostly empty or with only one or two customers. There in the main streets and places such as George street, Haymarket etc were rather more busy. I only saw one drunken man the way (in Sussex Street) reeling out of a Public House, and only a few instances of ale and other drinks being carried home. Indeed there was but little disgusting in the appearance of the public houses. In one case however, a foolish looking man perhaps more than half drunk was treating

a very unselect circle although including the host, hostess and their daughters to a very absurd and probably not very decent song, at which the young ladies appeared amused only within the bounds of modesty.

Approaching however the bad neighbourhood extending from Druitt St. to Goulburn Street, there were a few objectionable symptoms. A wife in a low hollow uniform tone of voice seeming as if half spent in the oaths which it had through a long life so constantly brought forth, was upbraiding her husband with causing the death of his two sons; the oaths flowed out in that smooth unhesitating manner which is the worst sin of deepest sin; they were the conjunctions and particles of her sentences, and her tone and words were altogether appalling. Still with only solitary instances all was quite in the neighbourhood.

The sky had throughout been cloudy and threatening; the weather rather close and warm. Now it began to rain. Not without some little hesitation I determined to examine Durand's Alley by night and then turn homewards. It was so dark I could only find my way with difficulty through it. For the most part the cottages in this den of infamy were closed and quiet; one of the most wretched was open and contained a shrivelled old woman and other low persons. How many of the most wretched and unhappy characters visible in Sydney must be liberated convicts retaining perhaps but a slight reminiscence of their first perhaps comfortable circumstances in England, and of their first steps in the awful downward race which ends but with death? As I came out of Durand's Alley two strong policemen entered and after enquiring at a few houses, entered one; they were doubtless inspecting a suspicious house, or apprehending some person who was taking refuge there. At the Goulburn Street entrance several girls were noisily sporting, almost the only ones of their class I saw.

I came home Liverpool street and across Woolloomooloo including the closely populated S.W. corner. All was quiet and dark; excepting ~~the closely~~ that in William Street there was a dancing sn in full operation. On the way my impression of Sydney at Night was more favourable than might be expected, but it may be this vice is only more secret.

Streets may be thus Classified

1. Thoroughfare or main road which directly connect distinct districts and conducts the traffic them.
2. Main direct streets, are those chief streets which divide up a district.
3. Main cross streets, generally run at right angles to main direct streets and are of less importance and width than the latter.
4. Back Streets, either affording a second entrance to houses in the main street, or occupied by additional houses subsequently built of an inferior class and size.
5. Special streets which only lead to some particular park or other place, and possess therefore no ordinary traffic.
6. Closed streets which are to shut as to have no traffic except that directly produced by the houses or other building in it.

Residences may be Distinguished into Four Classes as Follows

3rd. Houses inhabited only by labourers and others of low standing, evidenced by the small size and dirty disorderly condition.

2nd. Houses of limited size, 4 or 5 rooms, occupied by respectable tradesmen, shopmen, journeymen and other employees.

1st. Houses of superior size and appearance belonging to the upper class including merchants, chief shopkeepers, clerks, professional men, etc. also when in the country.

Mansion or villa residences, of considerable size and separately and specially erected

The districts over which houses of these respective classes extend are indicated by the following lines, drawn over them, and the relative closeness of the different series of lines represents roughly the proportion of the various classes of houses.

Artists	Grovers
Attorneys & Solicitors	Music sellers etc.
Auctioneers	...
Banks	Physicians
Barristers	Professors
Blacksmiths	Publicans
Boarding & Lodging houses	Registry Offices
Booksellers	Schoolmasters
Butchers	Schools
Coach prop. Etc.	Ship brokers
Chemists and druggists	Toymen
Coach builders	Tobacconists
Coach painter et.	Watchmakers
Confectioners	Wheelwrights
Cordial Man	
Drapers	To be done
Farmers	Timber merchants
Founders	Ship trades
Soda water man	Clothiers

	Residences	Shop supplying	Usual resorts (offices, ... etc.)	Amusements	
				Town	Country
Higher Classes					
(The Aristocracy	1.1	1.2	1.3	1.4	1.5
Large landowners					
All professional men	Dec. 18				
Bankers	Dec. 18	Dec,			
Large merchants					
Captains					
Middle Classes					
Shopkeepers					
Shopmen					
Clerks (not apprentices	2.1	2.2	2.3	2.4	2.5
Foremen					
Lower Classes					
All labourers					
Domestic servants	3.1	3.2	3.3	3.4	3.5
Churches Chapels	+				
Public offices and other buildings schools etc. *					

112	112.4	+ .4
111.0	111.4	+ .4
110.0	110.3	+ .3
109.0	109.4	+ .4
108.0	108.4	+ .4
107.0	107.3	+ .3
106.0	106.2	+ .2

105.0	105.3	+ .3
104.0	104.3	+ .3
103.0		
102.0	102.4	+ .4
101.0		+ .4
99.9	100.3	+ .4
98.0	98.3	+ .3
96.0	96.2	+ .2
94.9	95.2	+ .3

Towns

Remarks and Notes Upon the Map of Goulburn.

The distinctions between the several classes of dwellings are more than usually vague, the symbol [coloured, lead-grey dot] generally indicates a simple log-hut but comprehends also a great many brick and rubble stone cottages, often built in rows. Larger sized cottages are placed in the second class (o) while only a few of the best houses in the town are placed in the first class (1).

Goulburn is very judiciously laid out upon a plain backed by gentle slopes and bounded on the low side by the Mulwanee ponds a small sluggish stream little better indeed than a swamp. The general form of the town is that of a lengthened rectangle with two wings inclined at an angle. The streets are rectangular straight and of the uniform width of 33 yards or about 100 feet. The square spaces enclosed have a length along each side of 250 yards, except where they are subdivided. The streets are flat and unformed, so that they are very dusty in dry weather, and instantly turn to soft mud in wet weather, but the slope of the ground is so uniform that water quickly runs off, and any artificial drainage is as yet unnecessary. The water of the Ponds is muddy but otherwise pure, and is used in the town: when Goulburn increases however it is evident that it is become very much contaminated.

Nearly one half of the shops or stores (s) cannot be otherwise distinguished because they deal in two or three or even more branches of business. Drapery, ironmongery and grocery are generally united in one store and in many cases the collection of articles is most miscellaneous. Hay, corn, dairy produce, teamster articles, ironmongery, fancy ware, agricultural tools and machines are often seen together. In the smaller shops, bread, fruit, cordials, confectionary, small wares, milk are generally united. The only really distinct kinds of business indeed, seem to be those of Butcher, watchmaker, apothecary, snowmaker, cabinet maker and a few others.

The very large number of Hotels and public houses (viz. 20) cannot escape notice. The town has at present the appearance of the utmost prosperity for a comparatively extravagant number of buildings are now being erected. Many of these are large handsome stores, and hotels.

Goulburn is essentially of a metropolitan character; its industrial productions are entirely insignificant; ... beer boots and shoes, a little leather, soap and candles; ale, flour, are the only manufactures. The main spring of all the activity and wealth apparent is in the breeding of sheep and stock in the few districts, as well as the getting of gold. 21 surprises are these towns spring up without any visible support, and surrounded by nothing but the monotonous sterile bush.

There are only two considerable farms near Goulburn (within 2 or 3 miles). These are however well conducted, and at one I saw a steam engine and thrashing machine at full work. A great number of the huts or houses in the town have gardens in which potatoes, Indian corn, several fruits and a few other vegetables grow very successfully. The town is very devoid of trees, being built upon an open plain. Bricks are a very common building material; good freestone can be obtained at some distance among the ranges, but the rocks of the near ranges, consist of very hard splintery quartz and clayslate rocks are used for rough work. Lime is obtained from a very good limestone found probably at Yass or Queanbeyan.

Bark is scarcely employed here.

Remarks on the City of Melbourne

Our attention is strongly drawn to Melbourne by the fact that it is the chief town of Australasia and perhaps the chief sea port of the Southern Oceans, and it is still more strongly arrested by the wonderful circumstances that it has chiefly arisen within the eight last years, and that its site was only chosen 24 years ago. Victoria, thus, is an instance in which we see a

small state, with all its necessary and useful function suddenly called into existence, and the study of such an instance must supply useful information.

Melbourne is essentially a metropolitan town, even more exclusively than Sydney. Of the total importations into the Colony 82 per cent pass through Melbourne, and 14 per cent more through Geelong which can scarcely be considered a distant port. As there are few or no primary productive operations carried on near Melbourne, we have to study a body of some 100,000 person of various qualifications contributing to the wants of about 300,000 more who are distributed over the country and mostly engaged in gold mining, squatting or agriculture. The inhabitants of Melbourne then are only engaged in receiving storing and transmitting goods to the interior, shipping the exports and bullion returns and in carrying out the general regulations of Government. To this we must add such amount of trade, production and governance as is requisite within the town itself.

The main trade of Melbourne is closely concentrated in the older port of the town or Melbourne Proper and within this area a further concentration is very evident towards the middle of that side which lies along the river Yarra. The centre of commerce and monetary transactions lies at the junction of Collins Street and Elizabeth, and perhaps between that point and the junction of Elizabeth and Bourke Streets. Elizabeth and Bourke Streets may thus be considered the three principal streets and in the order here mentioned.

The offices of the General Government as might be expected are somewhat removed from the commercial centre, and do not exhibit any very distinct laws except that they are all within Melbourne proper and arranged somewhat symmetrically about the junction of Lonsdale and Elizabeth Streets.

Flinder Street of which one side is open down to the River Yarra is partially a marine street, although a great proportion of the marine business naturally belongs to Williamstown and Sandridge, which are on the shore of the Port. Still about Flinders Street and Lane are found most shipping agents and firms, the principal large merchants with their free or bonded stores. These stores are now often built of large size and in a substantial, [?] so that Flinders Lane almost presents a similar appearance to the vast ranges of warehouses in Liverpool London and the great seaports.

In Collins Street are most of the banks, and the offices of many merchants brokers, public companies [within] the town and country. Many of the principal retail establishments are in Collins Street but are found to an almost equal extent in Bourke Street spreading out further on either side, so that the centre of retail trade is slightly differently placed.

The site of Melbourne proper consisting of uniform uninterrupted slopes, it has followed that business spread over it in a manner equally uniform, and that those who desired a retired a pleasant residence could not obtain this in close proximity to the business centre.

The great number of persons who from the year 1852 flocked to Melbourne naturally sought business premises in the old town buying up perhaps old residences but their own residences were placed in some part of the wide and [in]extensive plain surrounding the town, to which access by level road was not difficult. The residential suburbs thus arising were the more distantly placed because the General Government reserved many large areas of land for future public purposes, and other tracks were of so low level as not to be secure from flood.

Towns

Social Map of Ballarat

Of its kind Ballarat is the most remarkable town in the world. Discoveries of golden riches before unheard of were made over an area of a few square miles of bushy country otherwise of little value and without a name. Countless crowds of persons rush thither from all parts of the world and within seven years there is built the large and permanent city which I have been examining. Its total population is represented at 40,000.

In such a town the ranks of society are of course curiously and unequally filling. Firstly there is the multitude of actual gold diggers and gold miners whose labour really supports the community of the town and to a considerable extent that of the colony. Among these are large swarms of Chinese, who must all be placed in the third rank. Of European diggers most also belong to the third rank, and retain alike under prosperity and poverty the same careless, improvident and drunken character. Many, however, and especially those connected with large mining undertakings may belong to the second class. But in addition to the diggers there are found a large class of dealers chiefly retail who supply every essential article. Tools, tent,

clothing and food are offered for sale in the greatest abundance and variety wherever considerable diggings exist, although it be hundreds of miles in the bush. These storekeepers chiefly fill the second class. In a large community like Ballaarat however, trade becomes very extensive and lucrative and many business firms or a wholesale character are established. The banking Companies also are tempted to establish banks where pecuniary transactions or such large extent take place, and the merchants, bankers, and their clerks thus introduced, form an incipient first class.

In Ballaarat the first class generally have residences in the township of West Ballaarat especially in the more westerly parts. A great number of second class however are here also to be found. Since so many very profitable mines have been opened in the township or near it, many miners have there erected tents or small wooden houses; otherwise all diggers dwell close to the alluvial workings.