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David Cowie

**The Evolutionist At Large
Grant Allen, Scientific Naturalism and Victorian
Culture**

**A thesis submitted in fulfilment of a Ph.D. in History, Philosophy and Social
Studies of Science**

**Centre for History and Cultural Studies of Science
University of Kent at Canterbury**

**Submitted 23rd July 1999
Corrected and Reprinted April 2000**

This thesis is dedicated to the memories of my Dad,

Henry George Cowie

and my Mam,

Irene Cowie.

Thank you for everything.

David Cowie

**The Evolutionist At Large: Grant Allen, Scientific Naturalism and
Victorian Culture.**

Abstract

This thesis concerns the extension of scientific naturalism across Victorian culture, as illustrated and embodied in the work of Grant Allen. It suggests that though there was a proliferation of scientific naturalism in to many areas, literature, art, history, religion, journalism, and that there was a colonisation of territory and a contesting of boundaries by the naturalists, it should not be assumed that this was a product of a position of strength. Growth in the cultural authority of science and scientific naturalism was relative, and other kinds of knowledge and cultural forms, especially the artistic and the literary, maintained a hold on the Victorian imagination so that scientific naturalism had to cast a net widely to gain support. Care needs to be taken not to assume that the ambitions of the naturalists became transformed into reality. Moreover, this expansionist naturalist agenda was one articulated in a commercial publishing context, and the expansion of scientific naturalism across Victorian culture took place within the context of changes to the system of the production and consumption of cultural goods.

Grant Allen's bibliography and intellectual project was wide ranging and extensive, and his work spanned the boundaries of aesthetics, literature and science, extending from technical scientific writing to sensationalist fiction. Grant Allen's work included scientific texts, books of natural history, short stories, novels, biographies, works of philosophy and sociology, histories, travel writing, art criticism, poetry and theology, totalling over seventy books in a period of just twenty three years between 1877 and 1900. There was however a continuity within Grant Allen's work, a continuity provided and framed by his absolute and total commitment to the values and cause of scientific naturalism, so that there was a scientific and evolutionary focus to Allen's project throughout all of its guises. Evolution not only formed the basis of his scientific inquiry into aesthetics and art, but also generated the themes, plots and narrative structure of his novels. It formed the moral lesson of each of his short stories, the subject of his poetry, the basis of his social and political thought, and even the frame for his series of travel books and his theology.

This thesis therefore has a number of aims and themes. At one level it is concerned to write a study of the work of Grant Allen and assimilate that work into the consideration of Victorian science and culture. At another level it is concerned to discuss the project of scientific naturalism and the place of evolutionary science in Victorian cultural life, linking that agenda to the production and consumption of cultural goods. More generally, I am also concerned with the way that science may be considered an aesthetic experience and entail aesthetic judgements for those involved, and with the connections between biography and history. There are parallels that can be drawn between Allen's work and the general project of scientific naturalism, that is, to produce a thoroughly naturalistic and evolutionary view of the world that was co-extensive with the range of cultural production and knowledge, and that was pre-eminent in that respect. In particular I want to suggest that Allen was extending the scope of naturalism and trying to reach out across to new audiences while expressing his own desires, interests and ambitions.



From Photo by

THE LATE MR GRANT ALLEN.

[Elliott & Fry.

The above photograph is considered by Mr. Grant Allen's family to be the most life-like portrait ever taken.

The Evolutionist At Large
Grant Allen: Scientific Naturalism and Victorian
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Introduction

Introduction: Grant Allen

Naturalist, anthropologist, physicist, historian, poet, novelist, essayist, critic, what place is to be assigned to this versatile well-equipped worker?

Edward Clodd in *Grant Allen: A Memoir, 1900* ¹

Aims and Themes

In 1894 J. T. Carrington, editor of *Science Gossip*, sought an “authoritative declaration” on the usage of the word ‘scientist’ which had recently been imported from the United States and appeared to be gaining currency in England. To survey opinion on the matter Carrington wrote to eight “prominent personages”, as Sydney Ross styles them, inquiring after their opinions on the validity of the word.² Those surveyed included: John William Strutt, the third Lord Raleigh, mathematician and physicist, and at the time Cavendish Professor at Cambridge; Sir John Lubbock, Liberal MP and writer on prehistoric society; Alfred Russell Wallace, winner of the Royal Medal in 1868, the Darwin medal of the Royal Society in 1890; George Douglas Campbell, the eighth Duke of Argyll, a statesman, geologist and biologist who argued against the evolutionists; Dr Albert Gunther, head of the Zoological department of the British Museum, and Thomas Henry Huxley, the zoologist champion of the new naturalism. All of these men were fellows of the Royal Society and they were all very distinguished within and without their own particular fields. One further figure was of interest to Carrington, and this was the “popular writer” Grant Allen, a name not so conventionally associated with evolution, science, the Royal Society, or indeed with the history of Victorian science.³

Grant Allen’s lack of prestige may well have been the reason Carrington selected him for his survey, that Allen was a lesser figure who could offer a different point of view on matters and who had a different kind of involvement with science than the

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other figures questioned. But the fact that Grant Allen was even thought of as a figure within Carrington's frame of reference, alongside Huxley, Wallace and Lubbock, suggests that he possessed recognition and an identity within science which historians have not usually attributed to him. Carrington's survey raises issues about changing definitions and status of science, the nature of scientific activity, and what the scope and remit of science was. Moreover Carrington's survey highlights the ambiguities in Grant Allen's project, ambiguities about the meaning and status of science in his work, his historical and contemporary identity and reputation, and the public orientation of his work. It is these issues and ambiguities that are the concern of this thesis, the continuity and diversity of Allen's work and the uniformity he saw in nature, the correspondence and coincidence of interests between Allen's project and the development of the programme of the scientific naturalists to contest boundaries and audiences, and the consideration of this project and programme within the context of popular culture and commercial publishing. This introduction begins by setting out the main themes and structure of the thesis, before turning to a very brief biographical note on Allen and a consideration of the work of Pierre Bourdieu which loosely frames this thesis.

Grant Allen's intellectual output was prolific and diverse. He published in the region of seventy books between 1877 and 1899 along with over one hundred and fifty essays placed in the most varied and prestigious journals. This work included scientific works on physiology, botany, physics and art, popular expositions of evolution on a vast number of topics, works of history, biography, religion, travel writing, poetry, short stories and novels. Underpinning this diversity though was an extreme dedication to science and a strong evolutionism derived from Darwin and Spencer. Grant Allen's project was the embodiment of the scientific naturalist

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programme and his work presents itself as a case study for the consideration of scientific naturalism in Victorian culture and society and across a number of contexts.

The initial subject of this thesis concerned the relationship of art and science in Victorian England, and in particular the way scientific naturalist writers such as Herbert Spencer, Henry Maudsley and Karl Pearson attempted to explain the origin and development of aesthetic products and sensibilities in evolutionary and naturalistic terms, yet also maintained that science was poetic, aesthetic and beautiful. This raised questions about the relations of science and art, about how naturalists were claiming the cultural authority to offer particular types of explanations about certain realms of human experience, and about how this authority was constructed and articulated. The boundaries of science and art appeared to be being contested and this had implications for considering the authority and territoriality of science.

As the research progressed a frequent name appearing was that of Grant Allen, who had produced not only well received work on the science of aesthetics and the evolutionary study of art, but had also been a travel writer, a populariser of science, and a popular novelist. Grant Allen appealed as an ideal case study of the issues that the original thesis was concerned with, as the general pattern of his work and its individual elements seemed to straddle and challenge the boundaries of the scientific, the aesthetic and the literary, the high and the low. Allen's work therefore became the focal point about which to discuss wider concerns about scientific naturalism and around which to spin the discussion of contesting boundaries and cultural authority. Grant Allen was constantly taking his project in different directions, constantly negotiating and challenging the boundaries of art, science and literature, yet throughout his work evolution and science were central.

Generally, the attention that has been given to Allen has been in respect to his fiction,

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and especially his novel *The Woman Who Did* (1895). Literary historians have considered Allen's work only briefly and have usually critically dismissed Allen. For example, Elaine Showalter describes Allen as "self-righteous", while Pamela Stubbs states that Allen is confined to "obscurity".⁴ Michael Shortland correctly notes that "while a mountain of research is developing on Eliot, Darwin, Dickens and Huxley, we still await detailed studies of such significant figures as Grant Allen, James Sully and George Romanes." Gillian Beer's *Darwinian Plots* commits a number of chapters to the work of Eliot and Hardy, but despite noting in the chapter concerning 'Sexual Selection and Women' that Grant Allen wrote an "important article" on aesthetics and physiology, Beer does not mention Allen's fiction, even though sexual selection recurs throughout his work and forms the central theme of his most famous novel, *The Woman Who Did*. Tess Cosslet similarly draws out the connections of scientific naturalism and Victorian literature, but limits the scope of that study to writers such as Darwin, Tyndall, Huxley and Tennyson.⁵

Moreover, we would be hard pushed to find more than a passing reference to Allen and his work in the literature concerning Victorian scientific naturalism let alone Victorian science. Of those writers who do mention Allen, Frank Turner refers to him as a minor player in the scientific naturalist movement while Peter Allen Dale mentions Allen as a man pursuing a scientific culture in his excellent book on the subject. Peter Morton gives a few pages and a good hearing to Allen in his book on Victorian science and fiction, *The Vital Science*.⁶ Beyond these sources Allen is given little mention. Desmond and Moore's *Darwin*, despite its extensive analysis of scientific naturalism and wide-ranging survey of Victorian science, only mentions Allen in the bibliography even though Allen wrote possibly the first biography of Darwin in 1884. Moreover, Desmond's *Huxley* mentions Allen as a "novelist".

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J.D.Y Peel in his biography of Spencer does not mention Allen at all, even though Allen was an ardent defender of Spencer's and Spencer recognising him as such. R.J Richards acknowledges Allen in his book on the emergence of evolutionary theories of mind, though only in respect to Allen's praising in verse form Spencer, and not Allen's own work on the physiology of the mind.⁷ Allen has therefore been only marginally studied, and even then this has tended to focus on only one aspect of his project.

A historically ambiguous figure such as Grant Allen also presents a problem to the historian in the matter of papers and sources. There exists no specific collection of Allen's papers that can be drawn upon for the basis of a research project. What letters there are, are fragmented and dispersed in various libraries, collections relating to other writers, and the archives of publishers. I have given details of these in the references.⁸ Allen's published work and the reviews of that material remains largely untouched and presents a rich set of sources. This is possibly what makes Allen so valuable as a subject, he represents the side of scientific naturalism, and indeed popular forms of science and fiction, that can be discarded by history but which is of great value to the historian.

This thesis concerns the extension of scientific naturalism across Victorian culture, as illustrated and embodied in the work of Grant Allen. It suggests that though there was a proliferation of scientific naturalism in to many areas, literature, art, history, religion, journalism, and that there was a colonisation of territory and a contesting of boundaries by the naturalists, it should not be assumed that this was a product of a position of strength. Growth in the cultural authority of science and scientific naturalism was relative, and other kinds of knowledge and cultural forms, especially the artistic and the literary, maintained a hold on the Victorian imagination so that

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scientific naturalism had to cast a net widely to gain support. The naturalists had to contest boundaries and territories because other sectors of the Victorian cultural field were powerful. Care needs to be taken, however, not to assume that the ambitions of the naturalists became transformed into reality. Moreover, this expansionist naturalist agenda was one articulated in a commercial publishing context, and the expansion of scientific naturalism across Victorian culture took place within the context of changes to the system of the production and consumption of cultural goods.

This thesis therefore has a number of aims and themes. At one level it is concerned to write a study of the work of Grant Allen and assimilate that work into the consideration of Victorian science and culture. At another level it is concerned to discuss the project of scientific naturalism and the place of evolutionary science in Victorian cultural life, linking that agenda to the production and consumption of cultural goods. More generally, I am also concerned with the way that science may be considered an aesthetic experience and entail aesthetic judgements for those involved, and with the connections between biography and history. I would suggest that there are parallels that can be drawn between Allen's work and the general project of scientific naturalism, that is to produce a thoroughly naturalistic and evolutionary view of the world that was co-extensive with the range of cultural production and knowledge, and that was pre-eminent in that respect. In particular I want to suggest that Allen was extending the scope of naturalism and trying to reach out across to new audiences while expressing his own desires, interests and ambitions.

Chapter one takes an overview of Allen's project and considers the continuity and diversity of Allen's work and his dedication to scientific naturalism. It discusses this continuity and diversity through a consideration of aspects of Allen's biography and bibliography and relates these to the development of scientific naturalism and social

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and cultural change in Victorian society. The chapter suggests that though scientific naturalism was relatively increasing in authority, it was not necessarily the dominant cultural faction, but had an interest in widening the scope of science and appealing to a wide audience. The chapter considers Allen's relationship to the scientific naturalist group and that group's relationship with other cultural authorities, the uniformity of science within Allen's work and his commitment to promoting and developing evolutionary naturalism, and also considers the development of the production and consumption of cultural goods. The chapter considers the evolutionist at large as one taking evolution to various intellectual territories, developing a total philosophical system, and raising public awareness of science.

Chapter two focuses upon Grant Allen's work on the development of a science of aesthetics and broadly considers the move of naturalism onto the grounds of art and art theory. The chapter views Allen's aesthetic work as the development of the agenda of the new naturalists to create a universal secular and rational knowledge, but asks the question of whether such a move was a sign of strength and ambition in scientific naturalism, or if it was a sign of relative weakness and that other factions were also powerful. The chapter considers how Allen developed the science of aesthetics, making the subject evolutionary and physiological, how he argued that science itself was an aesthetic enterprise, showing and enhancing the beauty of art and nature, and then considers the naturalists critique of art-criticism and romanticism.

Chapter three shifts the focus to popular science writing. Through Grant Allen's prolific output of journalistic essays the chapter considers the naturalist's appeal to common sense in support of scientific knowledge, suggesting that a call to widen the constituency of science was a way to broaden the support for science and gain access

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to a wider audience. Popular science writing offered Allen a much needed income, a way to develop his own position within the naturalist group by promoting their interests, and it was a way for that group to appeal to the public and gain access to a large audience who did not necessarily encounter scientific matter in their reading material. Allen was fulfilling the role of propagandist and populariser of the naturalist movement, and gained status within that group for doing so. The chapter considers how Allen reached an audience who might not normally have read science by publishing in various newspapers and literature based periodicals, and by developing a style that was noted as accessible yet informative.

Chapter four examines the evolutionary and scientific content of Grant Allen's novels, and considers how these works appealed to nature for their plots and thus had embedded in them an intellectual and moral framework that was derived from science. This chapter suggests that Allen's own move into fiction was precipitated by a relative decline in the public interest of science compared to fiction, which drove Allen to change the direction of his project and led the naturalists to seek alternative avenues for the dissemination of the ideals and knowledge of science. The chapter considers changes in the tastes of the Victorian reading public, which was increasingly for popular fiction, and how Allen reacted to that and used that form as a way to take the values and ideas of scientific naturalism to the public and to an audience who were not accessible to the men of science. Allen made his stories and novels vehicles for his evolutionary science, and in doing so opened up a route for the exposition of those values to wider and diverse audience.

Chapter five concerns Allen's later writing on the evolution of art and his series of travel guides. It examines the way Allen used the scientific gaze as a way of comprehending the new and the past, extending that gaze into the sphere of travel and

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tourism. This is viewed as Allen again attempting to raise public awareness of science and attempting to extend the aesthetic franchise into the privileged high brow interests of art and into cultural practices such as tourism and visiting galleries. The chapter considers Allen's work on the history of art and his series of travel guides, where Allen applied his evolutionary frame to fine art and to the comprehension of paintings and the history of art as an organic evolutionary process driven by differentiation and selection. The chapter also considers how Allen turned that theoretical position into the practice of visiting galleries and being a tourist by guiding the visitor via a route which demonstrated an evolutionary pattern and which explained individual paintings as variations of types or species of painting. Moreover the chapter suggests that this enterprise needs to be located in the context of a burgeoning travel literature and of Allen's commercial venture in helping his nephew Grant Richards establish his publishing firm.

Chapter six takes up the theme of religion, and looks at Allen's study of *The Evolution of the Idea of God*. The chapter argues that ideas of conflict between religion and science should not be wholly given over to ideas of nuance and continuity, as claims to continuity and assimilation could themselves be the source of such conflict. However, the conflict may not be visible in the texts themselves as it was manifest in the process by which the works were brought to and evaluated in the public eye. This debate links to wider concerns about the relations of scientific and literary culture and the social and cultural ambitions of the scientific naturalists. The chapter offers a critique of recent work which has tended to diffuse conflict between science and religion, before suggesting that though assimilation might be claimed within particular texts, in the public arena of publishing and reviewing such positions were seen as antagonistic, and indeed that positions of assimilation can serve to

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accentuate differences rather than resolve disputes. In any case, Allen's work suggests significant conflict between different groups representing science and religion and that there was great public sensitivity about issues regarding religion, suggesting an underlying social tension. Moreover, Allen himself critiqued Christianity in a violent manner, reducing Christianity to myth and even claiming Christ had never existed.

Biography and Method

I have so far set out the main themes of this thesis, and I now want to say a little about Allen himself, and about the work of Bourdieu whose work frames this study. This thesis is not a biography of Grant Allen. The thesis concerns scientific naturalism and commercial publishing as much as it does Grant Allen, but Allen still remains very much an unknown figure and I want to give a brief biographical/bibliographical outline of Allen in a tabulated form. In particular, I have noted biographical points of his early life as these are not covered in later chapters. I have also given an outline of Allen's bibliography to highlight the chronology and diversity of his work.

Charles Grant Blairfindie Allen, Grant Allen, was born in Alwington in Canada in February 1848, the second son of a Church of England clergyman who was said to have "religious scruples". Indeed Allen's father wrote to Alfred Russell Wallace in 1889 in support of Darwin, saying "I wish to see him proved right...so much embryonically leads up towards his views."⁹ Grant Allen grew up surrounded by the natural beauty of Alwington and Allen later said that "sweeter flowers blow there than any where else on this prosaic planet."¹⁰

At the age of thirteen the family uprooted and travelled to New Haven in Connecticut for a short time, before moving across to Europe where Allen was enrolled at the College Imperial in Dieppe. The family then moved to Birmingham in England where Allen attended King Edward's School.

In 1867 Allen entered Oxford University on a 'Senior Classical Postmastership' at Merton College to the value of £80 a year for five years. His study consisted of literature, moral philosophy, ethics, ancient history, philology and metaphysics. Allen also first read the work of Spencer during this time. Allen became joint editor of the *Oxford University Magazine* and

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Review, in which he published his first essays and stories.¹¹ While at Oxford Allen married his first wife, however she became ill and Allen attended her until she died two years after they were married. Allen wrote to his friend E.W.B Nicholson and said “I drop a tear. I had a deep affection for the dear departed.”¹² This had a severe affect on Allen who hardly had the will or money to attend Oxford.¹³ Allen was disaffected with his studies and he told Nicholson that all he wanted was “the two letters and as good a class as I can manage...I shall get an easy mastership, where there is lots of work and poor pay, and write into obscurity.”¹⁴

Following his graduation Grant Allen took a number of short lived jobs, firstly at Brighton, then at Cheltenham in 1872, before moving back to Oxford. Here he met his second wife Ellen Jerrard, whom he married in 1873. They moved to Reading where Allen taught again, before taking a post as Professor of Mental and Moral Philosophy at the Government School in Kingston Jamaica. Here he remained for three years. From the time of his arrival, Allen told his mother-in-law, “the general prospects of the College look very black” and his experiences did not improve. Allen wrote to Franklin Richards that he was running a “one man powered college”¹⁵ and he lectured “on every subject of human conjecture, from the weight of the sun and the path of the planets, the earthquake that shakes and the breezes that fan it, to the freedom of will and the nature of feeling, on the relative wrongness of fibbing and stealing.”¹⁶ The years were monotonous but they were productive and Allen devoted his time to reading the works of Spencer and Darwin.

Allen returned to England in 1876 and self-financed the publication of his first book, *Physiological Aesthetics* (1877). The book was well received, and Allen subsequently had science articles accepted by Leslie Stephen at the *Cornhill Magazine* and the *Gentleman's Magazine*. In July 1878 Allen's only son was born. These publications were punctuated by journalistic hackwork, and Allen moved to Edinburgh to work on Sir William Hunter's 'Gazetteer of India', before returning to Oxford and then moving to Lyme Regis.

In 1879 Allen published his second book, *The Colour Sense*, utilising left over chapters from *Physiological Aesthetics* and new material written in Edinburgh. This was again well received, but like *Physiological Aesthetics* was a financial disaster. Allen then moved on to journalistic work at *The Daily News* and *London*. However, Allen's health suffered and during 1879/80 he wintered in France and Spain. This was a pattern recapitulated throughout Allen's life, spending Summers in England, but Wintering abroad.

The early eighties saw a spate of science articles published in journals such as the *Pall Mall Gazette*, *The Cornhill Magazine*, *The Fortnightly Review* and *Mind*. Many of these essays were collected into critically acclaimed books, including *Evolutionist At Large* (1881), *Vignettes From Nature* (1881), *Colin Clout's Calendar* (1883). Allen also produced other books such as *Early Britain: Anglo-Saxon Britain* (1881), and books on botany, *The Colours of Flowers* (1882) and *Flowers and their Pedigrees* (1883).

However, Allen could not derive an income from this work and between 1883

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and 1895 his work was predominantly fiction based. Allen first published short stories in the *Cornhill Magazine*, followed by his first full length novel, *Philistia* (1884), a socialist book published under the name Cecil Power, and a the collection of short *Strange Stories* that same year. Allen then churned out stories at a prodigious rate, including *Babylon* (1885), *For Mamie's Sake* (1886), *This Mortal Coil* (1888), *The Great Taboo* (1890), and *The Duchess of Powysland* (1892), along with in the region of another thirty books of stories and novels, each of which, as well as being sensationalist fiction, was the exposition of one principle of science or another. In 1895, Allen hit on his great commercial success, *The Woman Who Did*, and embarked on the production of his Hill-Top novels in which he expressed his ideas freely and openly.

Though Allen's work from 1883 onward was superficially dominated by fiction, he also published what he considered to be one of his most important works, *Force and Energy* (1885), a consolidation of various themes of physical science. There were also other collections of science essays, including *Falling In Love* (1889), *Common-sense Science* (1887), and the more politically oriented *Post-Prandial Philosophy*, which *The Times* described as delivered under the "masquerade of the man of science."¹⁷

Allen's output after *The Woman Who Did* and *The British Barbarians* contracted, though there were other novels in a similar vein such as *The Typewriter Girl* (1897) and *Linnet* (1898). Allen published small amounts of fiction and science, mostly in the *Strand Magazine*, and these included the detective novels *An African Millionaire* and *Miss Cayley's Adventures*, along with short stories such as 'The Thames Valley Catastrophe' (1897). Within this short period he also published in serial form the popular science books *In Nature's Workshop and Glimpses of Nature*, again in the *Strand Magazine*.¹⁸ Along with this work Allen published his series of *Historical Guides*, a collection of books that gave an evolutionary tour of many of the cities of Europe. These reflected his work on the evolution of aesthetics, which Allen had also developed in his *Pall Mall Gazette* series on 'The Evolution of Italian Art' (1897-98). Allen also completed his life long work *The Evolution of the Idea of God* (1897).

Grant Allen died on the 25th October 1899, but worked until his last and was producing the volume *Hilda Wade* at the time he died. This book was completed for him by Arthur Conan Doyle, who wrote that in these final days Allen had "paroxysms of extreme pain" and would "give a cry and clasp his hands across his stomach, and wait until the pain passed."¹⁹

In the space of just twenty two years Grant Allen covered a vast intellectual and cultural territory, and he extended his science across a variety of subject matter and genres, taking to the public complex and serious issues of science, enacting the programme of scientific naturalism with its call for total natural knowledge and public education in science. As *The Times* obituary of the 26th October noted Allen

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“crowded into twenty five years work or so more than most writers would care to undertake in a much longer period.” This work was of a great variety in both style and subject matter, and *The Times* commented that though Allen may have had a “love and appreciation of scientific truth” he also possessed “an intensely aesthetic side.”²⁰ In a discussion about the all encompassing agenda of scientific naturalism, the aesthetic and narrative qualities of evolutionary science, and the growth and expansion in the scope and authority of science, Allen is an exemplary subject. This thesis is thus about the common values and interests of Grant Allen and the wider social movement he was a member of, scientific naturalism.

Pierre Bourdieu suggests that social relations are embedded in a context of struggle over cultural authority and the contesting of cultural boundaries. In particular I would like to very briefly note here Bourdieu’s concepts of habitus and field. The habitus is a system of dispositions and schemes which orders and generates an agent’s thoughts, perceptions and actions. Bourdieu defines the habitus as “an acquired system of generative schemes objectively adjusted to the particular conditions in which it was constituted”, which “engenders all the thoughts, all the perceptions and all the actions consistent with those conditions, and no others.”²¹ The habitus tends the agent to act in particular ways, to perceive ways to act, to impose particular meanings upon the world, and to perceive particular meanings in it, acting as “structured structures, predisposed to function as structuring structures”.²² The habitus has a durability and portability which permits it to exist through time and be consistent across space. It both structures and constrains the agent’s actions, and is capable of also running a thread of continuity through the agent’s actions and thoughts.

Like the habitus the concept of the field aims to transcend agency and structure, and through it Bourdieu stresses the importance of social relations in the construction of cultural works. For Bourdieu, “individuals do not move about in social space in a random way, partly because they are subject to forces which structure this space, and partly because they resist the forces of the field with their specific inertia.”²³ The field

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imposes itself on the agents who enter it, limiting their potential for free action, but the structure of that field is also altered by the presence of these new agents. “Fields of cultural production” Bourdieu writes, “propose to those involved in them a space of possibilities, that tends to orient their research even without them knowing it, by defining the universe of problems, references, intellectual benchmarks...in short all that one must have in the back of one’s mind in order to be in the game.”²⁴ Knowledge becomes defined in relation to against other positions in the space of positions. Entry to any of the fields is structured by the agent’s cultural capital qualifications, competence at deciphering cultural codes and indeed the structure and history of the field itself.

The cultural field contains a variety of sub-fields, including the literary, artistic and scientific. Positions in the field are strategic emplacements to be defended and captured. A complex of struggles takes place over these positions, struggles to establish the principles of domination, struggles to impose meanings upon the world, struggles over access to those meanings, struggles to control the boundaries of the field, struggle between and within fields for legitimacy and authority to speak on certain issues in particular ways. Disputes arise between the literary and artistic and scientific fields and there is struggle over the boundaries of those fields for dominance of the field as a whole.²⁵ Moreover, Bourdieu suggests that the cultural world is analogous to, is structured like, and behaves as if it were an economy. That is, there is production, circulation and consumption, competition, inflation, innovation and investment, and cultural capital and cultural goods have value, scarcity and rarity.

I would suggest that between 1850-1900 there were changes and struggles in the Victorian cultural sphere in which scientific naturalism had a high profile, and that Bourdieu’s concept of a field of positions over which there is contesting of authority and territory can be of value in interpreting. This field, and especially the ambitions of the scientific naturalists, also structured the possibilities Allen saw in his own work and it was within this cultural field that his project was mobilised and a position

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sought.

In his *Experiment in Autobiography* H.G Wells wrote that one person in particular was special to him, and this was Grant Allen. Wells' commented that in respect to his intellectual development "one friendly figure stands out amidst much other friendliness, that once reviled and now rather much too forgotten writer, Grant Allen. I do not think I have ever made a fair acknowledgement of a certain mental indebtedness to him. Better thirty five years late than never."²⁶ We can echo Well's comments here, that though Allen's work may have become forgotten or ill thought of, his work deserves attention. A study of the work of Grant Allen is opportune and such a study should not be confined to his fiction writing, but should integrate him into his scientific naturalist context and discuss that movement through his work.

Chapter 1

Evolutionist at Large: Nature and Culture in Victorian England

He loved nature as I have never seen it loved by any other man. He would dart towards some tiny flower by the hedgerow and talk of it with a quite beautiful sympathy; with an observation that seemed extra-ordinary to the average, and merely literary person.

C.K Shorter, writing of Grant Allen in 1900.¹

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Grant Allen possessed a “little pocket microscope” which, according to the poet and literary critic Richard Le Galliene, was “well known to his friends.” The little microscope was remarkable to Le Galliene and others because of Allen’s particular and peculiar attachment to it. As Le Galliene recounted, Allen always had with him a microscope, which he “used constantly to twirl and twirl between his finger and thumb as he talked, and without which he could not have talked at all.” Le Galliene added that he had seen Allen “stop in the middle of a sentence as he momentarily lost hold of it, and then once more go on flowingly as he had it twirling again.” Indeed, so struck was Le Galliene with Allen’s attachment to that microscope that he thought Allen’s “memory lived in that little optical device.” Richard Le Galliene was not alone in noting Allen’s attachment to that scope or the way it ignited his imagination. Alice Bird, a friend of Allen’s from his travels in Europe, noted that on country walks Allen would “gather a blossom, and handing round his *inseparable companion*, his pocket lens, would describe with enthusiasm the subtle devices by which at a special moment in its life the expanded blossom compels the visit of the pollen carrying bee.”²

The microscope, and the scientific vision that accompanied it, revealed to Grant Allen a clear, bright, pure and beautiful vision of nature and the world. It was a symbol of his commitment and attachment to science and of the portability of that science which remained with him no matter which fields of intellectual endeavour he ventured. Grant Allen’s bibliography and intellectual project was wide-ranging and extensive, and his work spanned the boundaries of aesthetics, literature and science,

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extending from technical scientific writing to sensationalist fiction. Grant Allen's work included scientific texts, books of natural history, short stories, novels, biographies, works of philosophy and sociology, histories, travel writing, art criticism, poetry and theology, totalling over seventy books in a period of just twenty three years between 1877 and 1900. There was, however, a continuity within Grant Allen's work, a continuity provided and framed by his absolute and total commitment to the values and cause of scientific naturalism, so that there was a scientific and evolutionary focus to Allen's project throughout all of its guises. Evolution not only formed the basis of his scientific inquiry into aesthetics and art, but also generated the themes, plots and narrative structure of his novels. It formed the moral lesson of each of his short stories, the subject of his poetry, the basis of his social and political thought, and even the frame for his series of travel books and his theology. As much as standing astride boundaries, Allen was collapsing cultural space into a scientific naturalist core, so that his scheme of thought consisted of a variety of elements subsumed under a common evolutionary model.

The *Evolutionist At Large*, however, was not just the scientific naturalist expanding into other territories or producing an over arching philosophical scheme under which all knowledge could be subsumed. It was also the evolutionist moving into or being exposed to a commercial and popular market for cultural goods and taking the ideology of scientific naturalism to the public. Allen's use of science in his project was a progression and expression of the programme of the scientific naturalists, and a choice made by Allen to make his own work distinct within the market for cultural goods. This thesis considers the extension of scientific naturalism and evolutionism across different fields and into popular culture. The portability of Allen's work chimed with the desire of the scientific naturalists to extend their scope and reach a wider audience. This chapter concerns Grant Allen's adhesion to science and his diversification into other fields alongside the relative growth in authority and scope of Victorian scientific naturalism. The first section concerns a discussion of scientific

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naturalism, the second section looks at the continuity and uniformities in Allen's work, the third section then turns to the diversity of Allen's project within the context of Victorian scientific naturalism, and the final section deals with social changes relating to the production and consumption of cultural goods.

Grant Allen and Scientific Naturalism

An analysis of Grant Allen's published books between 1877 and 1900 reveals two particular points, that Allen's work was very diverse and that there appears to be a very clear pattern to that diversity. I have divided a consideration of Allen's work into six periods of four years, and have noted the type and number of works produced in those years. Between 1877 and 1880 Grant Allen published just two works, both scientific analysis of aesthetics, *Physiological Aesthetics* (1877) and *The Colour Sense* (1879). Between 1881 and 1884, Allen published a further nine books, one history, one biography, five books of popular science or botany, and two works of fiction, *Philistia* (1884) and *Strange Stories* (1884). During the next four year period (1885-1888), Allen published one biography, two works of science, *Force and Energy* (1888) and *Common Sense Science* (1885), and ten works of fiction, including *Babylon* (1885), *For Mamie's Sake* (1886), and *The Devil's Die* (1888). The next four year period repeats this pattern (1889-1892), with nine works of fiction, including *Recalled to Life* (1891), *The Great Taboo* (1890), and *The Duchess of Powysland* (1892), only two works of science, *Falling In Love* (1889) and *The Tidal Thames* (1889), and one book about religion, a translation of the Attis of Cais (1892). The next four year period, 1893 to 1896. is even more stark, and in this time Allen produced just two works of science, *The Story of the Plants* (1895) and *Post-Prandial Philosophy* (1894), against thirteen works of fiction, including *The Woman*

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Who Did (1895), *The British Barbarians* (1895) and *The Scallywag* (1893). In the final cluster of years, 1897-1900, Allen produced nine works of fiction, five travel books, including volumes on *Venice*, *Florence* (both 1897) and *Paris* (1898), two final collections of popular science essays, and his life long study of religion, *The Evolution of the Idea of God* (1897).³

There is thus here a clear pattern to Allen's work, serious work on physiology dominated the first period, popular science the next, fiction for the next three, and then travel writing and religion in the last. Of course the pattern of the work was not as clear cut as this, though it does suggest a general trajectory to Allen's work, as all of the work Allen produced was underpinned by science and evolution as a philosophical and intellectual framework.

Within the diversity of Allen's work there was a uniformity supplied by his evolutionism and science, and in each of his works Allen attempted to consolidate or expand the authority of science and to advance the public understanding of evolution. There was a correspondence of interests between Grant Allen's project and the programme of the naturalists. There are parallels between the advocacy of science as the source of all knowledge in scientific naturalism and Allen's own adhesion to science, and in the extension of that naturalism to all fields of knowledge and the diversity of the work Grant Allen produced. There is therefore a need to locate Allen with the project of scientific naturalism.

Peter Allan Dale has recently given consideration to scientific and positivist responses to Romanticism. Dale suggests that a general theme of Nineteenth century literature was a loss of totality, and that though there was some attempt to reintegrate Religion into culture, by the 1860's a new totality was sought, of which the two key responses were Marxism and scientific naturalism. Dale suggests that there was

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widespread reaction to Romanticism by positivist writers who claimed to possess privileged access to truth and knowledge. This was not just in the scientific works of Spencer, Huxley, and Harrison, but also in more literary works by George Eliot, George Gissing, George Moore, H.G. Wells, Leslie Stephen, G. H. Lewes, Grant Allen, and even Thomas Hardy. Dale suggests that positivism was a revolt against theism and metaphysics and that it became the dominant intellectual force in the second half of the Nineteenth century, producing an all-encompassing theory of knowledge, mind, society, morality, and language. Peter Morton notes a very similar cultural impact of science and that the influence of science was massive.⁴

F.W. Turner has also noted the impact of scientific naturalism on the cultural landscape of Victorian England. Turner includes with this group Huxley, Spencer, Tyndall, Darwin, Stephen, Clifford, Galton, and more minor figures such as Edward Clodd and Grant Allen. I have adopted Turner's analysis of this group and its aims, partly because it is so thorough, but also because it is not as dogmatic about the success of the naturalists as other writers. Turner suggests that the new naturalists "sought" to bring about a secular culture to replace the old ecclesiastical and literary elite, and persuade the public to think scientifically and raise the status of science.⁵ As Turner put it "Huxley and others believed the New Nature and the scientific theories attached to it sufficient for the expression, explanation and guidance of human life. A wholly secular culture seemed possible."⁶ Turner suggests three central tenets of scientific naturalism, a commitment to uniformity in nature, that that uniform mechanism was the process of evolution, and a belief in psycho-physical parallelism. This was more concretely expressed in Dalton's Atomic theory, cosmic evolution and biological evolution, and the idea of the Conservation of Energy. These were bound up in a programme to attack a clerical elite, extend natural knowledge to

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all realms of knowledge, and to create public support for science.

Though not a politically or socially unified group the scientific naturalists were mutual friends and possessed mutual enemies, and were bound together by their conviction that scientific knowledge was the only knowledge and that science was the key to moral and social progress. As Herbert Spencer wrote in answer to his own 1859 question, 'What Knowledge is of the Most Worth?', "the uniform answer is - Science. This is the verdict on all counts...necessary and eternal as are its truths, all Science concerns all mankind for all time."⁷ T.H Huxley outlined these values and aims in a number of essays, but they are especially apparent in 'The Advisableness of Improving Natural Knowledge' (1866) which encapsulated the new naturalists desire for cultural authority and the key role the education of the public in science had to play in that. In this essay Huxley argued that there was social and moral value in scientific knowledge and that the great advances in society over a course of some two hundred years could be attributed to science.

In this essay we can see Huxley claiming the superiority of the naturalist philosophy, the desire to extend the scope of that knowledge and the call for the education of the public in science. Huxley noted that, "there is but one kind of knowledge, and but one method of acquiring it."⁸ This knowledge was based on empirical methods which tested belief against the reality of nature and its laws. This essay implicitly rejected knowledge grounded on Religion or faith, and Huxley wrote that "the improver of natural knowledge absolutely refuses to acknowledge authority as such" and instead cherished scepticism and the "annihilation of blind faith."⁹ Valuable knowledge was that which had been tested against the facts of nature. The man of science he noted "has learned to believe in justification, not by faith, but by verification."¹⁰ This was opposed to knowledge grounded on faith, on belief in authority for its own sake, and

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truth accepted on faith. What Huxley wanted to note was that “the improvement of natural knowledge is effected by methods which directly give lie to all these convictions, and assume the exact reverse to be true.”¹¹ The ideas of natural knowledge, that the universe was practically infinite, that the earth was a fragment of the universe, man is one of the life forms on it, and that there was a definite order of the universe, were all encompassing and far reaching. If such knowledge was valid in one field then it could be extended to others, and Huxley wanted natural knowledge to “become co-extensive with the range of knowledge”.¹² Indeed Huxley suggested that it was “our highest duty to recognise the advisableness of improving natural knowledge, and so to aid ourselves and our successors in our course towards the noble goal which lies before mankind”.¹³ Huxley was thus articulating and formulating the naturalist agenda, that the only true knowledge and authority was scientific knowledge, and that there was value in extending that knowledge to all fields and to inculcate that knowledge in people.

These intellectual, professional and territorial claims were entwined with concerns about knowledge and faith. As Turner has noted, conflict in respect to science and religion was a product of the professional redefinition of the men of science who sought to gain authority and prestige and to shift the values upon which such authority was attributed and distributed.¹⁴ There is thus a need to note an antagonism between the scientific naturalists and religious authorities, and in particular thinkers and writers who pronounced Christian beliefs.

Conceptions of the relationship between science and religion have recently emphasised a nuanced understanding of a variety of assimilations between the two. Conflict has been played down while the variety of positions taken in respect to evolution and Christianity in Victorian society have been emphasised. James Moore

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has suggested that the warfare metaphor is inadequate to describe the Victorian 'conflict'. As there was not a polarised, organised or antagonised effort on the part of the men of science to attack religion, Moore argued that a conflict did not exist. Moore then characterises a variety of responses to Darwin that assimilated science and religion: Darwinism, Neo-Darwinism, Christian Anti-Darwinism, Christian Darwinisticism, Christian Darwinism and Darwinisticism.¹⁵ Such nuanced analysis, valuable as it is, overlooks however the complexity and strength with which conflict itself was expressed. Moreover, Moore focuses on the textual expression of assimilation, rather than look for public reaction and debate. Assimilations themselves even provoked public conflict between various groups, particularly between the scientific naturalists and more romantic and Christian cultural authorities.

Grant Allen's work demonstrates this well. His book *The Evolution of the Idea of God* claimed not to attack Christian thinking, but Allen was a violent reactionary against Christian authority, and though his book was very careful about how it discussed the history of religion, it was publicly denounced and met resistance from publishers and reviewers because of its evolutionary content. Though it claimed to assimilate evolutionary science and religion, the book was a deliberate and concerted effort to deny the basis of religious authority and to reduce Christianity to a mere passing moment in the evolutionary process. Allen described religion in evolutionary terms, not evolution in religious terms. Similarly, scientific naturalists sought to remove faith from knowledge and produce a secular culture, and though the conflict regarding faith, religion and Christianity may not have been an essential or simple one, it did exist and was grounded in professional conflicts, sociological struggles over cultural authority, and heated debates about epistemology.

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There is a danger though of falling for the rhetoric of the new naturalists and of accepting ambitions for actuality and image for reality. We should thus think of the scientific naturalist programme as aspirational as much as something that was achieved. The American social historian Martin Wiener has forwarded a controversial counter-image to that of Turner and others, which suggests that the Victorian middle class were culturally inert and lacked imagination and ambition. The middle class, he suggests, were anti-industrial and their interest in enterprise faded as they became gentrified. Though Wiener accepts that an alternative image existed, of pragmatic, calculated, scientific seriousness, this was rejected and a romantic and rural ideal was embraced. With this the middle class became “drenched in romance”.¹⁶ This culture is invoked by Wiener to explain the decline of English economic fortunes at the end of the Nineteenth century. Middle Class culture remained romantic rather than becoming rational.

I want to suggest that neither the extreme pro-science image of Dale or the pro-romantic image of Wiener reflects the whole picture, and that what can be identified was competition between a variety of groups, literary, scientific, artistic, over cultural authority and territory. Moreover, I would suggest that though the scientific naturalists were an expanding group with great ambitions, there still remained a powerful literary and artistic culture against which science competed for authority, consisting of romantic and humanist thought. Indeed, it was because the scientific naturalists were not the dominant intellectual group that they needed to move in to other territories and convince the public of their superiority.

Between 1850 and 1900 it is possible to note three particular groups, writers, men of science and artists who rapidly expanded as a sector of the Victorian occupational structure (see p.53, table 1). Authors, editors and journalists for example numbered

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2671 in 1851, but had increased to 3851 by 1871, an increase of 44.18%. In 1891 this group numbered 5771, an increase on the 1871 figure of nearly 50%. Scientific persons also grew, from 442 in 1851, to 1048 in 1871, and to 1962 in 1891. These are inter-census increases of 137.1% and 87.21% respectively. Similarly, the group classed as artists experienced rapid growth, increasing by around 98% between 1851 and 1871, and over 350% between 1871 and 1891. These figures chime in a quantitative way suggestions about the growth of science and the struggle over totality, and suggest a burgeoning and intense cultural field.

Herbert Spencer's analysis of the evolution of the professional institutions, as published in the *Popular Science Monthly* during 1895, echoes in a qualitative way the suggestions of the census figures. Spencer's main point in this series of articles was that through a process of evolution the professions had become so distinct that each had developed its own institutional framework and that through periodicals there was a sense of integration and community among each. Spencer divided the professions thus, (i) the physician and surgeon, (ii) the dancer and musician, (iii) the poet, actor and dramatist, (iv) the biographer, historian and litterateur, (v) the man of science and the philosopher, (vi) the judge and the lawyer, (vii) the teacher, and (viii) the architect, the sculptor, and the painter. What is notable apart from Spencer's awareness of the growth of the professions and that each group was "increasing life", is his perception of a striving for differentiation between these groups and that each profession laid claim to a particular body of knowledge.¹⁷

In built into that conception of differentiation was the sense of competition and struggle between these groups and of the desire to possess particular intellectual territories and to enhance their status. We can read this not just as Spencer's analysis of the historical process by which the professions had evolved, but also as his

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perception of how, in his own time, these cultural groups related to each other and that there was debate and struggle over cultural authority and territory as different cultural factions, especially the artistic, literary and scientific, attempted to claim prestige or to define the grounds upon which prestige was to be ascribed.

These various groups, men of letters and men of science, romantics and rationalists, came in close contact and vied for the possession of intellectual territories. The Metaphysical Society, for example, formed in 1869 was a site of both co-operation and conflict.¹⁸ Its members included Ruskin, Balfour, Stephen, Lubbock, Manning, Clifford, Huxley, Tyndall, Bagehot, Mivart, Tennyson, and Froude. The society met nine times a year in London to give papers concerning the relations of science and religion, with the first ever paper being “Mr Herbert Spencer’s Theory of the Gradual Transformation of Utilitarian into Intuitive Morality by Heredity Descent.”¹⁹ Here the various cultural factions debated very contentious issues, there was no romantic consensus, there was debate. David Robbins’ work shows that debates about cultural authority could spill over in to other sites.²⁰ Robbins’ study focuses on the formation and development of the Alpine Club, established in 1857. The Alpine club contained within it various factions, mostly professionals, but also industrial capitalists, bourgeoisie landed middle class, intellectuals and members of the lower middle class. Robbins suggests that there existed three “discourses of feeling” within the club, each with its own adherents and interests, and each of which vied to dominate the clubs ideals. There was a group concerned with Athleticism, including Leslie Stephen and Edward Whymper, a group concerned with Romanticism, including Ruskin, and a group aligned with Scientism, chiefly represented by Huxley, Tyndall, and Forbes. The Athletes desired competitive sport, the Romantics a moral connection with nature, and the Scientists an opportunity for observations and physical activity. These

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groups co-existed, but there was antagonism which manifested itself in continual struggle over the content of the club's articles and guidebooks.

The scientific naturalists could become institutionalised and wield great power in those institutions. This was not just in terms of organisations such as the British Association for the Advancement of Science, which provided a platform for the exposition of current scientific thought and for a positive portrayal of the men of science, but also in less formal clubs. The X club, formed in November 1864 was a monthly dining club in which nine very influential men of science and philosophers met and discussed professional and intellectual interests. Its members, as Ruth Barton notes, were T.H Huxley, John Tyndall, Herbert Spencer, George Busk, W. Spottiswoode, Thomas Hirst, Edward Frankland and J.D. Hooker. The members of this club were concerned with developing an infrastructure for scientific research, raising the status of science in society, and in developing a science free from patronage and supernaturalism. As Ruth Barton notes, the X club became a powerful interest group and worked together in specific cases to aid its members in the interests of science.²¹ In the 1850's and 60's the X clubbers were junior members of the Royal society, but by 1880, through careful political manoeuvring and collaboration they had become its senior figures, colonising its committees and key council positions by nominating each other to the posts.²² We can also note similar influence in the establishment of buildings in Kensington and their mobilisation of power to ensure Darwin a prominent burial at Westminster Abbey.²³ I want to suggest therefore that the scientific naturalists were an interest group that was increasing its influence and power and had a programme to make natural knowledge co-extensive with all knowledge and to bring science to the people. However, this programme should not be taken as one that was necessarily realised, as other factions emerged and

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competed, though this in no way reduces the force or commitment those scientific naturalists had to their programme.

Continuity and Uniformity

Grant Allen has to be located within the context of the scientific naturalists and their philosophy and aims. Grant Allen's life and work was dominated in all its aspects by his love of nature, his dedication to science, and his all encompassing belief that the idea of evolution could unlock and explain any aspect of the world. Though science satisfied a number of emotional and personal desires, it was also a vehicle through which to advance his own career and by which find his own position in the market. Allen's science was something that both structured his own project, but it also defined a position in the field for him, and through that he could develop a niche and make his own work distinct. Science was a way for Allen to fashion his own identity and intellectual project, it was a way to attach himself to a group of men he admired and progress the agenda of the naturalists, and it was a way for him to mark his own work out as different. Science and evolution thus satisfied for Allen a bundle of emotional, intellectual, professional and social needs.

Grant Allen's historical and literary reputation has generally been concentrated upon his fiction, however, his own ambitions and identity were connected with science. Allen's long term goal was to be accepted into the scientific community and he identified himself as a man of science. In the preface to *Strange Stories* (1884) for example, Allen wrote that he considered himself to be "by trade a psychologist and scientific journeyman", and that science was his "proper sphere".²⁴ Moreover, in the preface to *The Colour Sense* (1879) Allen indicated that he had ambitions in science and that "one of the main necessities of science at the present day is the existence of that organising class whose want was pointed out by Comte, and has been further noted by Mr. Herbert Spencer. To this class I would aspire, in a humble capacity, to belong."²⁵ As has already been noted this meant for Allen, a connection to the scientific naturalists, and Allen took up the call to extend the realm of science and the

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raising of the public awareness of science.

Specific chapters will consider how Allen developed this programme through his work, but I want to just give two examples here to suggest that Allen conceived of himself extending science across fields and taking it to the public. We can note for example in the preface to Allen's first book *Physiological Aesthetics* (1877), where Allen tried to show that aesthetic preferences were the product of natural selection, that he considered his work to be "the fuller development in a single direction of that which has been inaugurated for the whole field of Psychology by Mr. Herbert Spencer, Professor Bain, Dr. Maudsley, and other leaders in the science of mind."²⁶ Indeed he chose this title because it "exhibits the positive point of view from which the present volume is written."²⁷ Similarly in the preface to *Vignettes From Nature* (1881) Allen wrote that he thought that his essays "may perhaps do a little good in spreading more widely a knowledge of those great biological and cosmical doctrines which are now revolutionising the European mind, and which owe their origin to the epoch-making works of Charles Darwin and Herbert Spencer."²⁸ Allen was reflexive then about the existence of a class of scientific men, that there was a desire to extend natural knowledge to a wider remit of subjects, and that there was a role for the public exposition and inculcation on that science. Allen's own ambitions and desires were bound up with the importance of being a man of science. Allen's mission was to extend the scope of naturalism to new areas and fields and attempt to gain popular awareness and acceptance of the doctrine of evolution through his essays, short stories and novels. This dedication to science satisfied Allen's need for logical and rational solutions to problems, but Allen's desire to be a man of science could also pay professional dividends. By aligning himself with the new naturalists he could attach himself to a group who were acquiring power and authority in the cultural world.

Allen firmly believed that science and the idea of evolution had transformed the intellectual and social world. In his essay 'The Progress of Science 1830-1880',

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published in 1887, Allen argued that there had been a revolution in science, and he suggested that science had become the major force for change and good in Victorian culture and society. Indeed, Allen outlined in this essay all of the elements Turner associates with scientific naturalism, uniformity in nature, conservation of energy, and evolution as the mechanism of nature. In the previous fifty years, Allen suggested, science had become coherent and powerful. This was the product of the development of a particular trend in science, that of a sense of uniformity in nature. Allen identified uniformity as the “the great scientific triumph of our epoch.”²⁹ Modern science had given, to paraphrase Allen, a simple, comprehensible unified cosmos, consisting of the same elements, drawn together by the same forces, evolving along the same lines in accordance with the “self-same underlying principles.”³⁰ This was in contrast to the fragmented science and nature of fifty years previous. Within this uniformity Allen noted “two great principles”, those of evolution and the conservation of energy. Allen noted the development of evolution across a number of sciences, firstly in respect to the cosmos with Laplace, and then in geology, with Lyell, biology with Darwin, and anthropology and psychology with Spencer. Evolution was according to Allen the “mainspring” of the uniformity in nature. This was accompanied by developments within physical science, and especially the “profound fundamental physical principle, the conservation of energy.” Developments in this field, especially those by Mayer, Clerk Maxwell, Tait, and Balfour Stewart Allen suggested, had brought this idea to a modern form where, “all energies are mutually convertible, and that the sum-total of energy, potential and kinetic, is a constant quantity throughout the cosmos.”³¹

Modern science then, through the idea of uniformity, encompassing evolution and conservation of energy, had reached a point of maturity where

“It unifies and organizes all our concepts of the whole consistent system of Nature, and sets forth before our eyes the comprehensive and glorious idea of the cosmos which is one and the same throughout, in sun star and the world and atom, in light and heat and life and mechanism, in herb and tree and man and animal, in body, soul, and spirit, mind and matter.”³²

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Allen was developing the ideological rhetoric of the scientific naturalists and the specific intellectual elements around which that programme was forged. I have suggested here that Allen was in every respect a scientific naturalist, he identified himself with them, he generally desired the extension of natural knowledge to all knowledge and the education of the public in that knowledge, and he subscribed avidly to the key ideas of that group, that is uniformity in nature, evolution, and the conservation of energy. Moreover, the uniformity we can see in Allen's conception of nature, can also be seen giving uniformity to his entire intellectual project.

Within Allen's own work and project he developed a special admiration of the work and personality of Herbert Spencer. Spencer's work was simultaneously a philosophy that created a framework for Allen's project, it was something approaching a religion that gave meaning to his life, and it gave a source of authority and credibility for his work. Both publicly and privately Allen expressed his reverence for Spencer, and if we want to understand Allen's project we need to be clear about Allen's absolute dedication to Spencer. Spencer endowed Allen's life with meaning and through his public expressions to Spencer, Allen's identity was being fashioned and allegiances were being expressed and constructed.

Not long after entering Oxford in 1872 Allen began reading the works of Spencer, to which he became, as York Powell put it, a "whole souled disciple."³³ This was unusual for an undergraduate at the time, but York Powell was clear about the attraction of Spencer to Allen. It satisfied his tendency towards dogmatism, his like for logical order, his desire for a comprehensive system, and Spencer "satisfied his scientific bent."³⁴ Moreover, Allen advocated and defended Spencer with "boundless ingenuity and perseverance."³⁵ While teaching in Jamaica Allen buried himself in Spencer's work, even introducing him to the curriculum of the government school.

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Moreover, It is clear from correspondence that Allen devoured any Spencer that he could read, and was sent copies of the various sections of the *Synthetic Philosophy* as they were completed. Indeed Allen even used Spencer's great failure the *Descriptive Sociology* in his own work. It was from these works that Allen drew his own all pervading version of evolution. Allen's dedication to Spencer was total, and his own philosophy was the Synthetic Philosophy, especially Spencer's conceptions of the natural process of evolution on a cosmic scale, evolution as an organic process tending to complexity from simplicity, and of the development of the psychology of man as a natural evolutionary process.

This relationship with Spencer even took on a quasi-religious nature for Allen, and Edward Clodd noted in his biography of Allen that Allen's philosophy was one of "unqualified adhesion to the faith as it is in Herbert Spencer" and that to Allen Spencer was the "new evangel".³⁶ Indeed, Allen described Spencer as evolution's "prophet" and its "priest".³⁷ This religious aspect was best expressed in an essay written in the 1890's on 'The Gospel According to Herbert Spencer'. Here Allen stated that one's duty in religion was to understand your own body, understand the universe, understand society, and understand your mind, so that you can govern your own path through the world as an individual. One had to "understand the phenomena, organic, or inorganic, physical or psychical, by which you are surrounded, and the laws to which they severally conform."³⁸ This was best achieved through the work of Spencer, and Allen noted that "In contradistinction to all the preachers of Faith - -that is to say, of contented and uncritical Ignorance - Mr. Herbert Spencer stands forth as the preacher of Knowledge."³⁹ In very religious tones, Allen stated that in respect to Spencer; "He alone has taught us the orderly development of the cosmos as a whole, and every one of its component parts, in accordance with a single law of synthetic

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development.”⁴⁰ Allen thus elevated the work of Spencer to a religious position in his own life, and he dedicated his life to that work.

Moreover, Allen became a very public advocate of Spencer, especially in his essay ‘Spencer and Darwin’ and in his biography of *Charles Darwin*. In this book Allen outlined the importance of the work of Darwin to the development of evolutionary ideas within biology, but he argued that for evolution on a cosmic scale it was Spencer who deserved the credit. Allen wrote that though evolutionary ideas had been developing for two centuries, the theory was now “summing itself up at last in our own time more fully in the person and teaching of Mr. Herbert Spencer than any other solitary mouthpiece.”⁴¹ This was a suggestion reiterated in ‘Spencer and Darwin’, where again Allen characterised Spencer as the great evolutionary philosopher, limiting Darwin’s achievements to biology. As Allen put it “the total philosophical concept of evolution as a cosmical process - one and continuous, from nebula to man, from star to soul, from atom to society - we owe to Herbert Spencer himself, and to him alone.”⁴² Spencer appreciated these public declarations, and he wrote to Allen after reading the Darwin book to say “thank you for what you have done in setting forth in various places the relations in which I stand towards the evolutionary doctrine, because it is a thing which I have not been able to do myself, and which none of my friends have hitherto taken occasion to do for me.”⁴³ These defences of Spencer publicly aligned Allen with him and confirmed Allen as a dedicated evolutionist.

There was, however, a tension between Allen’s Spencerian philosophy and his Darwinian biology which manifested itself in respect to explanations of the mechanism of biological evolution. Allen adopted Darwinian natural selection as his explanation of the process of evolution but maintained Spencer as the great cosmic

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evolutionary philosopher and prophet, even though Spencer himself continued to support Lamarckian evolutionary ideas. Moreover, to complicate matters further, Allen rejected Darwin's theory of pangenesis as the mechanism for heredity and championed Spencer's notion of physiological units as the basis by which inheritance took place. There were thus a number of competing and rival interpretations of the mechanism of the evolutionary process, from which Allen selected Darwin and natural selection.

Peter Bowler has noted a number of variations of evolutionary thinking available in the years around 1900. Four of these would have been available to Allen in the years between 1870 and 1900. These evolutionary mechanisms were natural selection (the survival and reproduction of individuals due to adaptive benefits derived from variation), orthogenesis (linear progressive evolution), Lamarckism (the inheritance of acquired characteristics), and theistic evolution (that is variation and descent that is directed by the Creator's will). Despite Allen's dedication to Herbert Spencer, a Lamarckian, he chose for the purposes of biological evolution and the life sciences Darwinian natural selection.⁴⁴ However, we might note that Allen often praised Darwin for his contribution to biological thinking in order to draw attention to the work of Spencer and to suggest that in terms of the philosophy of evolution, Spencer was the major contributor.

Allen maintained Spencer as the great evolutionary philosopher, but argued, publicly, that Darwin was the most important figure in respect to biological evolution. Allen suggested that Darwin's work and the idea of natural selection was the central keystone which gave credibility, explanatory power and support to all other aspects of evolutionary thinking. Allen suggested that though other thinkers, such as Lamarck, Von Baer, Buffon, Chambers and especially Spencer, had developed evolutionary

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ideas in various areas, Darwin was an “immense and powerful accelerating energy” who successfully outlined a detailed theory of evolution in the crucial area of the life sciences.⁴⁵ The value of Darwin’s work, from Allen’s point of view, was that it made man a product of kinetic solar energy, demonstrated that every plant and animal existed for the sake of only that plant and animal, argued against a divine universe, presented a vast array of facts, experimented and observed (in a way Spencer had not but which Allen had), and that Darwin wrote with truth and honesty. Moreover, natural selection was the key to biological evolution.

Allen praised Darwin because to his mind Darwin had the hardest fight to win, that is in respect to the life sciences. Darwin’s challenge to the design theory and Allen’s perception of this as the vanquishing of the fortress of religion, certainly gave Darwin status for him. Moreover, Darwin put biological evolution on a “safe, certain, and unimpeachable basis”, while others before and after him had offered theories without evidence or that did not match the facts.⁴⁶ Moreover, Allen noted that Darwin “added to the primitive evolutionary idea the special notion of natural selection.”⁴⁷ Darwin pointed out that though all plants and animals vary perpetually, not all variations are adapted to the circumstances of the species, and thus more adaptive variations would increase the likelihood of success in the struggle for life. Good variations would persist more than bad ones. It was this principle allied with descent with modification that persuaded Allen of the merits of natural selection over the “lame evolutionism of Lamarck”.⁴⁸

There were therefore a nexus of values in respect to Darwin which encouraged Allen to accept his theory over others. These included Darwin’s method and use of facts and observation, his challenge to design and creation, the universal applicability of the theory to all life, the reduction of mind to matter, and especially the addition of

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variation and selection to the idea of descent. There may also have been something in natural selection that allowed Allen to associate his political and social values with the theory. Allen could see meritocracy in a version of selection that based success on the qualities of the individual, not just on what they had inherited, he could identify his own social struggles and politics with the struggle for life Darwin saw in nature, he could associate his own atheism with the public perception of Darwin's work, and he could take from Darwin's theory the lack of need for a directing or creative force. Allen threaded together in his own theory of evolution the cosmic process evident in Spencer and the biological one derived from Darwin to create a total evolutionary intellectual framework.

Allen's politics and evolutionism mutually reinforced each other, and his socialism, individualism, atheism and opinions on female emancipation, were all grounded on and legitimated by evolutionary ideals and were echoed in his call for a democratisation of knowledge. Equally, Allen's desire to expand the realm and remit of science was fuelled by his anti-monopolistic values which attacked privilege and aristocracy. Allen's politics were a peculiar combination of extreme laissez faire market ideals and state controlled socialism. These two apparently irreconcilable ideals were pieced together into a set of values where the laws of nature could be permitted to work without artificial constraint by the establishment of equality by the State. Artificial inequalities were a barrier to social evolution, and only by redressing those inequalities could natural law act freely and for the benefit of all. Preventing the free play of those natural laws, that is competition and selection, would be to the detriment of all. Indeed, Allen wrote to the Fabian Hubert Bland that to him individuals matter above all else, and he commented that though he was "as Socialist as Marx, I am individualist as Spencer."⁴⁹ Moreover, in one of Allen's earliest essays

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‘The Positive Aspects of Communism’, published while at Oxford, Allen wrote that “communism does not imply the cessation of progress.”⁵⁰

Allen outlined this philosophy most explicitly in an essay on ‘Individualism and Socialism’, published in the *Contemporary Review* in 1889, and also in the Land Values series of socialist pamphlets. Allen suggested in this essay that the ideas of individualism and socialism were not mutually exclusive, and indeed he suggested that individualism “is only possible where all start fair, without any artificial handicap whatsoever.”⁵¹ All men he suggested should have free and equal gift of the products of Nature, that is soil, air and sunshine, and the common stock of raw materials. All things in Britain however, were monopolised by a small hereditary class and this prevented the free access to all that could allow nature and the laws of nature to act without constraint. Only through state intervention could a starting point be reached where the free play of nature could be secured. The common foe was thus monopoly and privilege, and this transformation could be accomplished through socialism. Allen argued that any man who laid claim to the products of nature, was encroaching upon the common rights of all to have access to that nature. This common ownership of the property of nature, was an idea that extended to the philosophy of nature and in Allen’s work there is often the theme of opening up privileged and monopolised intellectual territories, even if in practice he was also marking out interpretation of that territory to a particular version of nature and science. There are thus clear parallels between Allen’s call for Land Nationalisation and his consideration of science as Common Sense and its concomitant democratisation of knowledge.

Allen’s socialism rarely reached any kind of formality, but he was a member of the Fabian Society, though his connection was at times barely cordial. When initially asked to become a member of the society by Hubert Bland in the 1880’s, Allen was

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vehement in his declination, writing to Bland “I’m afraid I can’t join the Fabian Society. For one thing I dislike organisations - I am too individualist to pull together with them. For another thing I differ in some important particulars from your programme. I fear restrictions on the freedom of the action of the individual.”⁵² Moreover he told Bland that he was content to continue “having my say in my own way.”⁵³ Allen did finally join the society, but, as Grant Richards notes, Allen never attended any meetings and by the 1890’s his subscription had lapsed.⁵⁴ Allen and the Fabians also had specific differences over the Woman Question and the manner of dealing with it, and Edward Clodd notes that the Fabians preferred to play a “waiting game” on the issue, a strategy Allen disagreed with.

Allen’s works on the Woman Question is possibly his most remembered and he was both radical and conventional in his opinions on this issue. Though Allen demanded immediate and total emancipation for women, he did so in a very qualified manner. As with his socialism, Allen envisaged the emancipation of women within the context of unhindered natural law. This placed, in Allen’s mind, a very firm role upon women in society, that of the mother to children, yet also demanded a freedom for women to make decisions about their lives and the removal of oppressive marriage laws that prevented women from choosing the partners with whom they reared those children. So though Allen was very outspoken about the lack of equality for women and demanded their emancipation, this call was qualified by a conception of the role of women as one clearly defined and framed by natural law.

These views were most clearly expressed in an article entitled ‘Plain Words on the Woman Question’, published in the *Fortnightly Review* in 1889. Allen argued in this essay that for the healthy growth of the population, “which on Darwinian principles I consider to be a condition precedent of national health and vigour”, women would

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play a central role.⁵⁵ Based on calculations about population production, Allen said that it was essential that all women must become wives and mothers and that the “best ordered community” was one where as many women as possible could marry, and that they have smaller families.⁵⁶ Allen claimed he wanted a woman to be “a great deal more emancipated than she herself as yet at all desires”⁵⁷ but this emancipation “should not be of the sort that interferes in any way with this prime natural necessity.”⁵⁸ This entailed for Allen an increase in social status, access to political power and changes to the law. As Allen put it “we ought for the moment to make things as easy and smooth as possible for her; we ought to remove professional barriers, to breakdown the absurd jealousies of men, to give her fair play, and if possible a little more than fair play, in the struggle for existence.”⁵⁹ Allen wanted artificial laws stripped away to allow natural law free expression for national progress. As Allen put it in ‘A Glimpse into Utopia’, the woman of the future “will know no law other than her higher instincts. No man will be able to buy or cajole her.”⁶⁰

This kind of pseudo-eugenic thinking caused a furore when Allen voiced these thoughts. Allen had detractors on both sides of the woman question, those who objected to the emancipation of women, and other supporters of women who considered Allen’s ideas “utterly detestable.”⁶¹ Allen advocated the direction of the laws of heredity as a source of social change and progress, or rather the non-direction of those laws, as for him this did not involve a programme of social control or biological and legal restraint, but more the removal of all legal impediments to nature to allow social and racial improvement. This position may have been viewed as a eugenic one, but it was not one grounded in control, it was a product of his desire for emancipation (as he saw it) for women. Alfred Russell Wallace commented for

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example that his own article concerning 'Human Selection' published in the *Fortnightly Review* was intended to show "that the various proposals of Grant Allen, Mr. Francis Galton, and some American writers, to attempt to direct improvement of the human race by forms of artificial elimination and selection, are both unscientific and unnecessary."⁶² But Allen's proposals were not constituted to create an artificial state. He sought to remove any artifice and permit nature and individuals freedom of action. If there was an aspect of control in Allen's ideas, it was in respect to what function women would be play in society, not which partners they should be permitted or not permitted to have as mates.

Allen was a eugenicist to the extent that he sought a model for social and racial progress in nature and biology, but he did not envisage a positive intervention in nature or any kind of formal prohibition or programme regarding reproduction that would bring about that progress. Instead Allen saw the sexual and social freedom and hedonism that he saw in nature as the route to progress. The role of the state in this was merely as a leveller, creating an economic and social context that permitted women to fulfil their natural roles, as he saw them, by removing artificial constraints such as marriage and the inheritance laws which prevented women from having a free choice of sexual partner(s). In his essay 'A Glimpse of Utopia' for example Allen claimed that in an ideal society women would be mothers with a number of children. In this state a woman would be free to develop her natural role and her intellectual or artistic abilities, so that "no cramping conventions will be allowed to cage her; no worn-out moralities will be tied round her neck like a mill-stone to hamper her."⁶³ It was this removal of artifice, not the imposition of it, that would then lead to progress. Allen thus saw natural law and heredity as a way to create social progress, but saw the control of natural law as a route to social decay. What

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can be seen here though is how Allen's politics, could be derived from and then fed back into his science. Allen's belief in evolutionary progress and his ideals about emancipation mutually validated each other.

One further aspect of this political persona was Allen's extreme atheism, as this influenced his science and conceptions of nature. Allen's version of nature needed no designer and the evolutionary progress he envisaged needed no guiding force. Moreover, the church represented one of the establishment pillars and "monopolist instincts" from which Allen wanted to free the production of knowledge.⁶⁴ Edward Clodd's life and letters of Allen contains an illuminating letter from Allen to a clerical friend which sets out Allen's opinion on matters religious. Allen wrote the letter after having received a complaint about his Woman novels, and he wrote to the cleric that:

"Many years of study, historical, anthropological, scientific, and philosophical, have convinced me that the system of the universe which you accept as true is baseless and untenable. I firmly and earnestly believe that I am in possession of truths of the deepest importance to humanity, and that I am working for the establishment of a higher, nobler and purer society than any yet contemplated on earth."⁶⁵

Allen was adamant that Christianity was no longer a valid intellectual or social force, and he based this on an appeal to the facts of history and science. He wrote in the letter that "I do not think that the theory of Christianity is historically justifiable; and if it is not true, I cannot do other than endeavour to point out its untenability to others."⁶⁶ Allen did point out this untenability, especially in his 1897 book *The Evolution of the Idea of God*, considered in chapter six, but the basis of all of his work was that nature was not divinely ordained and that Christianity was a product of social and cultural evolution. Moreover, Allen declared in *The Echo* that he was not an agnostic, as agnostics declared that they did not know if God existed or not. Allen was clear, "there is nothing to be known."⁶⁷ Allen assaulted religion because there was nothing in science or nature that could justify it. The methods and values of

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religion could not stand up against the methods of science. Moreover, science had produced a social good, and not just the social evils Allen saw inherent in Christianity and religion.

This cluster of values, of scientism, socialism, atheism and equality, amounted to a rage against privilege and the establishment that called for social equality and freedom for the common man. Allen opposed all senses of monopoly which he considered relics of savagery, and these included religion, patriotism, property, slavery, female oppression. Allen wrote that these were “the greatest enemies of the social life in humanity.”⁶⁸ To Allen monopoly was the worst of all evils, and to him “its very name is hateful.”⁶⁹ Allen’s pursuit of science was grounded in his responses to these concerns and he saw science as a democratising and emancipating force that could be accessed by all and that would lead to social and intellectual progress. In the same way that Allen derided and attacked social aristocracies and privilege, he also did so in the field of knowledge and culture, and therefore the scientific naturalists were his obvious intellectual companions.

Diversity and Variation

At every point in his project Grant Allen worked science into his writing, giving a continuity to his work and making each aspect of his project a vehicle for his evolutionism. At another level, within particular texts and in Allen’s style, he continuously combined science with imagination. The general pattern of his work, spanning science, literature and aesthetics, is recapitulated in each piece that he produced. I want therefore here to cover briefly and broadly the pattern and diversity of Allen’s overall project, and the specific character of each of the particular aspects of Allen’s work, being especially aware of the uniformity of Allen’s evolutionism across his project and his extension of the scope and awareness of scientific knowledge.

The diversity of fields, genres and styles across which Allen worked was extensive,

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and Andrew Lang, fairy-tale collector and novelist, once described Allen as the “most versatile beyond comparison of any man in our age.”⁷⁰ Allen possessed the ability to express himself almost at will on any subject, in any genre, on any particular topic, across a variety of styles. Allen’s contribution to periodical literature over the course of his publishing career, for example, covered hundreds of essays appearing in some of the most distinguished literary and scientific periodicals. These included *Nature*, *Mind*, *Popular Science Monthly*, *The Cornhill Magazine*, *London, Pall Mall Gazette*, *Longman’s Magazine*, *Fortnightly Review*, *Contemporary Review*, *The Strand Magazine*, *Macmillan’s Magazine*, and *Fraser’s Magazine*. This output therefore covered a great array of types and styles of work. Allen’s contributions to the *Cornhill Magazine* are a microcosm of the overall work. These writings ranged from short stories like ‘The Reverend John Creedy’ and ‘John Corn’s Freedom’, to essays on botany such as ‘Dissecting a Daisy’ and the ‘Origin of Flowers’. Natural History was also a frequent topic, with essays on ‘Insect Gods’ and ‘The Modest Scorpion.’ Allen also produced articles on his favourite subject, the evolution of art, and these included ‘The Growth of Sculpture’ and ‘The Aesthetic Analysis of an Obelisk’.

I want to view this diversity as a product of Allen’s dedication to the programme of the scientific naturalists and his desire to gain authority in the cultural field by attaching himself to a group who were in relative ascendancy. In all the varieties of Allen’s work he was extending the scope and accessibility of science, contesting assumed boundaries and territories. Allen was trying to widen the sphere of science to cover aesthetics and literature and the widen audience for science through popular journalism and fiction.

Allen’s work within the field of science was in itself varied, including texts on specific subjects such as his first two books on aesthetics *Physiological Aesthetics* and *The Colour Sense*, and also his work on physics, *Force and Energy*. However, he also produced well-received works on the subject of botany, and also more popular

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journalistic volumes such as *The Evolutionist At Large*, *Vignettes From Nature*, and *Falling in Love*. This entailed variety in subject matter, genre and style. Allen's first two books were attempts to transform the esoteric and protected world of art into a scientific enterprise by grounding the analysis and development of ideas about aesthetics in the reality of man's physiological processes and his biological evolution. This was a process Allen later extended to the subject matter of art itself, where Allen made the world of painting accessible to the man of science by arguing that paintings and subjects of art were a product of the same laws of evolution as man himself and that specific paintings should be analysed as organic types within a long line of differentiation. Following from these initial books were a host of essays on various matters of natural history, which were notable for both their lively and accessible style and the publications in which they appeared. Allen made science accessible not only by writing about it in a style that was understandable and readable, but he reached a wide audience by having his work placed in titles such as daily newspapers and journals which had as their staple light weight fiction.

In other fields of naturalism Allen also branched out, writing three volumes of botany, *Flowers and their Pedigrees* in 1883, and *The Colour of Flowers* in 1891, sections of which were published in *Nature*, and also *The Story of the Plants* in 1895.⁷¹ These books were well received and Sydney Vines, Professor of Botany at Oxford, wrote that "every page gives evidence of his exceptional power of accurate observation."⁷² Allen made the subject of botany, a favoured subject of the Victorian middle class as David Elliston Allen has noted, a route to the exposition of evolution.⁷³ Allen wrote in the preface to *The Story of the Plants* that he had produced the book "in language suited to the comprehension of unscientific readers" and that in the book he was "making the story of plants a first introduction to the great modern principles of heredity, variation, natural selection, and adaptation to the environment."⁷⁴ Generally, then, Allen was attempting to develop his own career by pushing out the boundaries of evolutionary science into matters such as aesthetics and

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art, and into the public domain through more popular subjects such as botany and through more accessible reading material in journalistic pieces. There were thus various strands to Allen's science, but each extolled the doctrine of the scientific naturalists and attempted to extend their programme in some way.

Allen's literary persona also produced a number of different dimensions, from the poetry of *The Lower Slopes*, to short stories such as *Strange Stories*, and novels like *The Woman Who Did*. Indeed Allen wrote nearly forty novels and collections of stories.⁷⁵ These works were evolutionary essays framed as stories, dealing with psychology, heredity, the influence of nature on character, evolution and ethics, transforming the money making exercise of story-telling into a vehicle for his views. Within his fiction, Allen was able to combine, or possibly he was unable to separate, his science and his literature. Allen was inclined to embroider his science with a literary style. The progression from that was the combination of literary plot and narrative with the facts and theories of nature and evolution.

If we consider one of Allen's poems, printed as the first section of one of his collections of popular essays *Evolutionist At Large*, we can see that Allen approached his poetry and literature as a hagiographic treatment of nature and science. The poem, entitled 'A Ballade of Evolution', (sic) set forth the action of natural selection within the context of the evolution of man's earliest ancestor in the simplest of life forms, in the "mud of the Cambrian main", to man as he now was in his "civilised hive". At each point Allen noted how "the fittest will always survive/while the weakest go to the wall."⁷⁶ To give one verse:

As an active ascidian again
Fresh forms he began to contrive
Till he grew to a fish with a brain
And brought forth a mammal alive.
With his rivals he next had to strive,
To woo him a mate and a thrall;
So the handsomest managed to wive,
While the ugliest went to the wall.⁷⁷

Allen's poems were a celebration not only of the evolution of man, but also of man's

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coming to the realisation and understanding of that evolution.

Allen's stories and novels took science to an audience who would not otherwise have read or even encountered science. The plot devices and morals of Allen's stories were derived from the mechanics of natural evolutionary laws. Grant Allen not only made his characters espouse the greatness of science and evolution, but built his scientific and evolutionary beliefs into his stories so that they were vehicles for his science. Allen's short story 'The Churchwarden's Brother' for example was an illustration of comparative psychology and the heredity nature of personality. Allen's most famous novel *The Woman Who Did* took two themes, the necessity of obeying natural law and the role of sexual selection in racial progress, and constructed from them a story about a woman who hates the artificial marriage laws which contravene her nature, who meets and falls in love with a man has a child by him, but refuses to marry him, then brings the child up alone. *The British Barbarians* was a novel which contrasted the clarity and freshness of the scientific vision of an individual from the 25th Century with the stagnant vision of tradition and religion in the 19th. *The Duchess of Powysland* discussed the way in which hereditary traits passed through families and the importance of following natural law, and then turned the plot around those themes.⁷⁸ Novels and plots became for Allen devices from the stock of evolutionary beliefs, plots which were allegories to man's relations with nature, embedding his science in the stories. As Richard Le Galliene noted Allen's novels "were always the illumination of some scientific or moral conceptions."⁷⁹ So though Allen's fiction initially appears a divarication from his scientific project, it was an extension of his popularising zeal and drew extensively and fundamentally upon his evolutionary ideals and his belief in science. Indeed each incarnation of that literary persona, be it poetry, stories or novels, explained and extolled the virtues of science and evolution. This took science to a wider audience and extended the philosophy of evolution into literature.

Another sustained aspect of Allen's project, along with his scientific study of art, his

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popular science, and his fiction, were his series of travel books, *Grant Allen's Historical Guides* published in the second half of the 1890's. In these works Allen made what appear to be frivolous and avowedly commercial works subject to his overall evolutionary scheme and his public expression of science. These books brought together many of Allen's interests, science, travel, art, and though he decided that "guidebook writing is no holiday", he worked hard at the project and produced five books in two years.⁸⁰ Allen extended his arguments about the evolution of art products into the practice of tourism and he told his readers to understand the places they visited as specimens of the evolution of man and culture. Towns, buildings, and the art within galleries, were explained in evolutionary and organic terms, and the tourist was encouraged to tour the town and the gallery in a particular pattern to reveal the process of evolution. Paintings were recommended as being visited in a specific order to show the general evolution of themes, and individual paintings were explained as examples of an evolving organic type. Allen transformed the practice of tourism into a scientific enterprise and made the spaces of art, the gallery, into a site for the consumption of science. So even though the books were about architectural and art history, and the visiting of historic sites and places of aesthetic interest, that experience and those places were subjected an evolutionary and naturalistic vision. In his travel writing Allen was able to import and accommodate his evolutionary world view, rationalising history, and stamping an evolutionary pattern upon that history and upon the gazing upon and experience of history in tourist sites.⁸¹

Allen began his analysis of God and Religion as an evolutionist and in his life long work *The Evolution of the Idea of God* Allen reduced ideas of God and Christianity to facts in the evolution of religion, not the primary force behind that evolution.⁸² The development of religion and man's conception of God were illustrations and examples of the evolutionary process and of the psychological evolution of man. Simple ideas about dead men and ancestors were elaborated on over time and they became attached to objects and nature, and these were then elaborated on further and

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myths and stories became attached to them, until those dead men were elevated to Gods. Evolution was thus a method and process by which to analyse religion, and religion had removed from it any sense of relevance to man's understanding of the world. Religion merely became another example of the universal working out the natural laws of evolution, not the guiding force behind that process. Allen here not only attacked the authority of any kind of divine account of man and his world, undermining the clerical elites and romantics, but also extended the remit of evolution to the matter of religion. Allen not only gave an alternative explanation of God and religion, he made that study an example of how wide-ranging and powerful evolutionary accounts could be.

We could add to these five major aspects of Allen's project a miscellany of other offshoots and interests, each of which were also thoroughly naturalist, extended the scope of that naturalism, or made that science and evolution accessible to the public. For example, in the history of *Anglo-Saxon England*, Allen brought together thoughts and ideas from his own education into a thesis that examined the colonisation of Britain.⁸³ *Nature* noted that the author had "taken pains to master all the recent research in archaeology and ethnology, and therefore the book has a more scientific flavour than is usual in such works."⁸⁴ In whatever direction Allen's project went, and in whatever field he worked, he took his evolutionism and science with him.

Grant Allen's work apparently falls into five phases which have a temporal and a professional dimension. Allen began his career developing a science of aesthetics, then became a popular science writer, later developing a career as a novelist, and then became a travel writer, before completing his work on theology and religion. To an extent these phases are artificial because in reality Allen produced many of these types of work simultaneously. Allen's science gave a continuity to his work and his project was unified by his commitment to scientific naturalism, and in particular the organicism and evolution of Spencer. Like the uniformity Allen saw in nature, there was uniformity to his writing, and though Allen's work was diverse on the surface,

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there was a common philosophy and values to its deeper structure. Allen's project, and the programme of the naturalists, however, were situated within the context of fundamental social changes that gave a new status and meaning to cultural goods and the producers of those cultural goods.

Commodities and Cultural Intermediaries

In the 1861 census Report on the state of the nations products, William Farr, author of *Vital Statistics* and the assistant commissioner of the census 1851-71, included a section on the development of 'Intellectual Products'. "There are intellectual products", Farr wrote, and he went on:

"Ideas go through a series of processes in the mind; and in the end they assume definite shapes, which satisfy, gratify, delight or benefit man. They are expressed by painters, sculptors, architects, and by artisans of every kind in the products of the arts; they can also be expressed in "winged words" and in printed characters. Art is a product. Truth is a product. Sensation is a product. Emotion is a product. Man has a thirst for knowledge, and science enables him to interpret and command nature. Hence physicians, philosophers, naturalists, orators, historians, poets, prophets, judges and statesmen produce the highest order of utilities."⁸⁵

What is to be noted from this extract is Farr's consideration of these intellectual products alongside, and in some ways superior to, material products and utilities. Truth, emotion and art are considered products filtered through a system of production which gives them a solid form which can be evaluated in terms of value and utility. Moreover those who produce such goods are to be ascribed social status due to the value of those symbolic goods. This commodification of the imagination was entwined with an expansion of those occupations involved in the production and circulation of cultural goods, here termed cultural intermediaries, and in particular occupations such as authors, men of science, and publishers.

Raymond Williams suggests that during the nineteenth century there was conflict over the meaning of the word 'culture' and that over the course of the century it took

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on a cluster of new meanings. These included culture as a habit of mind, the state of intellectual development of a society, as the body of the arts, and later in the century, to denote “a whole way of life, material, intellectual and spiritual.”⁸⁶ Such changes in meaning grew out of wider social transformations including the development of “industry”, “class” and “democracy”. As Williams writes, the development of “the word *culture* is a record of a number of important and continuing reactions...to changes in our social, economic and political life.”⁸⁷

Similarly, Thomas Richards has suggested that a consumer culture emerged during the second half of the nineteenth century. Cultural and symbolic goods came to act as signs in the communication and ascription of social status.⁸⁸ As Richards writes “for those who knew how to use it, symbolic capital paid dividends beyond the dreams of avarice.”⁸⁹ This culture, he suggests was generated by the middle class, directed at the middle class and was also “sanctioned” by them.⁹⁰ The intensification of the production and circulation of goods was part of a wider development of what Mike Featherstone describe as “capitalist consumer production” leading to an increase in material culture and the number of sites for the purchasing and consumption of goods.⁹¹ W.H. Frazer notes that the formation of the mass market was enabled by the accumulation of population growth, a rise in living standards and changes in the tastes of consumers.⁹² To paraphrase Frazer, there were more people, in more homes, in more towns, with more money to spend, with the desire to spend it. Moreover, income, disposable income, and living standards generally improved, especially for the middle class. Between 1850 and 1900 basic wages rose by 80%, though there were notable slumps in 1868 and 1874.⁹³ Moreover, families had more to spend on consumer goods. In 1860 for example the average family could spend 10 and 3/4d on sundries, which rose to 1s 8 3/4d in 1880.⁹⁴

These changes in the production, consumption and nature of cultural goods had a significant impact upon the projects of writers such as Grant Allen. Changes in the way goods were produced and consumed, and the nature and size of the audiences

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appealed to, affected the content and style of science, who that science had to be attractive to, what science had to say, and how and where it was said. Particular changes related to the expansion of the service sector and the middle class, the development within this middle class of a sub-class of cultural intermediaries who have an interest in the production and circulation of cultural goods, and the growth of industries involved in the production of cultural goods such as publishing.

The rise of the service sector is important in that it both structured the occupational sector involved in the production of cultural goods and changed the audiences involved in the consumption of those products. Occupationally the middle class were very diverse, and included doctors, men of science, merchants, shopkeepers, teachers, authors, bankers, journalists, manufacturers, clerks, managers, lawyers, traders, architects, mechanics, civil servants, surgeons and a host of other groups.⁹⁵ The middle class were expanding during the second half of the nineteenth century, not just numerically, but also in a widening of scope and creation of sub-classes within it and as contributor to the national income.

Despite an increase of almost 2 million acres of cultivated land between 1850 and 1870, agricultural employment in England and Wales declined from around 20% of the workforce in 1851 to 11.5% in 1881.⁹⁶ The manufacturing sector, however, maintained around 50% of the working population. The service sector grew over the period to around 40% of the employed population. In 1861 there were 5,246,000 workers involved in manufacturing, of a workforce of 10.5 million. The service sector contributed around 3 million to that working population. Twenty years later, each sector had grown considerably, manufacturing to 6,700,000 and service employment to 4,400,000.⁹⁷ A consideration of specific service sector occupational groups confirms this growth. Within commerce between 1851 and 1881 there was an increase from 45 000 employed to 225 000, an increase from .5% of the working population to 1.9%. In trade and retail occupations the increase was from 547 000 to 924 000, a rise from 6.5% of those employed to 7.8% Public administration also

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expanded, from 52 000 to 82 000 employees. These trends continued until the end of the century.⁸⁹ We can similarly note a growth in the numbers of tax payers at certain thresholds of income, a more accurate and useful assessment of middle class growth, and as Harrison notes “all lower levels of taxable income were increasing at a rate more rapid than that of the population as a whole; but the middle class and the lower middle class incomes were increasing fastest of all.”⁹⁹

A more significant aspect of this expansion was in relation to middle class contribution to the economy and national income. Over the period 1851-1891 national income in respect to agriculture declined from 20.3% to 8.6%.¹⁰⁰ Within manufacturing there was a slight increase from 34.2% in 1851 to 38.4% in 1891.¹⁰¹ The percentage generated by trade, transport, government and professional sectors grew from 32% in 1851 to almost 40% in 1891.¹⁰² Deane and Cole note a similar trend with respect to the service sector as a whole, with its contribution to national income rising from 46.7% in 1861, to 54.3% in 1901.¹⁰³ The consequence of this is that the economy became focused on information, commerce, consumption, and services, and as Lee notes, the service economy was itself a stimulus for growth and became increasingly so over time.¹⁰⁴

These general economic changes were accompanied by some specific changes in the occupational structure, especially in respect to those involved in the production of cultural goods. Indeed, so fundamental and intense were these changes that the census of 1861 necessitated new and clear categories to accommodate them. William Farr wrote in the report on occupation that “the progress of civilisation introduces changes in men’s occupations; and we have now for the first time placed with these three sub-orders [clerical, medical, legal] six others not perfectly defined, but still distinct, and entitled to figure here; literary men, artists, musicians, actors, teachers and scientific men.”¹⁰⁵ These occupations had been recorded in the census previously, but in 1861 they were elevated in status to professions and were accorded their own category and place.

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The cultural intermediaries, or “minstrels of capitalism” as Thomas Richards terms them, were a diversifying and powerful occupational sector, and included writers, publishers, journalists, editors, men of science, teachers, designers, agents in marketing and advertising, architects, librarians, curators, actors and theatre managers, illustrators, musicians, painters, sculptors and a range of related specialist professionals.¹⁰⁶ An analysis of occupational classifications for this group in the censuses between 1851 and 1891, suggests four trends. Firstly, the cultural intermediaries were absolutely growing, secondly they were expanding as a percentage of the employed population, thirdly, the rate at which they were increasing was accelerating, and fourthly, that in comparison to other sectors of the economy, the growth of the cultural intermediaries was rapid.

Table 1¹⁰⁷

	Cultural Intermediaries for England and Wales. 1851-1891 from census reports				
	1851	1871	1891	% increase 51-71	% Increase 71-91
Authors, Editors, Journalists	2671	3851	5771	44.18	49.86
Artists	8363	16562	79115	98.04	377.69
Scientific Persons	442	1048	1962	137.10	87.21
Teachers	94878	127140	195021	34.00	53.39
Booktrade and Prod.	39902	74441	135616	86.56	82.18
Acting and Theater	2035	7324	9831	259.90	34.23
Engravers and Picture mkr	8975	10775	15823	20.06	46.85
Musicians	10833	18861	38606	74.11	104.69
Planners, Designers, Archit.	7726	12538	19374	62.28	54.52
Prod. of Paper	24441	39989	74244	63.61	85.66
Total	200266	312529	575363	56.06	84.10

Table 1 takes 10 categories and compiles absolute numbers and percentage increases for the years 1851, 1871, and 1891. These categories are 1. Authors, editors and journalists. 2. Artists. 3. Scientific Persons. 4. Teachers. 5. Those in the Book trade. 6. Actors and Theatre managers. 7. Engravers and Picture makers. 8. Musicians. 9. Planners, designers and architects. 10. Those producing paper. A very rapid increase can be noted across all the ten categories between 1851 and 1871, and between 1871 and 1891.

It is not possible to meaningfully compile statistics for each of these 10 census categories in Table 1 as a percentage of the entire population, but it is possible if the group is taken as a whole, as in tables 2 and 3.

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Table 2¹⁰⁸

	Cultural Intermediaries as % of Employed Population					
	1851		1871		1891	
	number	% pop	number	% of pop	number	% of pop
Emp. pop	17775081		22712266		29003000	
Agriculture	2084153	11.73	1657138	7.30	1336344	4.61
Commerce	526599	2.96	815424	3.59	1399735	4.83
industry	3062429	17.23	5137725	22.62	7336344	25.30
Cultre ind.	200266	1.13	312529	1.38	575363	1.98

Table 3¹⁰⁹

	Comparison of Sector Growth Over Time, absolutely and as % of Empl. Population			
	% increase 51-71	% increase 71-91	% increase of pop 51-71	% increase of pop 71-91
Agriculture	-20.49	-19.36	-37.77	-36.85
Commerce	54.85	71.66	21.19	34.42
industry	67.77	42.79	31.30	11.82
Cultre ind.	56.06	84.10	22.13	44.17

In 1851 the cultural intermediaries represented 1.1% of the population, that is 200 266 people. This grew to 1.38% in 1871, representing 312 529 workers, and to nearly 2% in 1891, a figure of 575 363. Moreover, the cultural intermediaries grew more rapidly than other occupational sectors, as table 3 suggests, which gives an indication of the groups rate of growth, the rate of growth as a percentage of the population, and compares the rate of growth to three more traditional employment sectors.¹¹⁰ Commerce grew absolutely by 54.84% between 1851-71, and 73.65% between 1871-91, and as a percentage of the population by 21.20% between 1851-71 and 34.54% between 1871-91. Agriculture declined absolutely and relatively, and though industry and manufacturing initially outstripped the culture industries between 1851 and 1871, it fell behind between 1871-91. For the cultural intermediaries, the respective figures were of an absolute growth of 56.06% between 1851 and 1871, and 84.10% between 1871 and 1891, with an increase as a percentage of the population of 22.13% between 1851 and 1871, and 44.17% between 1871 and 1891. So though this occupational sector remained small, it was growing rapidly, its growth was accelerating, and it was growing and accelerating more rapidly than the more traditional sectors. The conclusion drawn from these figures is that the cultural intermediaries were a vibrant and expanding sector, in absolute and relative terms. They were a influential group, whose size, structure and interest was growing,

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reflecting the way that the economy was becoming increasingly information, knowledge and design intensive.

Two other groups within the cultural intermediaries which also developed rapidly, alongside those involved in art, science and literature as mentioned in section one, were education and publishing. Between 1850 and 1900 Victorian society experienced intense and acute activity in the educational sector. Such developments suggest a shift to an information and knowledge intensive society which valued and evaluated cultural capital. As Table 2 illustrates, in 1851 there were 94,878 teachers in England and Wales, representing .54% of the total population. This grew to 127,140, and .56% in 1871, and to 195,021 and .67% in 1891. Its rate of growth then was 34% between 1851 and 1871, increasing to 53% between 1871 and 1891. As a percentage of the whole population the teaching profession grew by 4.68% between 1851 and 1871, increasing to just over 20% between 1871 and 1891.¹¹¹ Education was a growing sector whose expansion was accelerating, which matched or outstripped traditional sectors. Though this group remained small, it was powerful and its impact significant, especially when combined with other educational initiatives which expanded educational finance and provision.

Government spending on education between 1850 and 1900 grew massively, from just £370 000 in 1850, to £1.27 million in 1860, £1.62 million in 1870, £4 million in 1880, 5.8 million in 1890, and over 12 million in 1900.¹¹² Successive education acts also attempted to extend the scope and authority of educational provision, with the Newcastle Commission of 1858 surveying elementary education, and the Taunton Commission of 1867 establishing three grades of Secondary school.¹¹³ The 1870 Education Act increased grants to 20 000 voluntary schools, established new board schools and allowed provision of schooling through the rates. The 1876 Act established committees in districts with no school board and this was followed by the 1880 Act which made schooling compulsory for those aged 5-10 years old. In 1889 the Board of Education was established, and county councils were permitted to levy a

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ld rate for technical education. The 1891 Assisted Education Act granted schools 10s per child to eradicate the need for fee paying, and between 1893 and 1900 leaving ages were increased.¹¹⁴ These initiatives increased the educational population and the number of people registered as scholars grew from 1 166 192 in 1851, to 3 150 048 in 1861, and 3 563 888 in 1871.¹¹⁵ The growth of education is important for a number of reasons, it suggest an increasing role of knowledge in the economy, that knowledge became more important to more people, and that in terms of social stratification and social reproduction, education and knowledge was significant.

Alongside education, the publishing industry was one of the key cultural enterprises in the circulation of information, the amassing of cultural capital, and refracting wider social changes onto the practices of writers, editors and workers engaged in the production of books and periodicals.¹¹⁶

Table 4¹¹⁷ Booktrade and Publishing Employment in England and Wales 1871-1891

	Printers	Bookbinders	Publishers	Newsagents
1871	44 814	15 474	9687	4416
1881	61 290	20 097	9910	5515
1891	86 486	25 736	13 696	9598

The publishing sector growth was sustained by an increasingly educated public, advances in print technology and the endeavours of entrepreneurial bookmen. Those engaged in book production grew by 86% between 1851 and 1871, and by 82% between 1871 and 1891, to a figure that in 1891 was over 135 000. As the 1861 Census report on occupation noted, these trades were “rapidly increasing”, a trend which continued throughout the last quarter of the century, as table 4 suggests.¹¹⁸ We must also consider qualitative changes in the industry. Not only did the numbers employed increase but the throughput of technology also advanced. Printing techniques in 1827 enabled the production of around 4000 units an hour, this had risen to 27 000 by 1857, and to 168 000 in the 1870’s. By the 1890’s the implementation of rotary presses took this number to over 200 000.¹¹⁹

Other changes within the circulation, distribution and sales of books and periodicals

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had also led to an increase in access to those goods. In 1853 advertising taxes were lifted, and in 1855 stamp tax was removed, reducing the cost of both production and distribution. Paper duty was abolished in 1860, and there was a reduction on newspaper duties in 1861.¹²⁰ Other institutions also restructured access to books. Charles Edward Mudie's lending library came to dominate the book trade, buying up to 1000 copies of popular texts, and it was able to dictate tastes and mediums, providing access to over 7 million books by 1900 with as many changes of text as the reader desired for just 1 guinea a year. The company took in around £40 000 per year in subscriptions.¹²¹ New booksellers and kinds of bookselling also emerged, such as the railway bookstalls of W.H. Smith, formed in 1846, and series of books such as 'Boots Booklovers Library', 'Popular Library', and the 'Railway Library'.¹²²

These structural, technological and legal changes were accompanied by changes in attitudes of the bookmen themselves. The new entrepreneurial bookmen approached literature as a business and marketplace which existed to provide profits. These entrepreneurs included John Blackwood, Alexander Macmillan, George Bently, James Catnach, George Newnes founder of *Tit-Bits*, Cyril Pearson of *Pearsons Weekly*, and James Payn. Some of these publishers specialised in scientific books, such as H.S. King.¹²³ Payn, literary prospector and one time editor of the *Cornhill Magazine*, was typical of these men. He averaged earnings over a 35 year period of £1500 per annum, and in 1879 he penned an article which noted the opening of the world of literature to capital, marketing and advertising.¹²⁴ When Payn took over the *Cornhill* in 1882 he immediately dropped prices and increased the amount of light fiction to boost sales.¹²⁵

Editors attempted to spread the cost of editions over the lifetime of a book, and the three decker remained the most popular form for the novel as it met the demands of the library stockists and locked readers into repeat purchases. This attitude also extended to serialisations. Publishers and authors sought to gain profits and exposure from periodical publications, and also from later book re-releases. Publishers

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required lengthy padded out texts for fiction, and on average novels were 920 pages long and around 168 000 words, all for a one off payment to the author of just £200.¹²⁶

This was accompanied a steady but rapid growth in the numbers, sales, and access to newspapers, periodicals and books as mid-Victorian England was engulfed by “reading mania”.¹²⁷ Literacy, a crude but suggestive measure, was more or less universal by 1900, rising from 62% of the population in 1851, to 77% in 1871, and 93% in 1891.¹²⁸ Literature of various genres and purpose proliferated, providing information and entertainment to those seeking self-improvement, adventure and romance. The content of periodicals reflected the mixed interests of the readership, and serious articles of history, science and philology could sit easily alongside both lightweight and serious fiction. However, tastes changed over time and the desire for fiction was insatiable, encompassing both popular novels and serious literature. There emerged then a technically advanced, commercially aware, and structurally organised system of book publishing, circulation and consumption which sustained and constituted a burgeoning literary culture. Commercial imperatives entered the book trade, and editors, owners and writers addressed themselves to the competition and demands of the market.

Grant Allen was a member of this new service class, he was one of those new cultural intermediaries, and his work was influenced by the development of the culture industries and the commodification of information. Allen began his career as a teacher, then became an author, firstly making a reputation for himself as a scientific writer on physiology and aesthetics, before moving into journalism and gaining recognition as a popular science writer, essayist and critic. Allen then took up story telling and novel writing, before turning to travel writing and art-criticism. The development and content of that project was mediated within the context of these new culture industries and they had an effect on the work and kind of work Allen produced. Though Allen was a dedicated evolutionist, his work was directed by what

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the market and publishers demanded, and this shaped the specific content of those works and their style. However, in Allen's work, he made his science the factor that marked out his work as distinct, exploiting the market to his own ends and giving the scientific naturalists access to a wider audience. Changes in the system of the production and consumption of cultural goods had an effect on scientific works, so that editors and the public increasingly dictated the subject and style of works. This new mass and popular culture could be utilised to spread the word of science.

The *Blackwood's* reviewer of Allen's 1889 book *Falling in Love* noted how the development of the publishing industry had benefited authors like "Mr. Grant Allen" who "would not have found utterance, had not literature become an anxious and precarious but not too laborious a profession- the result of increased necessities in the way of reading, and a large growth of magazine and periodical literature, in- which a handy man like Mr Grant Allen is exceedingly useful...."¹²⁹ In the introduction to *The British Barbarians*, published in 1895, Allen lamented about how it was difficult to get a publisher to take any kind of serious science work, and that what publishers wanted was easy money made from light books. This certainly had an effect on the kinds of books Allen put his mind to, and he commented that "owing to the stern necessity laid upon the modern seer for earning his bread, and, incidentally, for finding a publisher to assist him in promulgating his prophetic opinions, it has seldom happened that writers of exceptional aims have been able to proclaim to the world at large the things which they conceive to be the best worth their telling it."¹³⁰ The publisher had thus taken on a key role in structuring the production of works.

This was a theme Allen noted in other essays and prefaces but he especially identified issues in the publishing industry in his 1881 essay 'The Ethics of Copyright'. In this essay Allen meditated on the notion of property and knowledge, suggesting that attempts to fix the price of books would be counter productive to a burgeoning literary culture and that "an author has a natural right of property in his books".¹³¹ An author's book Allen wrote, "is a product of his free individuality, and is

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as much a piece of his property as the shoes are the shoemaker's....and he expects to be rewarded like any other labourer, in proportion to the current demand for that particular kind of literature."¹³² A number of points are noticeable in these comments, Allen's obvious sensitivity and awareness to the market, his conception that books are commodities. and that the writers of them are workers who have a right to own their intellectual property. As there were no publishers willing to take risks on a serious book, Allen thought that "many writers with good powers are compelled to waste their time upon 'pot-boilers', or to write under disadvantages, or to work hurriedly and inefficiently, because their trade pays so badly that they cannot afford to give all the time and attention to consult the authorities."¹³³ As the market and the tastes of the publishers became increasingly important and conservative, so the author had to focus on the production of the works they demanded.

Herbert Spencer noted some similar trends as Allen. Spencer maintained a long-term interest in the business of bookselling. He had been a sub-editor on *The Economist*, and had been a member of a pressure group, which included Dickens, which had successfully called for reform of the taxes on publishing and printing in the 1850's. Spencer had also advocated the reform of bookselling. In the 1890's Spencer wrote a series of articles in *The Times* concerning the changes he perceived in the publishing world in the previous forty years. In one piece he wrote about the impact of cheap books on reading and writing habits, which he claimed had led to trashy novels, but also noted that...

"Grave but enlightening books, scientific, technical, or philosophical, and volumes of dry but instructive facts, have been spread abroad, and many have been brought into existence which previously could not have existed. While the sales of them were narrowed by artificially enhanced prices, numerous works of thought and information remained unwritten or unpublished. Publishers refused them and authors dared not issue them....Increased sales consequent on lower prices have thus made possible much of the best literature which would else have been impossible."¹³⁴

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There is much propaganda in this piece, Spencer was campaigning against net book agreements, but we need not take his specific point to accept his notification of the influence of the publishing process upon the production of knowledge. What authors produced, was in response to the demands of publishers, and publishers chose to put out only books that could sell, which reflected upon the readers' ability to purchase or gain access to books. Though the market constrained the writing of an author such as Allen, scientific naturalism had an opportunity to develop that market to its own advantage so that it could access the public through new outlets and avenues.

Allen's and Spencer's comments suggest the way that authors of all kinds needed to be aware of market sensibilities, and we can note that throughout Allen's literary career he had to continually bear in mind that market for cultural goods. Though it would be too deterministic to reduce an explanation of Allen's project and the pattern of it to financial circumstances, there is little doubt that Allen's financial predicament, though not shaping his work, did direct his attention to particular kinds of products for a particular market. It was not until the success of *The Woman Who Did* in 1895 that Allen attained any kind of security or wealth, and as such his work was subject to the demands of the market and the taste of publishers and the public. Indeed, it is not unusual to find in Allen's letters his concern about the financial predicament, exclamations about how destitute he is, and how he needed any work he could find. For example, Allen wrote to Hubert Bland when refusing membership of the Fabian society around 1890 that "I am an invalid and I have enough to do to earn a livelihood for my wife and family."¹³⁵

There were points in his life where Allen was willing to undertake any kind of work to earn money. For example, when Allen first left Oxford, which he attended on a scholarship, he had to undertake any kind of teaching post to make a living. At first he took three such posts, in Brighton, Cheltenham, and Oxford, and then finally he moved to Jamaica for a time where he was Professor of Mental and Moral Philosophy. Even while at Oxford Allen was having financial difficulties, and Allen

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told his friend Nicholson that; “When a man has no money and can’t make any anyhow he finds it difficult to make any very definite plan for the future.”¹³⁶ Allen’s employment was sporadic, and Allen explained to Nicholson the precarious nature of the family finances. Allen wrote to Nicholson expressing his plight, saying “As far as recognition goes, I am doing very well this week...and I am going soon to give a Friday lecture at the Royal Institution. But I cannot make enough money to keep us afloat. It strikes me you may know of some literary hackwork - index making, cataloguing, compiling or anything of that sort...I am ready to turn my hand to anything, if only it can be got.”¹³⁷

These financial troubles complicated Allen’s always precarious health, and at one point in 1879 he needed to winter abroad. On hearing of this Spencer, Darwin and others raised a fund so that Allen could go to Southern France and Spain. According to Grant Richards, Allen claimed this saved his life, as he had been so ill. This in itself suggests that after just two books Allen had been welcomed by the scientific naturalist community, that the likes of Darwin, Spencer and Romanes would come together to support him when he needed help. There was a pattern repeated in Allen’s life as a man of letters and man of science: Allen took what work he could, and within the demands of the market set out to establish what best position he could. In particular we could point to the crucial turning points in the trajectory of Allen’s project, as will be stated in detail in the relevant chapters, that when he moved from physiologist to journalist, from journalist to popular science writer, from popular science writer to novelist, from novelist to sensational novelist, that he was both financially insecure and willing to supply publishers with what they wanted.

What is important is the way Allen maintained science throughout his project and was able to push forward the programme of the scientific naturalists in his work, using the new market as a means to educate the expanding audience in science and to value science. The new service and knowledge based society offered opportunities to the naturalists and their propagandists like Allen. But if the scientific naturalists

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wanted to be the dominant cultural force in Victorian society then they would have to compete with other emerging and expanding groups, and if they wanted science to reach out to the public and become part of popular culture, it would have to do so within a publishing market that valued knowledge as a commodity.

Conclusion: Science, Culture and Society

In his autobiographical *Memories of a Misspent Youth*, the publisher Grant Richards, Allen's nephew, presents a picture of Allen in the 1890's living a very leisurely and literary life. Allen spent his time visiting friends and travelling off to stay at "Herbert Spenser's (sic), going to Buford to see George Meredith, going down to Bournemouth to visit Robert Louis Stevenson, going to lunch at the Criterion, and on to the Savoy theatre, and at the Saville club." Similarly, in 1892 Grant Allen became one of the founder members of the Omar Khayyam Club, a dining club formed to celebrate the work of the Persian poet. Its fifty nine members, including Clement Shorter, Edward Clodd, Edward Gosse, George Gissing, Grant Richards, and occasionally Thomas Hardy and George Meredith. The club expressed a bond of intellectual commonality in Omar's agnostic combination of science and the arts.¹³⁸ This variety in Allen's social and intellectual networks reflected the diversity of his intellectual project. Allen produced different kinds of work at all times, but there was a general trajectory to his work which variously embraced science, fiction, journalism, travel writing, philosophy, and theology. There was though a continuity to that work, and the universal action Allen attributed to nature, and his anti-monopolistic instincts in politics, were extended to his intellectual project which uniformly followed nature and evolution and continually called for the democratisation of knowledge.

The two themes of this chapter alongside the discussion of the continuity and diversity of Allen's work, have been that there were a variety of factions in competition with each other in the Victorian cultural field, of which one particularly ambitious and aggressive one was the scientific naturalists, and secondly that there

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developed a commodification of intellectual products that affected the producers and consumers of those products.

There was more to Allen's dedication to science than just dedication, he was advancing the agenda of a group he wanted to belong to and in which it was in his interests to belong to, using science as a way to gain authority and distinction for himself and his project in the market for cultural goods while extending the remit of scientific naturalism and spreading natural knowledge to the public. Grant Allen entered a burgeoning cultural field where a variety of intermediaries and factions were competing for intellectual superiority and territory and share of the market, where there was a relative rise of scientific naturalism within the cultural field, and where new opportunities were opened up for the propagation of science. As Allen noted in the preface to his novel *The British Barbarians* he considered himself bound up in "the spirit of an age, of which each of us is but an automatic mouthpiece."¹³⁹ Though I would not use Allen's terminology as expressed here, his project must be located with the context of the expansionist and populist agenda and programme of the scientific naturalists and the changes in the production and consumption of knowledge.

Chapter 2 Physiological Aesthetics

I know that to offer any criticism from outside our artistic public is to stir a nest of hornets, who straightway sally forth to sting the unhappy culprit with many technical phrases and great assumption of obvious superiority.

Grant Allen, *Cornhill Magazine*, 'Colour In Painting'.¹

Introduction

The Utilitarian novelist and psychologist James Sully wrote in his 1876 essay 'Art and Psychology' that "there is probably no region of phenomena which has received less illumination from the activities of the modern scientific spirit than the processes of the Fine Arts", adding that "to call something aesthetic is to claim its exemption from a clear and searching investigation." Though Sully argued in this essay that such an investigation was viable, he was aware that the complexity of art, the speciality of art theory and the protectionism of established aesthetes made the possibility of a scientific study of art problematic. Sully considered the speculations of the art theorist "to be among the finest examples of the sterility of the metaphysical method."² Such methods made beauty mysterious and impenetrable and the men of science had "restrained the impulse to subject this interesting region of human life to scientific control."³ Sully noted three frequent objections to the formulation of a science of aesthetics: firstly it was alleged that aesthetic sentiments were subjective and could not be generalised, secondly that there was no universal standard of art, and thirdly that art was historically constructed. Sully suggested that evolution and psychology could resolve these objections. A sense of standard and universality could be established through rigorous comparison and art could be historically related to the evolution of the social organism. The laws of psychological and social evolution could form the basis of a comparative method and a scientific theory of art.

Grant Allen expressed similar comments to Sully's in the preface of his 1877 book *Physiological Aesthetics*. "The subject of Aesthetics has so long been given over to transcendental rhetoric and vague poetical declamation", Allen wrote, "that the name

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alone upon the cover is sufficient to deter most scientific readers.”⁴ Aesthetic study according to Allen was devoid of rational contemplation and searching criticism, while critics of the new naturalism saw that evolutionary philosophy as equally devoid of beauty. To Grant Allen the insularity of elitist art critics such as John Ruskin, who wrote “Why we receive pleasure from some forms and colours and not from others is no more to be asked or answered than why we like sugar and dislike wormwood”, blinded them from asking the relevant questions about man’s experience of beauty.⁵ Allen responded to this in *Physiological Aesthetics* and wrote “the questions thus summarily dismissed by our great living authority on Aesthetics are exactly the ones which this little book asks, and I hope, answers.” Allen was challenging the authority of “Ruskin’s school” and attempting to answer the questions the art-critic and art-theorist could not. Moreover, Allen reasoned that because he was not “an excessive devotee to any form of fine art” he could approach the subject free of prejudice. For Allen, subjective judgements and enthusiasm were to be excluded from the consideration of aesthetics. Instead Allen concerned himself with just the “physical and the physiological facts”. Science and not art theory would form the basis of a modern aesthetics as science was critical and rigorous, not vague and bowing to the “fastidious” taste of the “worshipper of art.”⁶ Grant Allen was therefore staking out a claim to the ground the cultural elites prized, framing aesthetics in a scientific manner and explaining art from an evolutionist point of view.

Allen and Sully’s comments suggest that science and aesthetics were perceived to be mutually exclusive, but that this relationship was changing as long held positions and assumptions were being challenged, though not without difficulty. Both Allen and Sully noted that aesthetics had been beyond the scope of science but that the men of science were beginning to establish the methods, theories and authority to gain “control” of the subject. The metaphysical and romantic contemplation of art was no longer uncritically accepted and the authority of the aesthetes in Victorian culture was under scrutiny. For reasons of aspiration and aggrandisement the naturalists sought to

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develop what Sully described as that “dark and dangerous territory” of aesthetics.⁷ In doing so more than the truth of art or its principles were at stake. The authority of rival cultural groups, rival philosophical systems, values and beliefs, and the social status of the men in those groups were also challenged. If the expansion of science that Huxley envisaged was to be realised, where science would “extend itself into all departments of human thought”, scientific naturalism would have to challenge the interests of other groups and undermine the speciality of art and frame it in a way amenable to scientific investigation.⁸

This chapter considers Grant Allen’s contribution to this debate and argues that there was a correspondence between Allen’s ambitions and those of the scientific naturalists which precipitated a bold move on both their parts, manifesting itself as an attempt by science to enter and control the field of aesthetics. The first section considers the project of the scientific naturalists in relation to aesthetics and authority in the Victorian cultural field. The following sections then examine Allen’s work and argue that Allen’s decision to write about aesthetics and to self publish his books were part of a long-term strategy to accumulate status and recognition in the scientific field.

Art, Science and Culture.

In the first chapter it was suggested that from the 1850’s onwards there was a competitive rivalry between numerous factions within the cultural field among whom the scientific naturalists were in relative ascendancy, though they were not able to gain absolute dominance. This theme can be developed and extrapolated into a consideration of art and aesthetics. The boundaries between art and nature, science and aesthetics were being contested, dismantled and re-erected through a struggle to define and establish the appropriate areas of inquiry relating to a variety of factions within the field. Naturalists like Huxley, Romantics like Ruskin, and Aesthetes like Pater each claimed to present the most coherent and accurate appreciation and

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conception of art, nature and life. These rivalries in the cultural field structured both Allen's work and the agenda of the new naturalists.

Dominance in the cultural field was derived from the possession of cultural territory and authority. By extending the range of their inquiry into the artistic field, and claiming to be able to comprehend aesthetics, the scientific naturalists could accrue both. Attacking the authority of art and the sanctity of aesthetic theory was ambitious, but by doing so the naturalists could claim and displace authority in areas where they had little credibility and could appeal to a wider public beyond science. If the scientific naturalists wanted to become the cultural elite they would have to address questions beyond the scope of science and in which others already held authority. Aesthetics was still dominated by the art critic and the art theorist, and increasingly by the growing Aesthetic movement which was establishing its own aesthetics as a reaction to both the romantics and the men of science. Changes in culture and society opened up a space in which the scientific naturalists could pursue an expansionist policy as the romantic totality and the basis upon which it was established declined. It became possible and profitable for the men of science to move into art.⁹

The scientific naturalists were vying for power alongside established authorities and emerging rival groups. Though Romantics, Naturalists, and Aesthetes had different outlooks they were contesting common territory. Asa Briggs characterises the romantic spirit as a cluster of attitudes which included a concern for man's inner life, the value of emotion over reason, a mystical communion with nature, and a fascination for the remote and strange. They rejected reason, emphasised imagination, and celebrated the self and the genius of the individual. This is a very different set of values from those Turner associates with the scientific naturalists, with their absolute repudiation of introspection and any kind of metaphysical preoccupations. The scientific naturalists reacted against the supernatural, dismissed the soul, and developed a rational, empirical, secular, evolutionary, mechanical, and

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uniform version of nature which could have application to peoples everyday lives. This is not to say that the naturalists culture was not rich emotionally and spiritually, or that there were not nuances in their philosophy, Tyndall and Huxley were both influenced by Carlyle for example, but rather to say that they rejected those spiritual and emotional elements as the basis of authority in the new culture.¹⁰ Raymond Williams characterises the Aesthetic movement as seeking an immediacy in art, valuing a purity of aesthetic experience, and denying any sense of social purpose in art. Williams summarises Oscar Wilde's assertion that art only expresses itself, that all bad art comes from returning to life or nature, and that life imitates art not the opposite. The Aesthetic movement wanted individual immersion in the immediate experience of art free from moral, social and intellectual constraints.¹¹ These different and rival movements possessed common interests which generated conflict between them, including in the field of aesthetics.

The new scientific culture had aspirations to dominate the cultural field, and they were, as Robin Gilmour puts it, "laying claim to fields of human behaviour previously thought closed to it."¹² T.W. Heyck also notes the "growing acceptance of science's claims to jurisdiction in almost all realms of human understanding" in Victorian England, and he particularly characterises the conflict as a variety of groups seeking the social status and power that professionalisation could bring. We might question the scope Heyck gives to the role of professionalisation, but Heyck correctly identifies the rivalry between groups competing over cultural territory.¹³ The scientific naturalists attempted to move outwards into new fields, and they were trying to construct a scientific culture, or at least be in a position to claim that one existed, so that what positions of power they held could be enhanced.¹⁴

The naturalists widened and consolidated their domain and interests by suggesting that the approach to science and nature they possessed could unlock not just the truths of nature, but also the truths of art and the beauty of nature. Indeed, the naturalists had in a variety of places considered the relations of science and aesthetics and of

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evolution and art. John Tyndall wrote in some detail about the role of the imagination in science and published a number of articles on the subject. Herbert Spencer even claimed science was an aesthetic enterprise in his essays on education. Spencer wrote that “aesthetics in general are necessarily based upon scientific principles; and can be pursued with complete success only through an acquaintance with those principles” and he added that “rightly regarded, science is itself poetic.” The crucial issue was who asserted what that “right” way was.¹⁵ Moreover, Spencer suggested that “science necessarily underlies the fine arts.”¹⁶ In 1855 he included a section on aesthetics in his *Principles of Psychology*, though this was a small chapter towards the end of the book. Spencer also developed a number of ideas and themes within essays during the 1850’s that had attempted to treat beauty and art as branches of evolutionary history. These essays included ‘Gracefulness’, ‘The Sources of Architectural Types’ (1852), ‘The Philosophy of Style’, and ‘Manners and Fashion’ (1854). In his 1852 essay on ‘Use and Beauty’ Spencer focused upon social evolution and argued that “in institutions, creeds, customs, and superstitions, we may trace this evolution of beauty out of what was once purely utilitarian.”¹⁷ This idea was pursued from a more physiological point of view in an essay two years later on ‘Personal Beauty’ in which Spencer suggested a need to “avoid the metaphysics” of beauty and get down to the physiology of the matter.¹⁸

Darwin’s *The Descent of Man* also analysed the nature of aesthetic experiences. In 1859 Darwin had been unwilling publicly to associate natural selection with man, but by 1870 he permitted both natural and sexual selection to extend to man’s higher consciousness and to his aesthetic capacities. Moreover, Darwin suggested that it was not just man that possessed aesthetic capabilities: the whole of the animal kingdom possessed them. Sexual selection also generated an explanatory force that could account for the origin and nature of the aesthetic sense and which firmly rooted that sense in the laws of nature.¹⁹

Other physiological theories forwarded by the psychologists Alexander Bain and

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another Spencer disciple, Henry Maudsley, reiterated these kinds of claim. Bain had developed extensive work on the physiology of pleasure and pain in his *Emotions and the Will* and *Senses and Intellect*, and Maudsley had also considered the creative mind in his texts calling for the eradication of metaphysics, including *Genesis of Mind* in 1871. Even at a physiological level, then, the subject of aesthetics had been given some consideration by those associated with the new nature. The parameters of the debate about the nature and development of aesthetic consciousness and the contentious issues over the pertinent methods of studying that consciousness had been outlined and the potential ways of resolving them in the interests of scientific naturalism had been advanced.²⁰

Those with vested interests in art and aesthetics disputed and disparaged the claims of the evolutionists and naturalists. Ruskin had very different ideas about the nature and relations of art and science which were especially well articulated in *The Eagle's Nest*, a collection of lectures from his Oxford teaching in the 1870's.²¹ Ruskin's view of art, science and nature in these essays was literary, spiritual, Christian and sentimental. He was particularly vehement about the way "Darwinian" ideas had intruded upon art and science and wrote "very positively, I can say to you that I have never heard yet one logical argument in its favour, and I have heard, and read, many that were beneath contempt."²² Art and life could only be demeaned by evolution and the atheist materialism Ruskin associated with it, telling his public "among the new knowledges which the modern sirens tempt you to pursue, the basest and darkest is the endeavour to trace the origin of life, otherwise than in Love."²³ He entirely disputed the grounds by which science might have access to art, because art "has nothing to do with structures, causes, or absolute facts; but only appearances."²⁴ This made much of science redundant in respect to art, or at least irrelevant, and he told his students "you do not...need either chemistry, botany, geology, or anatomy, to enable you to understand art, or produce it. But there is one science which you must be acquainted with. You must very intensely and thoroughly know - how to behave."²⁵

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He thus emphasised the moral quality of science and art. Both methodically and morally Ruskin claimed that science had little and only specific value for art. William Morris similarly made these points. Raymond Williams writes that Morris's work contained an "anti scientific element: the Romantic prejudice that a mechanical civilisation had been created by a mechanical science, and that science was attempting to substitute for art."²⁶ These writers sensed the claims science was making about art and territory, and they reacted to and rejected those claims by dismissing the men of science as amoral and inept.

Not all artistic movements reacted in this way, and not all movements supported the romanticism of Ruskin and Morris. The Art for Art's sake movement equally disliked the dogma and consequences of the thought of Ruskin and his followers. Pater's aestheticism was disciplined and methodical locating art in human experience and the impressions on the mind. He wrote : "art comes to you professing frankly to give nothing but the highest quality to your moments as they pass, and simply for those moments' sake." As Williams notes, virtue in art was "made irrelevant."²⁷ In 1877, the year Allen's *Physiological Aesthetics* was published, the Ruskin-Whistler case was developing. Whistler was closely associated with the Aesthetic Movement and Ruskin infamously attacked his 'Nocturnes' when he commented "I have never expected to hear a coxcomb ask two hundred guineas for flinging a pot of paint in the public's face."²⁸ Whistler won his libel suit against Ruskin the following year and he made his point that sentimentality and literary subject had no place in an art which was concerned with the beauty of colour and form, emphasising that art was "the only thing in life worth taking seriously."²⁹ The movement had some links with scientific naturalism. Pater had been influenced by the writings of Bain, and, as Andrew St George notes "the Decadent movement was not literary but scientific in character, although its manifestations were literary."³⁰ But the movement was also a reaction against science. As St George notes, the Aesthetes attempted to counter the dominance of nature and science over art by "embracing the artificial in all its forms"

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and indulging in and exalting individual experience. It was not that the naturalist's theory was wrong, all theory was wrong and especially one that emphasised progress. Though the Aesthetes celebrated the immediacy of the senses and an art free from society, they rejected the way science subjected all of life to theory and fact, and especially the way art was being opened up as a subject of evolution and physiology. Art was not something to be calculated or to be contemplated, it was something to be experienced.

From very different directions the scientific naturalists and the new aesthetes were each attacking the sentimentality, literary leanings, and authority of the romantic naturalists and artists, especially those promoted by Ruskin and his followers. But the aesthetic establishment also resisted the new naturalism, and the new Aesthetes were equally challenging the old order and seeking cultural authority themselves.

In some ways the romantics and the scientific naturalists were both demanding a realism in art and a truthful and authentic depiction of nature. A source of struggle, however, was whose version of that truth was correct, whose depiction of nature was most accurate, and what the meaning of those depictions were. The challenge was not merely over the merits of natural realism, but over the symbolic meaning of that reality, what assumptions could be made about it, and what status could be attributed to those who deciphered its meanings. A religious and social purpose could be read into art and nature which could be articulated as a means to establish, validate and reinforce distinctions in the cultural field. References to religion, politics, and respectability were a means of making differences apparent and of ascribing value and meaning to those differences.

Ruskin used art and science as a means of criticising modern industrial society which he thought devalued human existence. His extended consideration of 'The Nature of Gothic', among other texts, had been a critique of political economy and the way industrialism had devalued man's labour, for which he held science to account. Ruskin's view of nature was a spiritual one, and he was a Christian who

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later in his life became a Catholic. This infused his view of nature with a religious and Christian tone, and he wrote “Nature, with one glory- is set to teach you reverence for the life communicated to you from the Father of the Spirits.”³¹ This had consequences for science which was “not the arrangement of new systems, nor the discovery of new facts”, but “the submission to an eternal system; and the proper grasp of facts already known.”³² Ruskin considered the scientific naturalists contrary to this view of nature, and he thought them “evil”, “criminal”, guilty of “blasphemy”, and “in league with the devils.”³³ Moreover, Ruskin had a series of disputes with the scientific naturalists. In 1873, for example, he launched a “violent attack”, as Sawyer puts it, on John Tyndall, considering Tyndall to be a fool and his work on glaciers seriously flawed. Ruskin also criticised Tyndall’s Belfast address a year later. There were points of antagonism, then, over the social role and religious content of science.³⁴

Scientific naturalism grounded much of its claim to authority on similar issues and on the dual claims that science had brought about material benefits in the world, and that the education of a mind in science was a better moral training than classical education. Science could generate material and moral benefits. As Huxley noted in ‘Improving Natural Knowledge’, “I say that natural knowledge, in desiring to ascertain the laws of comfort, has been driven to discover those of conduct, and to lay the foundations of a new morality.”³⁵ The scientific naturalists, according to Huxley needed no religious authority to sanction their knowledge, there was only the appeal to nature, the facts of nature, reason, experience, experiment, observation and the verification of these against nature.³⁶ Religious authority had no place in science, and the scientific naturalists version of science was a morally superior one because of this freedom. The new naturalists claimed an intellectual superiority because of their social and moral qualities. Even the Aesthetes’ assertion that art had no social consequences or meanings, was a movement within the cultural field, a way to claim a distinctiveness for their own position and establish a moral claim to a superior art

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by denying morality in art at all.

There was then a competitive rivalry between a number of factions over the territory of aesthetics which brought these factions into conflict and contact with one another, especially as the scientific naturalists sought to extend their authority and become a dominant faction. It was thus simultaneously in the interests of Allen and the naturalists that he pursued a science of aesthetics, in Allen's case because it gave him stature within the field, and for the naturalists because articulating a universal scientific framework of art, or stating that such a uniform theory existed, gave them access to cultural authority and was a way to challenge other rival groups.

Publishing and Patronage

Before the publication of Grant Allen's first book in 1877 his work had been confined to the few articles written for the *Oxford Magazine and Review* and in some Canadian publications. While teaching in Jamaica Grant Allen had little opportunity to circulate his work because, as he complained to Herbert Spencer, the island possessed "absolutely no literary or scientific society."³⁷ Allen was thus disconnected from, and unknown to, the Victorian scientific and literary world. This was something of a predicament for a writer with the aspirations Allen had for himself and he was in the difficult situation of desiring a position of prominence from one of obscurity. He alluded to this situation in a letter to Spencer in 1875, comparing their present relationship; "I am an unknown beginner...you have already made your name known to all genuine thinkers throughout the English speaking world at least". In another letter three months later, Allen asked for help in getting some work published, appealing to Spencer that "you doubtless know yourself the difficulty which a young writer has in gaining the ear of the public."³⁸ Allen was very aware that he had somehow to find a means of establishing a reputation, developing literary contacts, and acquiring the status needed to give credence to his work. I want to view Allen's work on Aesthetics as the early attempts to achieve this goal, to forge that identity,

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and to enter and be embraced by the scientific community he aspired to. With this early work he was attempting to find or create a distinct position within the structure of the cultural field that would be recognised and rewarded.

The process of writing and publishing involved choices about the cultivation of a reputation and an image. Allen sought to realise and maximise his cultural and symbolic capital by taking on a subject that had been almost a taboo to the men of science or at least that he could claim had been, and which had been the preserve of an artistic elite. In terms of the subject he chose to write about, the way he published his books, and who he appealed to in support of the projects, Allen was enacting a strategy to accumulate status and make a reputation for himself that would place him within the field of science and grant him acceptance into the naturalist group.

In an attempt to make himself distinct within the scientific field, Allen sought a subject which was already debated but to which he could add value by pursuing it further. Aesthetics was an ideal subject for a new author attempting to find a niche in the market. We should not view the selection of this topic as a subject for his early work as the progression of science towards grasping the truths of aesthetics, but as the manoeuvres of a new agent entering a field that was as yet underdeveloped. The truth was constructed by negotiating and establishing positions in the field. There was a convergence of interests between Allen's ambitions and those of the scientific naturalists which guided him toward the development of a scientific aesthetics.

As already noted Huxley, Spencer and other evolutionists had given attention to the subject and they desired some authority on the matter. What they had written, however, was fragmentary and dispersed across a variety of texts which never solely addressed aesthetics. These were the writers that Allen absorbed during the three years he was in Jamaica and it was their ideas that he responded to and appropriated in his own work. Allen had been able to pursue his interest in science as a professor and was able to work into the school curriculum the works of Darwin, Maudsley, Spencer and Bain, piecing together his own evolutionary system from the works in

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which he had been immersed. Allen developed his own writing, mainly relating to the evolution of pleasure and pain and the aesthetic sense, assimilating and synthesising scientific naturalist ideas into material that was to become *Physiological Aesthetics* and would form the basis of much of his subsequent work.

Most of Grant Allen's early work concentrated upon the subject of aesthetics. His first books, *Physiological Aesthetics* and *The Colour Sense*, advanced the idea that aesthetic experience had an evolutionary history which could be studied scientifically. A series of articles in *Mind* between 1877 and 1880, including 'Aesthetic Evolution in Man', and 'The Origin of the Sense of the Sublime' and essays in the *Cornhill Magazine* over the same period, including 'The Aesthetic Analysis of an Obelisk' and 'Colour in Painting' extended scientific principles and ideas to the analysis of aesthetics and art. He therefore issued a corpus of material that developed a science of aesthetics from the physiological and the evolutionary side.³⁹

These essays and books outlined a programme to bring aesthetics and art within the domain of science and he suggested that there was no reason for antagonism to exist between science and aesthetics as long as aesthetics was critical and modern in its methods. In his 1880 essay, 'The Growth of Sculpture', for example, Allen criticised the "shadowy and artificial standards so generally employed by the transcendental school" when examining the origin and development of art.⁴⁰ He argued that there was a need to look at the long term evolution of artistic products, from the simple art products of the Polynesian and Bushmen, to the more complex art of the Assyrians and the fine art of Italy. He wanted to emphasise the way in which "by slow degrees, the symbolical and mathematical drawing of savages evolves into the imitative painting and sculpture of civilised races."⁴¹ In these writings Grant Allen suggested that naturalism and evolutionism not only had jurisdiction in matters of aesthetics, but that they were able to offer an explanation and understanding of aesthetics which was richer than that of the art theorists. Aesthetics provided him with a convenient vehicle to move into the territory of the scientific and cultural field.

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When Allen returned to England from Jamaica in 1876 he had accrued, as Edward Clodd put it, “added intellectual capital” and financial security for the short term. He was unable, however, to find a publisher for the “hundred or more magazine articles on various philosophical and scientific subjects” he had written. Allen decided to risk some of this symbolic and material capital and publish the work at his own expense.⁴² This project became *Physiological Aesthetics*, and its follow up book *The Colour Sense*, originally intended as a chapter in the previous book entitled ‘The Genesis of Aesthetics’. This was to prove a costly exercise, but if Allen suffered financially he did at least establish himself as a name. By self financing publication of the book, Allen was able to circumvent the editorial process that excluded him from the market, and he was able to place himself and his work directly on to the market and field he wished to enter.

While playing the cultural markets Allen implemented strategies to protect his investment and give the venture a chance of success. One way he increased his credibility as an author and the viability of an evolutionary aesthetics was to call upon existing authority to validate himself, his project and the subject. A key part of this strategy was to make the publishing house act as a patron for the work he produced and also create a market for the book by gaining access to the networks and status of those companies. In the case of *Physiological Aesthetics* Allen chose to put the book out through H.S. King, one of the most prestigious publishing houses for scientific books in Victorian England. Most importantly H.S. King had issued the popularising science texts that comprised the *International Scientific Series* which had by the time Allen produced his book included John Tyndall’s *Forms of Water*, Walter Bagehot’s *Physics and Politics*, Alexander Bain’s *Mind and Body*, and Herbert Spencer’s *The Study of Sociology*. These books were very recognisable with, as Roy McCleod notes, very distinctive red covers which made them identifiable and signified the quality of the work within. Placing the book with H.S King guaranteed to the reading public the quality of the material contained within its covers.⁴³

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Though *Physiological Aesthetics* was not to be part of this series and was not commissioned by H.S. King, placing it with them situated Allen among these writers, gave him access to the extensive outlets developed and operated by the company and conveyed the impression of having been evaluated by their editorial process. The book would also be distributed by the company and be placed for review among the important journals. *Physiological Aesthetics* was steadily and extensively advertised, copies were circulated to public libraries, and 23 copies were sent to reviewers.⁴⁴ The book received very favourable notices in *Mind*, *Popular Science Review*, *The Athanaeum*, *Academy*, and most importantly *Nature*.⁴⁵ These were all journals who subsequently accepted a great deal of work from Allen. *Physiological Aesthetics* was not, as Edward Clodd noted, “financially successful” and Allen lost considerable money on the deal.⁴⁶ His own costs amounted to £120 just to put the book into print. 300 copies of the book were sold before a fire at the publishers destroyed most of the stock, for which Allen received just £15 in compensation, thus losing £50 on the project. Nevertheless it had served to bring Allen to the notice of the public and the periodical press.⁴⁷

The Colour Sense recapitulated this strategy and was published through a sister company of H.S. King, Trubner & Co. Though Allen was not able to finance the whole project, the book was to be included in the Trubner’s *English and Foreign Philosophical Library*, which would guarantee sales and exposure, and indeed its inclusion in the series was noticed in reviews of the book.⁴⁸ Allen arranged for the company to take the book on a half profits shared scheme, which Allen estimated brought him between £30 and £50 over the course of ten years, though company accounts suggest that the book was more successful than this and made just over £101 by the end of 1879.⁴⁹ It was however very widely and favourably reviewed, including lengthy and positive coverage in *Nature* from Alfred Russell Wallace.⁵⁰

This self financing reaped many rewards, if not pecuniary ones, by conferring status upon the works, giving Allen access to sales and reviewing outlets, bringing him to

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the notice of editors, and associating him with major writers. Allen was not attempting a financial venture with these books, he was rather utilising the companies and their networks to construct and advance his own reputation, and by carefully selecting the houses through which to privately finance these works, he could cultivate reputation and status for himself. By placing the books with H.S King and Trubner and Co. Allen was able to put himself and his work directly on to the market, and by selecting particular companies he was able to direct the attention of the scientific community to his work and confer upon that work some ready made status.

With *Physiological Aesthetics* Allen also sought the support of a prestigious patron to give the project credibility. When the book was complete and publishers were arranged Allen sought endorsement for the project, desiring the injection of someone else's symbolic capital to give the work increased status. The ideal candidate for this was Herbert Spencer. Allen had begun courting the favour and patronage of his hero while in Jamaica and it is possible to see in the correspondence between them during this time and in his early months back in England Allen's deployment of a strategy of appealing to Spencer's vanity and authority in order to gain an endorsement for his own work and access to Spencer's literary contacts.

In November 1874 Allen wrote to Spencer enclosing verses he had been inspired to write after reading parts of the *Synthetic Philosophy*. He wrote to Spencer "My sole object in sending you these lines is that which I mention in the concluding stanza- to send you thanks for the personal assistance you have rendered me in interpreting the universe". Allen declared Spencer the prophet of the age. He was the writer who "first told us Man was Nature's child, and in one continuous law proclaimed them reconciled", concluding the verse with,

"For Praise is his who builds for his own age
For he who builds for Time, must look to time for wage

Yet through thy power spirit do not need
The vulgar question of brief renown
some little need at least, some little need

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Given age may add to thy more lasting crown
Accept an unknown singers thanks, for light
Cast on the dim abyss, bounds out little sight.”⁵¹

Spencer was impressed by the verse and wrote to Allen saying he was “quite unprepared” for such praise and that he was pleased someone so distant appreciated and comprehended his system, declaring the verse “admirable, alike in its choice of language and in the music of its versification.”⁵² Allen wrote back to Spencer and included in his letter an essay on “Idealism and Evolution” with the following request; “Should you think it of any worth, I venture to ask whether you could use your influence with the editor of the Contemporary or the Fortnightly to get it published.”⁵³ Allen was seeking from Spencer some “literary aid”, as he put it, in the hope that by associating himself with Spencer he could advance his own interests. Though Spencer mentioned the piece, nothing came of it.⁵⁴

On his arrival back in England Allen contacted Spencer seeking his permission to dedicate *Physiological Aesthetics* to him. This appears a favour to Spencer, but it was Allen’s way of gaining sanction for his work by one of the leading scientific men in London. “I have now in the press a short work on “Physiological Aesthetics”“, he wrote to Spencer, “I venture to ask your leave to dedicate it to you. I believe everything which I say in it is strictly in accordance with your views.” He continued, noting that the work had been read by “specialists” and that his book would “not be one of which you need to be ashamed to receive the dedication.”⁵⁵ Spencer very rarely accepted any accolade or praise, turned down many honours, and always wanted his approval sought before accepting any honour, and so though this was only a dedication, the granting of it should not be thought of as trivial. Spencer was delighted with the work of which Allen had sent an extended extract, and he wrote to Allen “you have carried out the general principles in new directions with great originality and insight...the work deserves to be a great success”. These were high recommendations from the philosopher of evolution who had himself taken evolution in many directions.⁵⁶ With Spencer’s sanction the book was put out with the

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following dedication preceding the work itself: ⁵⁷

TO
THE GREATEST OF LIVING PHILOSOPHERS ,
HERBERT SPENCER,
I DEDICATE (BY PERMISSION),
THIS SLIGHT ATTEMPT TO EXTEND IN A SINGLE DIRECTION
THE GENERAL PRINCIPLES WHICH HE HAS LAID DOWN.

The dedication indicated a number of things, Allen's reverence of Spencer, Spencer's support of the project, Allen's contact with other evolutionists, the adherence of the book to Spencer's ideas, all of which testified to the quality of the author and the work. Spencer offered Allen further help and suggested him to E.L. Youmans in connection to a book about *The Poetry of Evolution*. From Spencer Allen was able to derive status for his first book and an introduction to a network of contacts to generate further work and credibility.⁵⁸

Prior to the publication of *Physiological Aesthetics* Grant Allen lacked both contacts and credibility. By writing on a unique subject through a major publisher and gaining the endorsement of a major figure prior to publication he was able to construct status. Through these actions Allen gained access to the machinery by which a name could be made. This was a successful venture and Allen became respected and noted among the scientific community. George Romanes in *Nature* described *Physiological Aesthetics* as an "entertaining little treatise" and "a valuable addition to the literature on aesthetics". *Popular Science Review* described Allen as "a man of much culture" whose book was "most readable and instructive". William James writing in the U.S edition of *The Nation* went further and said Allen was "so well-read a man, his style is so clear and strong and flexible, his wealth of illustration so exuberant and many of his special suggestions so ingenious, that we cannot but express the hope that after this first flight he will settle down to some more limited and exact investigation, and

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end by becoming one of our best psychologists.” Charles Darwin wrote to Allen about *The Colour Sense* to say “I have read the whole of your book with great interest. It contains very many views new to me, and highly ingenious, and some new, facts”. This reputation was long lasting and widespread, and Leo Tolstoy wrote in his 1899 essay ‘What is Art?’ that the “prominent writers on aesthetics during the present century” were “Herbert Spencer”, “Charles Darwin” and “Grant Allen”. Allen gained recognition publicly and privately for his work, but more significantly gained the endorsement and acceptance of the scientific community he aspired to.⁵⁹

Physiological Aesthetics established Grant Allen’s name, and Allen noted in a letter to Edward Clodd; “Not only did it bring me into immediate contact with several among the leaders of thought in London, but, it also made my name known in a very modest way, and induced editors - those arbiters of literary fate - to give a second glance at my unfortunate manuscripts.”⁶⁰ The project opened up numerous possibilities for the pursuit of a literary career and placed Allen on the market so that he could develop his standing and interests and forge a distinct position with reputation and recognition. The work put Allen’s name and his work in circulation and connected him to essential literary networks. The next section considers how the works themselves addressed issues from a particular standpoint that further endeared him to the scientific naturalist community and advanced the interests of that group.

Evolution and Aesthetics

Grant Allen could have developed a radically different naturalistic theory of aesthetics from the one he did. William Begg for example aligned himself with John Ruskin, and envisaged a “Natural Theology of Natural Beauty” in his 1887 book *The Development of Taste*. In this book, Begg attacked the “absurdity of supposing that there was no beauty in the world till the principle of association came into operation in animals or in man.” Begg argued that “beauty is not an accident, but of the essence of nature” and that sexual selection, natural selection and natural law “cannot account

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for beauty.”⁶¹ An explanation within science need not have been from a scientific naturalist stance. Other versions could have and were advanced which were theological, romantic and idealist. The scientific naturalist approach to aesthetics was not inevitable, and an alternative version of the origin and nature of Beauty and the Sublime was available, but Allen declined to take these up and instead aligned himself with the scientific naturalist camp.

Allen simultaneously advanced his own interests and those of the new naturalists by outlining a programme which established a scientific naturalist aesthetics, adding value to his own status by identifying with them. By articulating certain ideas he objectified and signified the choices he had made and the allegiances he held. He was able to become identified by and with the naturalists, and was also able to extend the scope of their interests and authority into other areas. Within this search for a distinct position, the display of allegiances and forwarding the interests of the scientific naturalists, Allen argued three points. Firstly, that there was a science of aesthetics, secondly that there was an aesthetic dimension to science, and thirdly that art-criticism was unscientific. Through these claims Allen attempted a naturalisation of aesthetic values and an aestheticisation of science, so that art became a product of nature and science became aligned with aesthetics.

(i) The Science of Aesthetics

To generate a basis for a scientific analysis of aesthetic experience and expression Grant Allen appealed to a variety of doctrines associated with the new nature. Allen suggested firstly that aesthetic experience had a physiological basis, secondly that aesthetic sensibilities had developed in an evolutionary pattern, thirdly, that the mechanisms for that evolution were natural and sexual selection, and fourthly, that aesthetic faculties were hereditary. Each of these claims simultaneously explained the phenomena of beauty, created the basis for a legitimate scientific claim to that phenomena, and located Allen within the sphere of the new naturalism.

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Aesthetic sensibility, Allen suggested, was shared among all members of a species or race and individual variations gave rise to what we call taste. It was this shared aesthetic sensibility that permitted both the experience of art and the scientific study of it. Allen sought to demonstrate that this general similarity was the product of common physiological structures, both in terms of the structure of the sense organs and in terms of the nervous system. Aesthetic experiences were grounded in physiological structure and psychological processes, and it was through them that an explanation of the aesthetic consciousness could be established because this permitted the claim of comparison, generality and standard.

This was part of a wider attack upon idealism, and Allen wrote “unless there had been matter there could never have been mind.”⁶² Allen replaced association theory with psycho-physical parallelism so that aesthetics was grounded upon the physiology of pleasure and pain, not the simple association of pleasantness with a particular colour. Aesthetic experience became within this frame “the psychological aspect of an ultimate physiological fact”.⁶³ Though idealism and association looked “fallaciously plausible” when applied to a fully evolved consciousness, they were “meaningless” and “self-contradictory” when applied to the process of evolution.⁶⁴ Therefore, those who accepted association theory or who advocated any kind of idealism were not thinking “rationally” or “concretely”.⁶⁵

In advancing psycho-physical parallelism Allen argued that aesthetic experiences were the subjective feelings of objectively cognised nervous functions. Aesthetic feelings were special orders of pleasure and pain, produced either by the stimulation of the sense organs or nervous centres, each of which had evolved to discriminate between what was beautiful and what was ugly, what was pleasurable and what was painful, and what was healthy and what was harmful. The eyes, for example, had become adapted so that colours which might damage the eye, such as bright white, became unpleasant, while colours which permitted the healthy working of the eye became pleasurable. Similarly Allen argued that the nervous centres had evolved

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structurally to filter out unpleasant stimulations. In artistic works symbolic forms were repeated until “they became ingrained in the nervous and muscular systems.”⁶⁶

By arguing that aesthetic experience had a physical basis Allen was able to legitimate his attempt to make that subject a science and was able to draw upon the authority and status of the established sciences of physiology and psychology so that his own subject matter could be rendered scientific. His explanation of the phenomena, and legitimation of that explanation, was that aesthetic experience was related to the physical structure of the body and was common to all members of the species or race, an idea contrary to that of the idea of the artistic genius but which opened the subject to scientific investigation.

This physiological aesthetics would not have been plausible or credible if it had not been combined with an evolutionism. Allen believed that aesthetic experience had evolved in gradual increments and that there were evolutionary stages to aesthetic development. Allen argued that “the simplest aesthetic feelings precede the more complex....” and that “we can trace its gradual development from stage to stage, becoming more and more divorced from life - serving functions with every onward step.”⁶⁷ Again here we have an attempt to conceptualise and explain aesthetic experience in a manner that made it amenable to scientific study.

Allen’s general Spencerian stance was that aesthetic sensibilities were a product of long term gradual change which tended to develop from simplicity to complexity. Aesthetic values were not the product of divine creation or of some unique human quality, they were the cumulative result of “step by step” accretions in the individual, race or species.⁶⁸ Children and savages possessed a limited degree of aesthetic appreciation, which excluded scenery, foliage, melodic music or beautiful creatures, but gradual advances in the individual and the race, a “concentric widening of aesthetic feeling”, produced advanced aesthetic tastes which culminated in the European race who possessed a love of flowers, sunsets, waterfalls and birds and representations of those elements.⁶⁹ So, from the simple sense of beauty in the lower

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orders with a taste for colour, brilliance and rhythm there emerged the refined and complex tastes of Europeans embodied in modern poetry, painting and sculpture.

This was also the mechanism by which Allen linked man to the animal world. The evolution of the colour sense, for example, linked man “to a long line of ante - human ancestry, stretching back indefinitely through geological ages to the first progenitors of vertebrate life.”⁷⁰ This was a very long process which Allen extended back to early mammals and man’s early fruit eating ancestors. “We shall thus have traced the perception of colour from its first faint beginnings in palaeozoic seas or carboniferous forests”, he wrote, “down to its latest developments in the palaces or galleries of civilised man.”⁷¹ This embedded man’s aesthetic consciousness and his artistic endeavour in the natural process of organic evolutionary history.

Moreover, the aesthetic sensibilities had developed through a four stage evolution. The first stage focused on a love of personal decoration, the second stage was identifiable by the decoration of weapons, the third extended this to utensils and vessels, including the construction and decoration of royal places and temples.⁷² Finally this beauty in art paved the way for the appreciation of nature and scenery at which point the aesthetic faculties had reached their “highest and most disinterested stage” achieved only among the “most advanced types.”⁷³ The origin of the sense of the sublime had also passed through a four stage evolution, beginning with an admiration of heroism in others, then to the admiration of kings, the admiration of gods, and finally the development of sublimity associated with nature in the advanced races. Evolution supplied a frame to account for man’s complex higher faculties that possessed both explanatory power and cultural status.

The mechanism drawn upon to drive this evolution was a process of selection, more specifically the laws of natural and sexual selection. This again provided a scheme which generated both explanatory power and scientific credibility. Not only had the aesthetic sensibilities evolved, but they were the product of the same laws that had governed the origin of species and the development of physical structure. This

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evolution was a product of “ceaseless competition of rival species.”⁷⁴ Colour, for example, originated “under the constant stimulus of over-population and natural selection, resulting in survival of the fittest.”⁷⁵ Indeed Allen saw sexual selection and natural selection as mutually reinforcing laws, so that “the strongest and the best”, were always “on average the most beautiful.”⁷⁶

According to Allen the likes and dislikes of all animals, including man, were partly the product of natural selection. Man’s colour sense was not a recent acquisition, but was derived from his fruit eating ancestors. Through the exercise of vision in search of food, where those with the better vision fared better in the survival for life, a nervous organisation evolved which was able to discriminate between the colours of fruits, and those with the more acute and discriminating colour sense were able to procure more and better food, and then pass these sensibilities on to their own offspring, who then developed further variations and refinements.⁷⁷ It was sexual selection however that was the driving force behind the evolution of the sense of beauty and the beautiful in nature. The continual selection of mates over generations accentuated choices made by females, and the displays offered by males produced “such highly evolved aesthetic products as the waving plumage of the bird-of-paradise, the sculptured antlers of the gazelle, and the varied song of the mocking bird.”⁷⁸ So, aesthetic sensibilities had “progressed in unbroken order from the simple admiration of human beauty, for the sake of a deeply-seated organic instinct, to the admiration of abstract beauty for its own sake.”⁷⁹ Natural and sexual selection had evolved man’s sense of beauty.

There was some clever manoeuvring by Allen in this. To combine the Lamarckian evolutionism of Spencer and Darwinian natural selection was not easy. Allen achieved this by demarcating the extent of Darwin’s work to biology, allowing Spencer to take the credit for evolution on a cosmic scale and in psychological and physiological terms. Darwin, whose theory of sexual selection had been criticised especially in respect to its application to man, appreciated this, and wrote to Allen

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after reading *The Colour Sense*, “I am glad you defend sexual selection: I have no fear of its ultimate fate, though now at a discount. Wallace’s explanation...seems to me mere empty words.” Spencer also wrote to say that Allen’s work was “a very valuable development of Evolution doctrines.”⁸⁰ Allen thus gathered support from a variety of quarters by making his explanation span the corpus of scientific naturalist doctrines. Spencer supplied the general law and the physiology, Darwin the specific mechanism of biological evolution. This added strength to the argument of the book and made Allen some vital and important contacts.

Implicit in this evolutionism was the idea that aesthetic tastes were hereditary and that it was possible to trace the evolution of aesthetic sense in individuals through personal lineage and of races or species through their collective heritage. In ‘Note-Deafness’ Allen linked the deafness in his subject to deafness in his parents and siblings. Finding that they had no musical abilities Allen concluded that this would “possibly point to some hereditary defect in the structure of the organ”.⁸¹ This was the same for the race and the species. Birds and animals acquired gradual architectural complexity in their nest building, such as the harvest mouse’s “pretty little globular nest” through their “inherited instinctive tendencies.”⁸² Moreover, in mate selection Allen argued that an individual of a species must be able to distinguish themselves apart and be able to select a beautiful member of its own species. Each species was thus “constructed hereditarily as to answer congenitally to certain typical shapes and sounds often experienced ancestrally, and always with the ultimate benefit to the race.”⁸³ Aesthetic preferences were not a matter of randomness or creation, they were a product of individual and species selection transferred through generations hereditarily.

Allen inscribed the study of aesthetics on to an established scientific space by embedding the vague and metaphysical study of beauty into an applied and scientific scheme, formulated by appeals to the facts of nature and the course of human history. Scientific method, ideas and values were injected into the study of the origin,

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development and nature of the aesthetic sensibilities. The two schools which Sully and Allen saw in conflict were assimilated within a scientific and evolutionary system.

(ii) The Aesthetics of Science

This assimilation was carried on in another way, and it is possible to perceive in Allen's work not only an advocacy of a scientific aesthetics, but also of an aesthetic science. Allen suggested that science could be an aesthetic enterprise and could form the basis of the next great aesthetic epoch. In *Physiological Aesthetics* he commented that "literature may roughly be divided into two great classes; that which aims at imparting knowledge, and that which aims at imparting pleasure:- - in other words, the scientific and aesthetic."⁸⁴ There was the suggestion that scientific expression or experience was excluded from the aesthetic realm. Allen also drew a distinction between the Intellect and the Emotions, with aesthetics belonging to the latter and science to the former. This again created an impression of two exclusive divisions in contrast to one another.⁸⁵

However, Allen also suggested that this division was not a concrete one. Literature was only "roughly" bilateral, and he added that "many kinds of writing hover on the borderland between the two."⁸⁶ Similarly, in terms of the intellect and the emotions Allen conceded that aesthetic appreciation was possible via the intellect if the intellectual exhilaration was "remote from all ulterior aims."⁸⁷ There was the possibility that aesthetic gratification could be derived from intellectual pursuits such as science and thus the boundaries between the scientific/intellectual and the aesthetic/emotional were potentially fluid. A recurrent theme in Allen's writing was that these boundaries were in the process of changing and that science could form the basis of a new aesthetic consciousness. Science would reveal through its methodology and vision a more beautiful and sensuous world than even that which the veneration of God had realised. The trajectory of aesthetic evolution was towards

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an experience which had the study of nature at its centre and Allen suggested that science would create a more beautiful vision of nature than any that had previously existed. Science could not just explain aesthetic experiences, it could create and provide them too.

In *Physiological Aesthetics* Allen stated that the instruments of science would illuminate and intensify the beauty of the world. “When the microscope reveals to us the wonderful perfection of minute structures in organic bodies or crystalline forms, a new world of intellectual pleasure is laid open before us”, Allen wrote, “we are lost in astonishment, awe, and delight at the myriad facets of an insects eye, the painted scales of the butterfly’s wings, the marvellous symmetry of a flower, and the exquisite architecture of a spangled snow-flake.”⁸⁸ The microscope had enabled steps to be taken beyond the superficialities and surfaces of nature to look into nature’s deeper structures and laws, and to see for example “the myriads of beautiful things which people a drop of water”.⁸⁹ This was not to reduce the beauty of nature, it was literally magnified. “A daisy at first sight is a mere white flower with a yellow centre”, Allen wrote in an 1877 essay, but “looked at through a pocket lens, it shows us a lavish mass of golden balls, fringed with a border of snowy florets.”⁹⁰

It was not just the technology of science though that was enabling this appreciation, however, it was the relationship of the man of science to nature that was generating that special access. In his essay on the sublime published in *Mind* Allen wrote that men of science had something of a privileged and special experience of natural beauty. “When we stand in the river gorge of Praffers or the water torn ravine of the Niger, we can realise the endless working of that slowly encroaching power with far greater vividness than the un-scientific thinker can,” Allen wrote, adding that “the progress of scientific thought has opened before us a field for the exercise of our faculty of Sublimity almost as new and as extensive as that which was laid open by the monotheistic creed and the doctrine of creation.”⁹¹ There was something special, unique and superior about the scientific understanding of the world which verged on

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the aesthetic.

In *Physiological Aesthetics* Allen made three points in relation to this. Firstly that the greatest aesthetic pleasures in art were derived from the “truthful delineation” of the reality of the objects depicted.⁹² Secondly, Allen suggested that the most beautiful sights and sounds were those which were ordered and symmetrical and that a “mere tangled mass of sensations, without order or plan, strikes us as meaningless or absolutely disagreeable.”⁹³ Highly symmetrical art and architecture were the highest forms of aesthetic pleasure. Thirdly, Allen suggested that the appreciation of nature was the most advanced aesthetic form and occurred “only among the...most advanced types.”⁹⁴ If we take these three points together, the appreciation of nature, through ordered examination and truthful representations of reality, we arrive at a conception of aesthetic contemplation that resembles the scientific naturalists version of science.

Moreover, science had the potential in the future to provide aesthetic experiences. As science was a recent human development it had not yet become refined enough to be classed as art, but the language and images of science would in the future provide the stimulus for aesthetic advance. As Allen wrote in *Physiological Aesthetics*, science had “been gaining ground of late years” on other forms of gratification and “united with the feeling of the Sublime, and appealing to interests daily increasing in diffusion, they will doubtless form in the future a powerful aesthetic instrument.”⁹⁵ Allen also identified a natural progression along these lines in *The Colour Sense*, and he identified an advance from aesthetics in connection with the monarchy, to a connection with religion, and then on to a next stage, where there was a “pure love of colour in nature for its own sake.”⁹⁶ He thus perceived a gradual disentangling of art from elitism and monopoly.

These were themes developed in a number of Allen’s essays published in the widely distributed and read *Cornhill Magazine* during the period of the publication of *Physiological Aesthetics* and *The Colour Sense*. In his essay on the ‘Growth of Sculpture’ Allen stated how he wanted to belong to “a school which should judge of

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art-products not by the transcendental and often dogmatic principles of Lessing or Winckelmann, but by the sober light of actual evolution.” In ‘Cimabue and Coal Scuttles’, Allen wrote of his anticipation of a new aesthetic class who knew nothing of connoisseurs and who would “set to work to invent beautiful and effective decorations on rational principles, not according to pre-established models.”⁹⁷ Science could supply the principles upon which a new aesthetics could be based.

Moreover, Allen argued that the imitative arts were differentiating away from the decorative arts. In ‘Colour in Painting’ he argued that imitative art was more intellectually demanding, especially as the imitative aspect of art was evolving so that drawings were “nearer to the truth” and colouration more “approximate to nature.”⁹⁸ The trend towards realism in art was open to more intellectual analysis. How well a painting captured the likeness of nature was something Allen claimed was pleasing to the “more exacting and critical eye” which demanded “natural colouring”.⁹⁹ As art became increasingly imitative, with landscape paintings and depictions of fruits and flowers and ferns, it became more open to intellectual, and thus scientific analysis.¹⁰⁰ Huxley also picked up this theme in an 1882 lecture ‘On Science and Art’, and stated “in painting; what is called “truth to nature” is the intellectual element coming in, and truth to nature depends entirely upon the intellectual culture of the person to whom art is addressed.”¹⁰¹ As realism and truth became inherent in art science could increasingly claim access to it, and impose its own meaning on to it.

Allen perceived the boundaries between the two great divisions of science and aesthetics to be in the process of being reconstructed. The methods and vision of science would form the basis of a new aesthetic sensibility. This opened up art to the man of science, extending his authority and ability to art and beauty.

(iii) The Challenge to Art Criticism

To strengthen the position of the naturalists in the field of art-criticism and art-theory Allen heightened the credibility of men of science by devaluing and attacking the

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stature of the art critics themselves. Allen's appeal to nature and science was aimed at undermining the interests of rival schools. As the *Popular Science Reviewer* noted of Allen's *Physiological Aesthetics*, the book would be "doubtless as entertaining to the school to which he belongs as it is exasperating to those who think that there is inspiration in art and the idea of beauty."¹⁰² Allen's works accentuated the qualities of science and demeaned and derided those of art-criticism. Allen's critique of art-criticism manifested itself in two ways, firstly as a call for the democratisation of aesthetics which aligned the men of science with the tastes of the mass of people, and secondly through a challenge to the elitism of the art critic.

The special nature of the artist was a recurrent theme in romantic thinking and the artist was exalted as having a special relationship with nature. He was a genius capable of interpreting the world in a way others could not. For the naturalists, genius need not be couched or accounted for in such loose terms and could be analysed statistically and mathematically. This was especially advanced in Francis Galton's work on *English Men of Science* (1874) and *Hereditary Genius* (1869). Genius was not God given, or some metaphysical quality possessed by great men, it was a product of family history and the hereditary laws of nature. In effect this did nothing more than re-name those who were already eminent as worthy of that eminence, as Galton wrote "I see no reason to be dissatisfied with the conditions of accepting high reputation as a very fair test of high ability."¹⁰³ However, it was the man of science who was controlling the naming process, and nature which was the provider and arbiter of that worth. Moreover, not only did the scientific naturalists challenge the notion of romantic individual genius, they suggested that the methods of science were open and amenable to all.¹⁰⁴ Science was not based upon the personal experience of the lone genius who had a special experience of nature, nature was open to all. Allen took up these themes and contrasted the particularity and subjectivity of the art-critic with the generosity and objectivity of the man of science and linked his own work to the anti-elitism and common sense of the scientific

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naturalists.

Art was open to all because every individual possessed the innate physiological capability of aesthetic experiences. It was not the right of cultural elites to say what was and what was not aesthetic, as all men possessed the ability to make such evaluations. This was not Allen's perception of Victorian art-criticism expressed in the *Cornhill* essays, where he wrote "each critic has impressed upon the public the peculiarities his own immutable principles...while he has generally passed by with contempt the simpler manifestations of aesthetic feeling which ought to form the basis of any comprehensive theory of beauty." English art he insisted "must become democratic".¹⁰⁵ A frequent target of Allen's writing were those who sought aesthetic experiences only in the finest arts. His *Physiological Aesthetics* was specifically aimed at critics who regarded "with contempt every species of aesthetic emotion except the most elevated ones which were capable of gratifying his own fastidious and educated taste."¹⁰⁶

Allen suggested that aesthetic experience was more universal and general than the art critics allowed and it was not debased by being so, indeed it was enhanced because of its commonality. As he wrote in his *Mind* essay 'Aesthetic Evolution of Man', "hundreds of thousands, who would stare in blank concern at a torso from the chisel of Pheidias, can love and admire 'the meanest flower that blows', with something not wholly unlike the welling emotions of a Wordsworth", adding that, "one is often inclined to fancy that the truest lovers of beauty in nature, or in the works of man, are not always those who can talk most glibly the technical dialect of art-criticism." In Allen's opinion, aesthetic feelings possessed a "disinterestedness and freedom from monopoly" and they could "give pleasure to thousands without detracting from the enjoyment of each."¹⁰⁷ What Allen suggested was that aesthetic experience was not the preserve of the few, but was the natural heritage of all. Allen perceived exceptional dogmatism in art theory but noted that a revolution was coming and a new type would be invented for "ourselves", and people would begin to exercise their

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right to express their aesthetic preferences.¹⁰⁸ Allen therefore called for an extension of the aesthetic franchise and recognised that the men of science could lead the way by taking on the entrenched privilege of the aristocracy of art.

We might initially attribute this outlook to Allen's own personal values, that his socialism led him to believe that no one had sole right to claim primacy in matters of art. Allen saw the science of aesthetics as a democratising force, challenging the monopoly of the art-critic, but Allen's diatribes were often targeted at another socialist and his school, Ruskin, which suggests that Allen's critique was more measured and considered than just an expression of his political values. In any case Allen's evolutionary and physiological version of aesthetics re-framed the subject in a sophisticated and specialised language which was closed to many and which made a scientific aesthetics an area of expertise, though one practised by a different class of men. Allen was thus not just attacking specialism in the criticism of art, but advancing an ideology that could challenge the authority of those who possessed the cultural power the naturalists desired. In more than one place Grant Allen criticised John Ruskin and his followers for only considering the highest forms of art as aesthetic. He criticised them for dismissing common aesthetic experiences, of "confining themselves to the very highest feelings of the most civilised nations", and of advancing overly sophisticated aesthetic schemes which ignored the natural and common aesthetic pleasures.¹⁰⁹

The current state of study of the arts was "infantile" and Allen described the art critic as "insolent" for thinking he could put his trade above the universal laws that governed all human action.¹¹⁰ "The aesthetic philosopher" he said "has no right to either praise or condemn his sole duty is to account for the positive facts which he finds in the data before him."¹¹¹ Allen argued that the scope of art was widening and attacked those who wanted art to remain the domain of those who could buy Italian masters.¹¹² "Too many modern enthusiasts" he wrote "are accustomed...to speak of medieval artists in terms which would be exaggerated if applied to the most

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developed aesthetic works...finding in them a thousand qualities which are wholly invisible to the cold and matter of fact eye of the historical critic.”¹¹³ Science, though, had done much to bring about the education of aesthetic tastes. “Those railways which Mr. Ruskin so cordially despises have probably done a thousand times more for promoting a love of beauty in nature than the most eloquent word painting that was ever penned even by his own cunning and graceful hand” Allen wrote in ‘Aesthetic Evolution in Man’.¹¹⁴ Science had brought aesthetic experiences to the people, expanding man’s aesthetic consciousness and developing his innate abilities.

The subtext to this argument was that art-criticism and art theory were illogical, elitist, and subjective, but that scientific aesthetics were democratic, objective and rational. Allen suggested that a science of aesthetics possessed greater authority because it was grounded upon an objective analysis of art through psychology and physiology, and because it possessed a resonance with a more popular common sense appreciation of art. The democratic psychologist, Allen wrote, “must allow that there is beauty - relatively to the mass of men - in products which the art-critic would denounce as wretched daubs or atrocious travesties of music.”¹¹⁵ However, contained in this argument was a sense of superiority for the man of science, and if one set of values was eradicated from the aesthetics, another was imported. Allen was not escaping the transcendental subjectivity he thought he was, because his physiology was as value laden as the romantic metaphysics he challenged. If Ruskin’s aesthetics were infused with a god and great men, Allen’s were equally infused with the new nature and the new naturalists.

Repeatedly Allen noted how the statements he made could not be supported by evidence or that evidence was slender. In *The Colour Sense* he admitted “we can never know” if a common perception or experience of the colour blue existed, even though this was a cornerstone of his argument. This claim could only be established on “testimony”. Similarly, he stated that the perception of colour in other animals and especially the higher vertebrates, could be “taken for granted” and was “all but

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incontestable". The colour sense was not certain and Allen had to state that "the positive proofs which can be advanced in favour of the belief are very meagre and insufficient." Again, in respect to the common experience of all species and their colour sense Allen wrote that "the evidence...almost entirely fails us." The works on aesthetics were strewn with statements such as "vague and symbolical as such a sketch confessedly must be..." and "we conclude with much probability" in respect to the truth of his facts .¹¹⁶

Opinion and aesthetic judgements were continually articulated as fact. For example, Allen wrote in *The Colour Sense* that the different colours had different aesthetic values. Red and yellow were more pleasurable than blue or green because green was more common and reds more novel. Reds were more stimulating to the nervous system because they tended to be the colours of fruits. This conclusion was pure speculation, couched in a vague scientific frame of physiological responses and "experiment". Allen's suggestion that "The red and orange end of the spectrum is decidedly the most pleasurable: while the central colours, green and blue, are decidedly least so" is just opinion, as is his statement that "Green *appears to me* to be the least effective aesthetically of all colours."¹¹⁷(my italics) These were just the kind of statements for which he derided the art critics. These were not facts or laws, they were Allen's own aesthetic consciousness naturalised and presented as fact.

Allen gathered a great deal of information from a variety of authorities and then presented that information in a narrative that was both eloquent and detailed. This was to take a rational and critical relation to the world which J.S. Hall noted in 1879 had "a sort of satisfaction peculiar to itself which may justly be called aesthetic."¹¹⁸ Allen made his own science aesthetic. Thus Allen alluded to the wonder of the colour sense through a depiction of "the azure heaven above us, the purple sea beneath us, and the green meadows by our side...the beetles clad in burnished gold, the peacock adorned with all the hues of the rainbow, and the humming-birds decked out in ruby, sapphire, and amethyst." How one might ever establish the "tints of eventide mirrored

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in the glassy lake” as fact was not certain, but the images were evocative and the language endowed the science with an aesthetic dimension itself.¹¹⁹

Allen also paid great attention to detail in his work with very graphic depictions of the minutiae of biology and physiology. For example in *Physiological Aesthetics* Allen gave very detailed comparisons of all classes of animals in his search for evidence of a colour sense in them.¹²⁰ He could also indulge in very dry language in his description of animals, for example in *The Colour Sense* he wrote “the Medusae are shown, by their peculiar mode of development, to be the descendants of hydraform polypes. During the sessile stage, when they exactly resemble the true Hydroida, they are destitute of eyes...”¹²¹ Allen gave numerous and copious examples of his knowledge of the biology of plants and animals. These were also offered on the authority of others, and Allen noted how his information in *The Colour Sense* was taken from such illustrious sources as Sir John Lubbock, who Allen described as a “patient and minute observer”, and also Darwin, of whom Allen wrote “I think the conclusion of so careful and masterly an observer has considerable substantive value as corroborative of the positive facts.”¹²² If the information itself was not decisive the authority of its producers could carry the science as reliable.

The overwhelming attention to detail, the eloquent exposition of that information, and the reference to established and prestigious authorities, gave the work scientific credibility because it conformed to expectations of its target audience and appealed to the aesthetic sense of those other scientific naturalists who reviewed and read the book. In his *Nature* review Alfred Russell Wallace commented that *The Colour Sense* possessed “a wealth of illustration, a clearness of style, a cogency of reasoning, which make up a most attractive volume...we cannot but admit that he has placed the whole subject before us in a way that must engage the attention of both the man of science and the general reader.”¹²³ George Romanes similarly stated in *Nature* that in *Physiological Aesthetics* “the arrangement is good, the style admirably lucid, and the spirit thoroughly scientific.”¹²⁴ Darwin also wrote to Allen expressing “many thanks

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for the pleasure” the *Cornhill* articles had given him.¹²⁵ It was not just the facts of the ideas advanced that were attractive, it was the aesthetic effect of those and the way Allen expressed them that appealed to the naturalists who read the work. As Sully noted in his review of *Physiological Aesthetics*, Allen demonstrated his “firm hold on the methods” in a way that would impress his target audience.¹²⁶

Grant Allen attacked the credibility, respectability and objectivity of art critics and aesthetes in his attempt to create a basis upon which science could be seen as a credible and viable approach to the study of beauty and art. Though Allen was critical of the metaphysical self indulgence, his own scientific aesthetic was not devoid of value judgements and it appealed to the aesthetic sensibilities of science.

Grant Allen created a distinct position for himself by bringing together a variety of strands of naturalist thought and developing an account of man’s aesthetic consciousness which favoured the ideology and cultural ambitions of the scientific naturalists. Allen outlined criteria upon which such a study could be pursued which excluded those of a romantic, metaphysical and idealist persuasion but which included those approaching aesthetics from a scientific naturalist view point. By doing so he included himself in that group and signified his support and enthusiasms for the project they were pursuing. Science could account for the nature and development of the aesthetic faculties, it could claim to be an aesthetic enterprise itself, and could claim to be superior to other rival explanations.

Conclusion

When Herbert Spencer had read *Physiological Aesthetics* he wrote to Grant Allen to say he was “proud of a disciple who achieves so important an extension of the general theory as this.”¹²⁷ Spencer’s comment suggests a number of things: the recognition of Allen’s commitment to evolutionary principles in the work, that Allen’s work was perceived as distinct in some way if not unique, that Allen was accepted by the men he admired, that his work was valued as good evolutionary science which extended

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the scope of that science, and that the scientific naturalists were aware that such an extension was becoming possible and was significant to them. Spencer indicated that Allen had become known in the field of evolutionary science and that scientific naturalism had pretensions to extended itself into the field of art.

The development of a scientific aesthetics was beneficial to both Grant Allen and the scientific naturalists as a movement. It gave Allen a distinct position within the scientific field and the naturalists access to cultural territory that had been closed to them and from which they could develop their position further. Art and aesthetics were subjects outside the remit of scientific investigation but were areas of cultural authority. By subjecting them to scientific scrutiny, or claiming to, the naturalists could enhance their cultural interests and authority.

From a sociological perspective it makes sense for Allen to have chosen the kind of specialism he did and to align himself with those he chose to. There was a name to be made by the author who took on the subject of aesthetics and supplied the critique of art theory. Though it may have been a gamble for an unknown author to take on such an unusual topic as aesthetics from a scientific point of view, by specialising in that subject Allen could develop a niche in the market for himself and accrue greater rewards from the higher risk. Moreover, Allen could further his own ambitions by becoming associated with a group which was itself gathering social and cultural status. As wider cultural configurations permitted the scientific naturalists to become eminent, Allen's own stature could be accelerated by his identification with them.

Truth and beauty were not absolutes. They were the product of the relations of individuals and groups in the cultural field and the constructs of agents in that field pursuing their personal projects. J.S. Hall noted in his 1879 essay 'Is Aesthetics a Science', that "science has not yet disclosed the foundations for a radically new synthesis of any art".¹²⁸ This is not to say that such a synthesis was not attempted or that a heated debate was not taking place. As the topic of Hall's paper testifies a critical interchange was taking place where notions of truth and beauty were being



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negotiated through struggles over cultural territory, and in which science became more aesthetic and aesthetics more scientific. As Hall noted “I fancy it may behove the artist of the future to be more instructed in the scientific aspects of his department, and perhaps a trifle less fearful of impairing creative faculty by the cultivation of critical acumen.”¹²⁹ Though art had not become scientific and the boundaries between aesthetics and science were not dissolved, they had been critically challenged by the men of science in an attempt to redefine the scope of their inquiry so that an important aspect of Victorian culture came under their influence if not their control.

Chapter 3 Common Sense Science

Mr. Allen's method of treatment, as explanatory of the scientific revolution known as evolution, gives a sort of personality and human character to the trout or the strawberry blossom, which invests them with additional charm, and makes many of his pages read more like a fanciful fairy tale than a scientific work...Mr. Allen's essays ought to open many a half-closed eye.

*Manchester Examiner review of Evolutionist At Large, 1881.*¹

Introduction

Between 1897 and 1899, *The Strand* magazine published simultaneous serialisations of a number of Grant Allen's works, including the adventure stories and detective novels *The African Millionaire*, *Hilda Wade* and *Miss Cayley's Adventures*, and the science series' *In Natures Workshop* and *Glimpses of Nature*. Indeed, particular editions included sections from both the novels and science collections. *The Strand* magazine was one of the most successful latter Nineteenth century periodicals selling between 300 000 and 500 000 copies per month, and Allen was one of its most prolific writers, contributing over 65 pieces in less than three years. The reading boom that gave rise to such periodicals as the *Strand* was ultimately fiction based, and to satisfy that demand Allen made his science essays like his stories, full of adventure, detection, and drama, but with a thoroughly evolutionary philosophy at their heart. This gave his writings a resilience and identity that permitted them to become a permanent fixture in periodical literature during the 1880's and 1890's.²

Historians and sociologists have proposed a variety of ways of thinking about the nature, purpose and form of popular science, and such writings have been variously construed as the simplification of pure science for the possibility of public consumption, the publication of genuine knowledge for the affirmation of the expertise of the man of science, the dissemination of an ideology that is favourable to science in order to gain further support for science, or as a response to the demands of a public desiring forms of rational entertainment and education, provided by those who may have instigated or instilled such a demand.³ This begs the questions, is

popular science to do with style, with audience, with the producer, or is it to do with the location in which that science is consumed, the quantity that is consumed, or the publication in which the material is printed? Moreover in whose interests does the popularisation serve, the men of science, the public, publishers, or individual authors?

Pierre Bourdieu's terminology developed in relation to art and literature is of use here in locating the populariser. Bourdieu refers to fields of *restricted production* and fields of *large-scale production* and he writes that "within a single universe one always finds the entire range of intermediaries between works produced with reference to the restricted market on the one hand, and works determined by an intuitive representation of the expectations of the widest possible public on the other."⁴ There are two points to draw from Bourdieu's ideas here, that the populariser both occupies a particular place within the field of science, and that by occupying that position they are more exposed and accessible to the market for cultural goods. Producing popular science was in Allen's case an act both within the field of science and an orientation to the market for periodical literature.

Popular science writers occupied a particular position in the field and one factor often omitted in accounts of 'popular science' are the author's own ambitions and interests. This chapter develops the two dominant themes of this thesis, firstly that there was a correspondence of interests between Allen and the scientific naturalists, and secondly that changes in wider cultural configurations structured the pursuit and content of science. Moreover, I have interpreted Allen's popular science writing within the context of three themes, firstly as the pursuit of the scientific naturalist programme, expanding scientific naturalism into the public sphere and educating the public and gaining their support for science. Secondly, I have taken Allen's popular essays as niche marketing on his part within the burgeoning and developing periodical literature market. Popular essays need to be considered in the context of the periodical literature within which they existed, especially as they were the best way of popularising those scientific ideas Finally, I have viewed Allen's popular

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science writing as an expression of his political views which were socialist and anti-monopolistic. There were thus parallels between his desire for access to the land and power of the Nation and his call for the democratisation of knowledge. The first section of this chapter considers the ideology of common sense within scientific naturalism, the second examines this through the style and content of Allen's essays and the third links this content and style to the location where the essays were published. The chapter suggests that Allen's style and the location of his essays were intended to advance the interests of the scientific naturalists and popularise the science of that group, and thus that Allen's writing in that respect was an attempt to gain recognition in that group as a populariser.

Scientific Naturalism and Common Sense.

The overriding theme of this chapter is that the popular science writer occupied a particular position in the scientific field and literary market, and cultivated, possessed, claimed to possess, or was perceived to possess particular qualities and skills and thus demanded certain respect and status. Grant Allen identified a niche within which he could gain status. There were a number of benefits that accrued to Allen by focussing his attention on popular writing, he could gain financial security, he could gain respect from those he admired, he could gain a position of distinction for himself, and he could become known as a name among the editors and the public. Popular science journalism was a way to cultivate a position that could bring him financial stability, cultural distinction and social status.

Moreover, in this particular context, Grant Allen was not only taking up a position in the scientific field, he was also fashioning a particular identity in the circle of scientific naturalists. Although moving toward the market gave Allen less autonomy and his work was increasingly structured by the tastes of the public, he could use that work to manoeuvre and make himself known within scientific naturalism. Allen was advancing his own position while also advancing the interests of the scientific

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naturalists, pursuing his popular science as a strategy in response to the agenda of scientific naturalism while simultaneously trying to validate himself within that circle. Allen produced popular science essays to advance scientific naturalism, and this gained him authority and notice within that group. However, by taking science into popular culture, Allen had to address the market for cultural goods and create a position for himself in the market for those goods, as it was this wider audience the naturalists wanted or needed to appeal to.

Within scientific naturalism there was an implicit call for the education of the public in science and recognition of the need to spread natural knowledge. There was though a constant tension within popular writing between assertions of special access to nature and claims of possession of an outlook that could be appropriated by anyone. Permitting public access to scientific knowledge simultaneously undermined the special nature of that natural knowledge and invited scrutiny of those ideas by the public. Scientific naturalism overcame this tension by asserting an affinity between science and everyday life, but conferring upon the man of science a special role as an interpreter of nature. Any differences between science and common-sense were only a matter of degree, but that common sense had to be refined, trained and organised in a scientific manner and this was qualified by the claim that science was not only a superior way, but the sole way of gaining access to truth. There were two dimensions to this naturalist agenda, firstly the desire to spread the word of science, and secondly the appeal to common sense.

As was noted in chapter one, alongside the call for the co-extension of knowledge to all knowledge, the scientific naturalist agenda was one that desired an extension of that knowledge to all people and an education of the public to value science. Huxley's essays and lectures were the embodiment of that and he took science out to the people in Working men's colleges and into journals. In the lecture/essay 'A Liberal Education and Where to Find It', delivered to the South London's Working Men's College, Huxley called for public education in science. Though Huxley was

discussing formal education, the ideas he expressed in this lecture express his call for public knowledge of science.

In this lecture, and the subsequent essay, Huxley argued that education was the great work that needed to be addressed in society, and that though this was not doubted by anyone, the form and content of that education was. Huxley wanted a very specific form of knowledge to be the basis of that education, and that was scientific knowledge. Huxley forwarded this argument via an analogy with a situation where a man had to play a game of chess as if his life depended on it. Huxley suggested that in such a situation, that person would want to learn the rules of the game to ensure success. He extended this analogy to the world and to nature, and said that “the chess board is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of nature.”⁵ One needed to ensure that one learnt the “rules of the mighty game” and develop “instruction of the intellect in the laws of nature.”⁶ What education needed to develop was knowledge of the things and forces of nature. Moreover, Huxley commented that “those who take honours in nature’s university, who learn the laws which govern men and things and obey them, are the really great and successful men in this world.”⁷

What Huxley was suggesting here was the importance of education in science and of developing public knowledge of science for social progress. This was lacking in public education, at a primary, secondary and university level, and thus popular science could be part of that educational agenda as it both took science out to the people, and conveyed the knowledge and image of science to a wider audience. These were points Huxley and Spencer had frequently alluded to, and in particular in the ‘Advisableness of Improving Natural Knowledge’ essay Huxley had urged education in science as a matter of social, moral and national progress. There was an agenda for the inculcation of scientific knowledge in the public which popular science could contribute to.⁸ Huxley was principal of the working men’s college when he delivered his lectures during the 1850’s and 60’s, and he devoted time and effort to

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the dissemination of knowledge and science through them. Though Huxley's lectures to working men may have reached only an "insignificant fraction" of men, as J.D Bernal put it in 1954, it does demonstrate Huxley's sense of the value of winning the minds of the people.⁹

The ideological appeal to common sense was a recurring theme in scientific naturalist writing. William Kingdon Clifford, mathematician and philosopher, was adamant that scientific discovery and everyday life were consistent with each other and that the public had access to scientific ways of thinking. Clifford suggested that everyday experiences were based on reason and observation, and were thus akin to science. Indeed, Clifford's post-humous collection of material edited by Karl Pearson in 1885 was entitled *The Common Sense of the Exact Sciences*.¹⁰ Thomas Huxley similarly wrote that the methods of science "differ from those of common sense only so far as the guardsman's cut and thrust differ from the manner in which a savage wields his club."¹¹ There was continuity between everyday life and scientific activity, and indeed with scientific knowledge. As Huxley put it in one of his lay-sermons "the vast results obtained by Science are won by no mystical faculties, by no mental processes, other than those which are practised by everyone of us, in the humblest and meanest affairs of life."¹² Science was, as Huxley put it, "nothing but trained and organised common sense."¹³ This valuing of common sense and the public view of science had the consequence of placing importance on writers who could convey the scientific naturalist message effectively to the public. Scientific naturalism tried to gain support by claiming an affinity with the knowledge and interests of the people.

These are the kind of themes we find in Grant Allen's work and it was very much the scientific naturalist agenda that he was responding to and taking forward. In the preface to *Evolutionist At Large* (1881) Allen stated that he was attempting to increase public awareness of science, but crucially, his target audience was those who were as yet not converted to the cause. He wrote regarding these essays that "my object in writing them was to make the general principles and methods of

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evolutionists a little more familiar to unscientific readers.”¹⁴ Allen was thus concerned to make more widely known the philosophy of the new naturalists, and produce work which those naturalists would sanction as a welcome contribution to their struggle for cultural authority.

In Allen’s work there is both the sense of educating the public in science or appealing to them to think in a scientific manner, and an allegory of science and everyday life. In Allen’s essay ‘Science in Education’, he elaborated on both the themes of the need to increase knowledge of science and the significance of common sense. Allen wrote in this essay that there was a need for science in education, and that this was what “all the scientific men of England have so long been fighting for. And a very good thing it is in its way, and I hope they get as much as they want of it.”¹⁵ What Allen meant by science in education as opposed to education in science, which he took to mean the training of men of science, was a competent general knowledge of anatomy, physiology, chemistry, botany and biology. “What the world really needs” Allen wrote, is “due recognition of the true value of science in education.”¹⁶ This especially meant the results of science. Moreover, Allen argued for the corollary of this, which was that these results were open to all, and stated that “there is nothing occult or mysterious about them.”¹⁷ Indeed, Allen suggested that “what common sense really demands, then, is education in the main results of all the sciences - a knowledge of what is known, not necessarily a knowledge of each successive step by which men came to know it.”¹⁸ Allen was here chiming with the call for wider education of the public in science, and the appeal to common sense in scientific naturalism. This was something that can also be noted in his essay work.

In the *Vignettes from Nature* (1881) essay ‘Fallow Dear’, originally published in the newspaper the *Pall Mall Gazette*, Allen takes the quaint image of domesticated fallow deer straying about grazing in the ancient woodlands of Woolney park and links this back to the time when the forest was co-habited with humans. Allen subjects this image to a historical analysis and makes these unsuspecting deer the subject for an

exposition of the process of evolution, the greatness of Darwin and Spencer, and the encouragement of his readers to adopt evolutionary thinking.

Early in this essay Allen raised the issue of the value of evolution as a philosophy by which to not only interpret nature, but everyday life. He therefore made a connection with common sense that appealed to the scientific naturalists. Allen wrote that these fallow deer were not “accidental animals” they were products of an evolutionary process of which “Mr. Darwin and Mr. Spencer have read the riddle for us, and in doing so they have given us a key which will help us unlock, each for himself, a thousand little secrets that meet us everyday on our way through the world, at every turn.”¹⁹ There is a great deal conveyed in this passage, Allen announcing that evolution was opening up nature and the world to all, and Scientific Knowledge was accessible to many and applicable to everything. Moreover Allen drew attention to the contribution of Spencer and Darwin in this, making them heroes of science. Indeed Allen makes great play elsewhere in the essay of the role of Darwin and writes that it was Darwin who discovered the process of natural selection in biology and thus that it was man who was “the real lord of creation.”²⁰ There is here then the anti-monopolism that was noted in the first chapter being conveyed to the public. In the same way that Allen wanted equal ownership of the fruits of the land and the soil of the earth, he also wanted equal access to the territories and products of knowledge.

As well as suggesting the general applicability of evolutionary thinking to understanding the development of deer, Allen outlined the specific process of natural selection in respect to the development of the antlers of the deer. As there was competition over space there emerged a rivalry between the various “tribes” of deer, and those with the most marked bony projections from their head were more likely to “vanquish their rivals” and thus that their descendants would be produced and inherit these peculiarities with “more or less variation.” The similar process would apply to these variations, and they would be “selected by the law of battle in accordance with their fighting powers and the fitness of their weapons.”²¹ Allen took the reader from a

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woodland scene where deer lay in “pretty groups” and through that subject revealed the ruthless cut and thrust of the struggle of evolution, that the law of natural selection can produce gradually convoluted horns, and that in individual deer horns are a product of natural history in that “every deer in fact recapitulates in his own person the whole evolution of his race....”²² This was an essay then that was about the charm of evolutionists and the genius and status of the originators of that theory, expressed through a subject that was “beautiful”.

The ideology of common sense was one that Allen adhered to and which he perpetuated, even entitling one of his books *Common Sense Science*. Reviewers noted this in his essay work. *The Athanaeum* review of *Evolutionist At Large* commented for example that “Mr. Allen skilfully maintains the association of common sense with science.”²³ The work was clearly intended to be consumed by the public and to attune them to science, as the *Academy* put it the essays “aim at awakening an interest in “the principles and methods of evolutionists” among unscientific readers....”²⁴ Reviewers also noted that Allen “devotes his ability to diffusing an interest in biology among readers of periodical literature, who certainly could not be reached by any less attractive means.”²⁵ Allen was therefore supporting evolutionism and scientific naturalism in a number of ways, he was writing about the doctrines they advocated, he was presenting that agenda to the public in a persuasive manner, and he was asserting the superiority of the scientific naturalist outlook. By doing so, Allen hoped to gain the support of men like Huxley and Spencer. Allen was putting into practice the call for education and support for science that was at the heart of the scientific naturalist agenda. Allen was concerned to take scientific knowledge to the public, and he drew an analogy between common sense, everyday life, and science. This desire to pursue that agenda of public education and the knowledge of science was manifest in two ways in respect to these essays, firstly in the content, nature and style of the essays themselves, and secondly in the locations in which Allen’s articles were placed.

Vignettes from Nature

In the preface to Allen's collection of essays *Vignettes from Nature* published in 1881, he noted that the "little essays" he had written were produced "in almost every case exactly under the circumstances which they describe, so that they form the record of a single summer's strays thoughts on Nature from an easy-going, half-scientific, half-aesthetic stand-point."²⁶ Moreover Allen wrote that they had "no pretension to be any more than popular expositions of current evolutionary thought, occasionally the author's, oftener still other people's."²⁷ These vignettes were character sketches of nature and illustrations of the principles of evolution, but despite their apparent looseness and lightness, they contained a hardcore naturalism that situated all subjects and products within the uniform and all-embracing process of evolution. Their alleged inconsequentiality and occupation of a space somewhere between science, literature and art, belied the thorough going scientific naturalism contained in them that was derived from Spencer, Darwin and Huxley and that their purpose was to advance the knowledge and agenda of the new naturalists.

Allen was developing the project of scientific naturalism and instilling in a wide audience ideas about uniformity in nature and evolution. Allen was trying to educate the public to think about science and the world in a particular way, and to think about the producers of science in a particular way. In particular what I want to note in Allen's essays is the evolutionary knowledge and agenda they contained, how they conveyed that evolutionary knowledge and the appeal of science and scientific accounts of the world, and how that was contrived and packaged to make science and evolutionism available for public consumption. I am concerned here with what knowledge was conveyed, what image of science that portrayed, and how that advanced the agenda of the scientific naturalists. Allen's aim was to relay and relate science to a wider public and convey the message of evolution in a way that was engaging and informative for readers and attractive to editors and the evolutionists.

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These factors influenced the content, style, structure, and language of the essays. I now want to consider some examples of these essays, noting the evolutionism and the naturalist agenda contained in them, before making some more thematic points about the essays themselves.

In the 1881 essay 'A Mountain Tarn', from *Vignettes From Nature* and originally published in the *Pall Mall Gazette*, Allen, noting the peculiar existence of the Llyn Gwernant trout in an isolated pool up high in a mountain, found that evolution had not only produced the tarn itself, but that all of the flora and fauna of the area could be explained through that process too. Thus here immediately Allen was able to point out the specific way that evolution could explain the development of species, and that this was a cosmic process that could span across geology and biology.

The process Allen described and outlined was one where there was spontaneous variation of a colony of fish, exposed to a particular set of environmental conditions, (that of bright sunlight as opposed to the dullness of lowland trout), who had access to particular foodstuffs. In this environment the qualities for survival were different from the lowland trout, and the fish had thus "been slowly altering in one direction under the influence of changed conditions and of a more specialised natural selection" while the river based trout evolved in a different direction.²⁸ This thus explained the very different types of trout. Evolution solved the problem of the varieties of trout and outlined to the reader how the same uniform principles of evolution could act in the same way, but produce a very divergent end product.

Moreover, Allen argued for the superiority of this viewpoint by contrasting a caricatured creationist idea against that of modern evolution. Allen noted when considering the trout that under "the old theory which represented every species of plant or animal as the direct result of special creation, we would have had no alternative but to suppose that each of these kinds of mountain trout was specially created in and for the particular little pool where we now find it."²⁹ An instance of creation would have to be called up to explain each trout and indeed the tarn in which

they existed. Allen noted that “the new theory of evolution” was more credible than this and had the power to explain this complexity from simple beginnings and that the theory “simply teaches us that each trout has been evolved under peculiar circumstances to suit the special conditions of these isolated sheets of water in which they live.”³⁰ Allen thus made this essay on a very narrow and quirky topic, upon which he hooks the reader, the basis of a sermon on the process and power of evolution.

There was also a particular narrative style to this essay, and we can note the way Allen dramatises and aestheticises the evolutionary process so that it becomes a story which takes place in the beautiful surroundings of “the calm surface and the bare craggy sides of a little mountain tarn” which itself had been the product of the glacial age.³¹ Allen sets the essay in a beautiful site and then tells the story of how from a glacial hollow the action of a “gringly” glacier winding down a long valley had “scooped out” the tarn. This glacier had then become a stream and trout had found their way into the tarn. When the stream dried up these trout were stranded at which point the principles of selection and environmental influence produced a unique species of trout.

This essay is typical and indeed identical to the many other essays Allen produced. Allen takes a “curious” question of nature and points out the difficulty it presents to the naturalists, the rare species of trout in an isolated tarn, subjects that to an analysis of natural selection and then states a general principle about evolution, while all along arguing in a familiar, accessible and pleasant writing style.

The companion volume to *Vignettes from Nature, Evolutionist At Large* republished essays from the *St James Gazette* and contained essays in a similar vein. ‘On Cornish Cliffs’ for example extends again the remit of natural law on two fronts, firstly as an all encompassing process that can be applied to the coastline, the plant life and the animals of a scene, but also extended the remit of the selective process to account for the production of beauty in nature. Allen’s main theme in this essay is that “in the

last resort, the beauty of leaves, like the beauty of coast scenery, is really due to the constant interaction of a vast number of natural laws, not to any distinct aesthetic intention in nature.”³² Only natural law is needed to account for the “great broken precipice”, the “dark cliffs of horneblade and serpentine”, and the “dappled coat of grey and yellow lichen”.³³ “All this beauty”, Allen noted, “has been produced by the mere interaction of the sea and the barren moors of the interior.”³⁴ The process directing that interaction was of course natural and it was the interplay of cause and effect of geology and geography, which produced a symmetry and variety which Allen considered akin to tracery or lace. It was not just the laws of biology then, but the laws of geology and geography that were universal and could account for the diversity of nature.

Another example from this collection, ‘Butterfly Psychology’ conveys well the way in which Allen tried to take a complex subject such as psycho-physico parallelism and introduced this notion to the public in an accessible way. Moreover, Allen here not only reduces behaviour and psychology to the level of physiology, but he accounted for the origin and development of that physiology and behaviour through the process of natural selection. Allen argued that the behaviour of the butterfly was purely mechanical and wrote that “his nervous connections are so simple, and correspond so directly with external stimuli, that we can almost predict with certainty what line of action he will pursue under any given circumstances.”³⁵ This activity was the product of a long process of descent with modification, and the butterfly was “guided by the blind habit of its race imprinted with binding force in the very constitution of its body.”³⁶ These instincts led the butterfly to be attracted to red and yellow flowers, to fly, and to recognise its mates. These were instincts which “have arisen by natural selection alone, because those insects which duly performed them survived, and those which did not duly perform them died out.”³⁷

In the follow up essay, ‘Butterfly Aesthetics’, Allen applied this analysis of physiology to aesthetic consciousness and a consideration of the affinity of

psychology between man and other animals. Allen suggested that though the intellect of the butterfly might be akin to that of a cunning nervous machine, it could be “true at the same time that he is, viewed emotionally, a faint copy of ourselves.”³⁸ There was a subtext to these essays, as in others such as ‘Microscopic Brains’, that what could be applied to the butterfly could also be applied to man and that psychological processes were just the function of physiological ones. This was an important principle. Even very complex behaviours were determined by physiological structures. In these essays then Allen took two key naturalist principles, natural selection and psycho-physico paralellism, and combined them in the analysis of the butterfly.

This analysis of the emotions of simple animals could also be extended to humans, and such an analysis was charged with assumptions about both nature and politics. In ‘Falling in Love’, included in the collection of the same title in 1889, Allen related one of man’s highest emotions to the process of natural and sexual selection and to the psychology of man. Moreover this essay was a polemic against those who sought to over regulate marriage and to introduce a positive eugenic agenda into social affairs. Allen argued that love was an evolutionary benevolent instinct, that it was a benefit in the selection process of mates, and that marriage based on love was a benefit in the struggle for existence. Allen suggested that even falling in love was a product of natural selection. Love was an instinctive feeling through which individuals would identify those who were young, healthy, and beautiful. Indeed Allen suggested that beauty was a great guide in the process of the selection of the best mate, and that we fall in love with “efficiency” and “ability” and the outward signs of healthiness.³⁹

It was important then that in matters of love free choice was exercised. This was not a woolly epithet, it was a fact of nature. For social and biological progress, love had to be freely expressed just as nature demanded. Again here we can see Allen outlining strong evolutionism, giving that natural process great scope, so that it could

even encompass love, bringing man's most complex emotions into that evolutionary and natural scheme.

In 'Pleased with a Feather', published in the *Cornhill Magazine* in 1879 Allen noted the sheer pleasure and productive thought there was to be had in thinking in an evolutionary way. Allen evocatively imagines a journey through natural history while confined to his room during the winter. Here he finds a subject in the feather which he uses as "the text for a humble lay-sermon".⁴⁰ Allen meditates on the feather, describes how it has grown, attacks the old view of Creation, which he says had no wonder or point, and states that there is a new view on nature which is "continuous" and "progressive."⁴¹ He then takes this "strange fact in natural history", the feather, and reveals its history, saying that it was the product of descent with modification and that the feather had evolved from a thin film of skin on the pterodactyl, which had been selected through time. Those who developed any extra faculty or advantage in the struggle for existence from that additional layer in terms of warmth, or ability to fly, would be more likely to survive and produce offspring. These successful variations would be accentuated over time and generations. Allen then discussed the matter of sexual selection and the modification of the feathers into aesthetic ornaments, and how that same process of selection had produced beautiful colouring and patterning.

What is interesting about this essay is the way Allen very reflexively takes an engaging but small aspect of nature, the intricate structure and colouring of a feather, and uses that as a basis for the exposition of not just the evolution of birds, but the process of evolution itself. Moreover, Allen gives a great scope to that evolution, it can account for life, beauty, structure and great variety, produced from a simple step by step process of variation and selection. So again we have these great themes of uniformity and evolution explained and developed through a familiar natural object. Another message in these essays was the encouragement to be a naturalist, and Allen commented that to be pleased with a feather might be childish simplicity to some, but

wrote “is there not some solace in that new philosophy which can enable one to pass a whole hour, this murky afternoon, in pleasurable contemplation of that tiny plume which seems no contemptible subject of human study to Charles Darwin and Herbert Spencer.”⁴² Science was a rewarding exercise, and even the smallest and apparently trivial of natural objects could be enlightened and made entertaining through the philosophy of evolutionism.

A particular bundle of information and messages were conveyed and relayed to the reader through the content of Allen’s essays. They told the reader about the uniformity of natural law, of the process of natural selection, of the all encompassing scope of that process, of the genius of the men who had discovered it, and of the value that the reader could themselves accrue from thinking about evolution and spending time considering science. These were core naturalist messages, and whatever subject Allen wrote about, in whatever journal, he made that essay a vehicle for the exposition of that set of values and a cluster of ideas.

In addition to the content of the essays, the style, structure and language of the essays were important in establishing an interest in science and gaining the attention of readers and editors. The essays were readable and colourful, and delivered the nucleus of the scientific naturalist philosophy in a compact, poetic and dramatic fashion. Allen attempted to escape the dryness of science by writing in a style that would appeal to a wide public and that would engage readers. There was a poetic and imaginative dimension to these essays which not only acted as a factor by which to get the material placed in journals, but also to make science and the messages they conveyed attractive. Most importantly, other writers noted this stylistic quality. James Sully noted for example that Allen’s essays concentrated on the “poetic side of the evolutionist’s conception of the world.”⁴³ Another reviewer commented how “nearly all the fresh lights which have been thrown upon the relations of the natural world by the teachings of Darwin and Herbert Spencer are here condensed and exhibited in the most simple gossiping style.”⁴⁴ Allen did not need copious notes to

persuade the public of his great knowledge or reading, and he did not need to continually display his learning by listing Latin names of natural objects. The device Allen used to engage his readers and persuade them of the value of science and the truth of evolution, was the style of the essays.

For example, Allen described his surroundings in very poetic ways, even including in his collections poems exalting the beauty and wonder of evolution. He described one locale thus; “In the bank which supports the hedge, beside this little hanger on the flank of Black Down, the glossy arrow-hearted leaves of common arum form at this moment beautiful masses of vivid green foliage.”⁴⁵ Similarly, when describing objects of Nature Allen used evocative imagery that combined naturalist observation with aesthetic appeals. When describing a feeding butterfly Allen wrote “a small red-and-black butterfly poises statuesque above the purple blossom of this tall field-thistle. With its long sucker it probes industriously floret after floret of the crowded head, and extracts from each its wee drop of buried treasure.”⁴⁶ Allen also infused nature with dramatic devices that made evolution into a story, so that we are told cycles of life and death, searches for food and shelter, and stories of relationships between animals and their offspring.

Alongside these lyrical tendencies and qualities the essays addressed issues that could be of interest to the general reader. The subjects Allen selected to write about were such that they could have wide appeal. The subjects required no special knowledge and the title of each essay was thus evocative and suggestive. There were essays which dealt with particular locations, such as ‘On Musbury Castle’ or those that addressed seasonal aspects of nature, ‘The Fall of the Leaf’ and ‘The Return of the Swallow’, those that told a story of nature, ‘A Woodland Tragedy’ and ‘Marriage Among the Clovers’, those that anthropomorphised the natural world, ‘The Mole at Home’, ‘Fish as Fathers’ and ‘Plants That Go To Sleep’, those that dealt with curiosities of nature, ‘Blue Mud’ and ‘Microscopic Brains’, and those which addressed particular flora and fauna, ‘A Pretty Land-shell’, ‘A Sprig of Water

Crowfoot', and 'The Hedgehog's Hole'. The title always functioned to entice the reader and make the essay attractive.⁴⁷

Allen thus made his work different by making it lively, dramatic, personal, vivid, informative, and colourful. As one reviewer noted the work was

“calculated to bring home to every reader how much interest and novelty, of intricacy, of beauty, of wonder, is to be found in the structure or history of the humblest plants or the most familiar animals; and also how greatly the once-decried doctrine of evolution has added to the ideal and poetic aspects of the study of nature.”⁴⁸

By focusing upon the poetic, aesthetic and curious aspects of evolution and presenting that in a lively and dramatic style, Allen was able to present his science in a manner that could satisfy the tastes of editors and readers.

The philosophy applied to the style of the essays extended to the structure of the pieces so that they followed a pattern that was attractive to his audience and editors, who demanded short and succinct essays to meet the constraints of space and reader's attention spans. Moreover, this style was attractive to readers who wanted light entertainment or fiction, and it thus appealed as a way to grab the attention of readers and give them knowledge of science. Allen's general strategy was to take a familiar object or subject, and make that the focus of his study for the duration of the essay so that the subject acted as a case study of evolutionary processes. In the preface to *Evolutionist At Large* Allen explained that his technique was “to take a simple and well-known natural object, and give such an explanation as evolutionary principles afford of its most striking external features. A strawberry, a snail-shell, a tadpole, a bird, a wayside flower-these are the sort of things which I have tried to explain.”⁴⁹ This explanation manifested itself as a set pattern that re-occurred throughout all of his essays.

Each piece opened with a scene being set where Allen described or evoked a locale, normally a place of rest in a picturesque riverside or valley, or on the Dorset Downs, where as Allen noted in his essay 'Blue Mud', “in a few places the layer of chalk that once topped the whole country-side has still resisted the slow wear and tear of

unnumbered centuries.”⁵⁰ A curious but familiar object of nature was then identified amidst this scenery and panorama, and a particular problem was then associated with an aspect of that object, such as the patterning of a snail shell, the shape of a leaf, or a cliff face where “the yellow sandstone is tinged in parts with a deep russet red with the bright green fields above and the sombre steel-blue of the lias belt below.”⁵¹ The principle of evolution is then outlined, and then that principle applied to the particular problem and object, so that in the case of the strange coloured mud, this contains a huge number of fossils which reveal “the real chronological relations of evolving life in the different periods.”⁵² This was then extrapolated to a number of other similar examples from nature, often to demonstrate the diversity of evolution, before the essay was summarised with a comment that affirmed evolution could account for all the world, and that only evolution could provide that account.⁵³ In the case of the ‘Blue Mud’, this gave evidence of the time that was needed for evolution to take place and even caught the intermediate forms of species which were untenable “in the days when Mr. Darwin first took away the breath of scientific Europe by his startling theories...”⁵⁴ Almost all of Allen’s essays followed this set pattern, so that the material was presented in a focused, intense, and ordered way to ensure the readability, accessibility and conciseness demanded by editors and readers.

Allen made a conscious attempt to simplify the theory and language of his essays, but not as to patronise his readers, but to value the clarity of straightforward expression and language. In this particular context the ideology of Common Sense purported by scientific naturalism expressed a continuity between science and everyday life which gave equal parity to both. Allen was consciously aware of this in his essay writing, and he referred frequently to his attempt to simplify science for the general reader. Allen frequently alluded to the contrast between what professional men of science demanded and what the public consumed. As Allen noted, he altered his style when writing for a non-professional audience, because “ordinary people care little for...minute anatomical and physiological details. They cannot be expected to

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interest themselves in the *flexor pollicis longus*, or the *hippocampus major* about whose very existence they are ignorant, and whose names suggest to them nothing but unpleasant ideas.”⁵⁵ Science was packaged so that it was consumable in a particular location through a particular medium by a certain group of people. But that material did not lose any meaning or value because of that, and rather than thinking of these essays as diluted, we should consider them as refined or distilled so that they could be consumed and absorbed. The surface of the essays concealed and conveyed deep messages about the value of evolutionary thinking and the pursuit of science.

Allen paid special attention to ‘simplification’ with regard to language in his essays. Expressing concerns about scientific language was a way of making differences pronounced and was a further construct of the assumptions made about audiences and readers. Scientific language and terminology was an especially powerful device by which men of science could claim expertise and authority. There was a deliberate attempt on Allen’s part to write his essays in language that was not specialised and that distanced himself from such speciality. As Allen put it “if you wish to be understood, it is best to speak to people in words whose meanings they know.”⁵⁶ However, this served to identify Allen’s own skills and authority, in that he articulated, displayed and drew attention to his ability to step between different modes of expression and asserted his own authority by always being capable of displaying his control of terminology and learning. Allen’s own authority was thus established by his denial of the authority of formal scientific language, and his emphasis on simplicity as an expert practice. Only someone who possessed mastery of both the codes of formal and popular science could translate one to the other, and only a writer who was skilled as a periodical writer could write science in the way the public would accept. Allen was thus able to claim to be a specialist within science as a writer attuned to the public, and claim to be an expert popular writer because of his ability to convey complex scientific ideas in a common language.

To overload readers with complex scientific language would not convey a positive

image of science and it would not attract readers to evolution. Richard Le Galliene explained that Allen's work was popular because when he wrote about science, "he made it clear, he made it simple, he made it interesting, he made it positively romantic."⁵⁷ Allen was aware that he was adjusting his writing style and language to suit a particular purpose and audience, and he commented that "if I have not gone very deep, I hope at least that I have suggested in simple language the right way to go to work."⁵⁸ In an essay on 'Blue Mud', Allen wrote in clear language because in his opinion "so very misleading to the ordinary mind is our accepted geological nomenclature."⁵⁹ Allen expressed his science in a language that was available and accessible to his audience. This expressed an affinity between science and popular culture and evolution and everyday life.

There was a simplicity of language in Allen's accounts of evolution in nature and of the minutiae of natural objects, which may be best attested to by contemporary reviewers. The *Nature* reviewer of *Colin Clout's Calendar* commented that the essays contained "the least technical and most graphic language."⁶⁰ The *Scotsman* commented "they give a broad general view of the principles and the methods of evolution, couched in clear, untechnical, and oftentimes racy language, and are thus admirably adapted for their intended purpose."⁶¹ The straightforward language of Allen's essays was one of their most admired features, and it marked Allen's work out as special and himself as a highly competent writer.

Allen tailored his writing in numerous ways to suit his audiences and to make his work and his message noticeable to them. Allen wrote in the preface to his collection *Falling in Love* that he had made compromises to editors and his readers when writing his essays. As he put it "some people complain that science is dry. That is, of course a matter of taste. For my own part, I like my science and my champagne as dry as I can get them. But the public think otherwise."⁶² Allen was aware that the expectations of the public constrained him and he made changes to his work to accommodate the desires and tastes of the public and noted that he had "ventured to

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sweeten accompanying samples as far as possible to suit the demand, and trust they will meet with the approbation of consumers.”⁶³ Popular science here was constructed as a response to the demands of the public.

In these essays we can see that Allen was granting a universality to evolution, opening up the interpretation of nature to anyone who would but become familiar with the principles of evolution. Moreover, the essays themselves drew upon a technique of introduce the reader to familiar, attractive or peculiar subjects to illustrate a very strong evolutionism. There was a subtlety to this style of luring the reader into the essay, and then delivering a compact hit of evolution and new naturalism. Those key naturalist ideas, of uniformity and evolution, were conveyed to an audience in an attempt to educate and inculcate scientific thinking in the public and express an affinity between the scientific naturalist and the public in an attempt to gain popular support for science.

In Nature's Workshop

The period 1870 to 1900 saw a flourishing entrepreneurial dimension within publishing and a general expansion in the market for reading matter which, as Raymond Williams has suggested, altered the relationship between the writer and the audience to such an extent that the market came to play an increasingly significant role in the production, circulation and consumption of cultural goods.⁶⁴ Science was not exempt from these developments and the expansion and diversification of commercialisation in publishing, spurred on by entrepreneurial bookmen keen to satisfy the public demand and desire for reading material, had a significant impact on the access of the men of science to the public.

Roy Mcleod has noted in his analysis of science periodicals that publishing was “decisive” in establishing the public persona of science.⁶⁵ Market demands were expressed as editorial responses to reader's desires and the burgeoning literary publications lists presented new opportunities for the presentation of science to the

public. As W.H. Brock writes “the main growth factor in nineteenth century science periodicals was a commercial spirit not the proliferation of societies.”⁶⁶ Within science, speculators were willing to venture into publishing in part due to their concern to advance the cause of science and see it gain a wider public, but also because of a desire to see financial returns. These “enterprising publishers”, as Susan Sheets-Pyenson describes them, included Richard Taylor, William Francis, and John Passmore Edward respective publishers of *Scientific Memoirs*, *Geological Record*, and *The English Mechanic*. The men of science also ventured into publishing, with Huxley, Busk, Lubbock speculating with the *Natural History Review* between 1861 and 1865, though as Brock notes it was a “chillingly serious” piece of literature which after only four years became defunct.⁶⁷ Alexander Bain also financially supported the journal of psychology, *Mind*. The number and variety of science journals became consolidated, with the emergence of a number of strong titles, including *Popular Science Review*, *Quarterly Review of Science*, and *Nature*.⁶⁸

Such specialist publications were not the sole source of scientific information however and crucially they were not the most widely read journals, especially among the middle class audience the men of science sought to cultivate. A review of Allen’s *Evolutionist At Large* in *Nature* identified the growth and importance of non-science periodicals to the proliferation of science. “Wider and wider grows the field over which newspapers and magazines exert their distributive influence” the reviewer wrote, “their readers find a royal road to learning the contents of books which they are too hurried to read in full, in short essays which collect the essence, omit the difficulties, and state the conclusions of the writers in the clearest and most unqualified terms.”⁶⁹ Though the reviewer may have been disparaging of this trend, and even of Allen’s contribution to it, his comments suggest the increasing significance of newspapers and periodicals as propagators of science and of the significance of the media in constructing the style of science and its content.

The power of Allen’s essays as popularising texts, was not just their style or clarity

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of expression, it was their location and context which put them in a position to be consumed by a particular audience as they presented science to an audience who may have picked up reading matter for reasons other than access to science. Grant Allen's popular science books for example were all collections of essays previously published in non-science periodical literature. The essays in *The Evolutionist At Large* were taken from the newspaper the *St James Gazette*, as were those in *Colin Clout's Calendar*. The essays in *Vignettes From Nature* were originally published in another daily the *Pall Mall Gazette*. *Falling in Love* consisted of work that had appeared in the *Fortnightly Review*, the *Cornhill Magazine*, and *Longman's Magazine*, and essays collected in *Science in Arcady* were also re-published from these latter two periodicals. Another collection of material, more social comment than science, *Post-Prandial Philosophy*, was first published in the newspaper the *Westminster Gazette*. *Flashlights on Nature* and *Glimpses of Nature*, contained essays that had previously been published in the *Strand Magazine*. We should also note that Allen's collections did not gather together all of his essays. Allen collected only together only 25 of his near 70 *Cornhill* science essays, and republished just 10 of the 33 science related essays in *Longman's Magazine* in later collections. This amounted to hundreds of essays each of which was situated in a title that could bring to the attention of the public evolutionary morals and information about the value of science. It was through general titles that a wider public could be addressed and cultivated, and through which science could be situated alongside more popular pursuits. Though Allen published in science journals such as *Nature*, *Mind* and *Popular Science Monthly* many of his essays appeared in locations where science was not to be anticipated. As James Sully noted in his review of *Evolutionist At Large*, it was desirable and difficult to place science where others would read and see it, and he noted that

“it is not often that a daily paper finds room for scientific studies amid its crowd of political and social topics; but the papers here thrown together were fortunate enough to obtain a place in the columns of the *St. James Gazette*. Mr. Allen's success is really one large success; in having succeeded in penning a

series of scientific sketches acceptable to a leading political paper he did something worthy of permanent record.”⁷⁰

This in itself made Allen’s work unusual, and indeed Allen made for himself a unique position in the market for such goods, and gained recognition as a populariser of science.

Allen was interested in reaching as wide a public as possible, utilising systems of large scale production to achieve this. We might want to consider the nature, content, readership and attitude to science of these types of titles to consider the context in which the essays were placed and read. I intend to use Alvar Ellegard’s studies of Victorian periodical literature to reconstruct the audiences and orientations of some of these titles.⁷¹ Ellegard notes that the *Cornhill Magazine*, the publication Allen contributed to more than any other, had a circulation of some 12 000 per month, a circulation enhanced by its availability at Mudie’s subscription library. Ellegard considers the readership to have been “middle to upper class” and that the magazine was politically liberal and religiously neutral. As Ellegard writes it relied “increasingly on fiction” to the detriment of other matter. The *Pall Mall Gazette* was a very different kind of title. This was a daily evening newspaper with a circulation of around 8000 middle to upper class readers, with a “fair to high” educational standard and who were slightly more conservative than those of the *Cornhill*. We could similarly describe the daily newspaper the *St James Gazette* which published a great deal of Allen’s work and ran long series of his essays, most notably *Colin Clout’s Calendar*. The *Fortnightly Review* was possibly the most partisan of the titles Allen placed his essays with, and though it had a general subject matter and covered a variety of topics it was, as Ellegard writes “politically liberal-radical, with a rationalistic philosophical creed.” Its circulation was only around 2500 per month though it was available through Mudie’s. The *Contemporary Review* was another monthly available at Mudie’s, with a circulation of around 4000. However, this was a more religious publication and thus its general reading matter “was likely to find a wider public than the freethinking *Fortnightly*”, as Ellegard puts it. *Fraser’s*

Magazine's monthly circulation numbered around 6000, though it to was accessible via Mudie's, and Ellegard writes that its subject matter was varied but that it was "an important organ of opinion" and its middle to upper class readership were "seriously minded, tending to broad Church views..." *Macmillan's Magazine* was also characteristic of these periodicals, in the sense that its circulation was around 8000 and its readership largely middle class. However, its tone was more serious, and Ellegard notes that it was "an organ of opinion rather than a purveyor of fiction", and that its readers were "Broad Church or even agnostic."⁷²

Similarly, Grant Allen's books were widely reviewed, in national newspapers such as *The Times*, regionals such as the *Glasgow Herald*, weekly journals specialising in the arts such as the *Athanaeum*, fortnightlies like *Academy*, and monthlies and quarterlies like the *Contemporary Review* or the *Edinburgh Blackwood's Magazine*. If we take Grant Allen's *Evolutionist At Large*, we can note that the book was favourably reviewed in a wide range of types of periodicals and papers. Not only was the book noticed in *Nature*, but it was also given lengthy reviews in the science sections of the journals specialising in the arts and sciences, for example in *Athanaeum* and in *Academy*. These are the types of places we would expect to find these reviews, but Allen's book was also reviewed in more literary titles such as *The Saturday Review* and the *Westminster Review*, as well as regional dailies such as the *Leeds Mercury*, the *Scotsman*, and the *Manchester Examiner*.

The first aspect to note here is that the material was appearing in periodicals that were not necessarily science dedicated. The essays were placed in a variety of locations, in dailies, weeklies, monthlies, and quarterlies, with both general and specific readership, in periodicals that published general and various subject matters. More importantly we might note that the magazines in which Allen placed his essays relied greatly on fiction which suggests that science was reaching readers it would otherwise have missed. A.J. Meadows estimates the science content of journals such as the *Cornhill Magazine*, *Fortnightly Review*, *Contemporary Review*, and

Macmillan's Magazine to be around 5% during the 1870's, *The Blackwood's Edinburgh Magazine* contained only 1% science in the 1870's, growing to 9% later. This compared to 9% in the *Contemporary Review*, and 5% science content in general for these mixed titles.⁷³ So though science was a fixture of popular periodicals, and a prominent one in some, it was generally a minority subject in most of them. For example the November 1877 issue of the *Cornhill Magazine* contained a contribution from Allen, an essay on 'The Mighty sea-wave' by another prolific and prominent science writer Richard Proctor, chapters from serialised novels by Margaret Veley and R.D Blackmore, some sonnets by J.A. Symonds, and a story by Grenville Murray. The *Cornhill Magazine* of November 1884 contained just one science essay, by Allen, five pieces of fiction and one general essay. The *Longman's Magazine* of November 1882 contained four fiction elements, one History essay and another on a general topic, with just two science essays. The February 1890 issue contained just one science essay, compared to three fiction pieces and four general interest articles.

What is important is that Allen's material was placed where science was not the dominant or even featured aspect of the titles output, which was often fiction, news and general articles. This may have made Allen an especially effective populariser as he was often the author of articles and fiction, sometimes even in the same issue as his science pieces, as was the case in the *Cornhill* issue of October 1884, which contained the story 'John Cann's Treasure' and the botany essay 'Queer Flowers'. This may have made Allen's work appear less partisan and dogmatic, and even made him appeal as a model writer open to the ideas of evolution, an example of how science and nature could be aids to the imagination.⁷⁴

We can also consider each of these titles attitude towards Darwinism and compare that to their attitude to Allen's books to gain an indication of the impact his style and approach might have had. The *Pall Mall Gazette's* normal stance towards Darwinian issues was positive, though as Ellegard suggests this did not often extend to a consideration of natural selection in respect to man. The *Cornhill Magazine* however

accepted evolution in all areas, and while the *Fortnightly Review* contained information on evolution, it was not always supportive of it. *Fraser's Magazine* and the *Contemporary Review* were less supportive of evolutionary doctrines, whether in relation to man or on general matters.⁷⁵ Allen was spreading the word of science by publishing in places not usually associated with science and not normally accepting of Darwinian ideas, thus gaining access to a non-science audience. This was just what the scientific naturalist agenda demanded.

Moreover, this was an expanding market, and Allen was able to carve out a niche in that market for his essays. Allen had been able to earn additional income by placing some of the many essays he had written with the *Cornhill Magazine* in the 1870's. These included 'Carving a Cocoa-Nut' in 1878 for which he earned 12 guineas, though it helped him that the editor of the *Cornhill* at the time was the supporter of science and evolution, Leslie Stephen. Allen wrote later that this payment "was the very first money I earned in literature. I had been out of work for months, the abolition of my post in Jamaica having thrown me on my beam-ends, and I was overjoyed at so much wealth poured suddenly upon me." Moreover, once published and his name was known he noted that "other magazine articles followed...and before long I was earning a modest -a very modest- and precarious income, yet enough to support myself and my family."⁷⁶ Periodical writing, then, was something from which Allen could earn an income, in a way that his physiological science could not provide. Moreover, Grant Allen had been, as Edward Clodd describes it, "casting about for new channels" after the publication of his two works on aesthetics and his subsequent failure to find constant and paying work.⁷⁷ Allen could not only make a living from popular writing, he could also establish a reputation for producing lighter essays on various branches of science. Allen was searching for a position in the field that could generate further demand for work and which could raise his visibility in the scientific field and address a niche in the literary market.

The reviewer of Allen's *Falling in Love* noted with an ironic metaphorical twist that

“as are white polar bears and foxes to the snow-fields of the arctic regions, so is Mr Grant Allen to the popular serial. He is made for it, and it for him.”⁷⁸ Leslie Stephen, then editor of the *Cornhill Magazine*, was less cynical than this and wrote to Allen that there was a special quality to his popular essays, and he wrote “you have done what is very rare and very excellent in journalism...you have made a distinct place for yourself, and you have done a real service in spreading some popular notions of science.”⁷⁹ Stephen was aware that Allen had developed for himself a particular position in relation to science and he added that “few journalists can say as much for themselves.”⁸⁰ Allen was therefore a specialist populariser possessing a set of skills by which others could identify him as prominent in the field.

It is worth briefly noting here some similarities between Allen’s position and that of another prominent populariser, Richard Proctor. Like Allen, Proctor had issued some well received but commercially unsuccessful scientific texts which had established him a reputation among men of science, including *Saturn and His System* in 1865. His attempts to enter the field of popular science were initially rejected by publishers, but once in circulation they were widely appreciated. Both Allen and Proctor thus claimed a particular position in the scientific field, and were even able to assume specialism within that, Proctor in astronomy, and Allen in biology, psychology and botany. Indeed their work often appeared alongside each other in periodical literature and they were compared to one another in reviews.⁸¹

Allen’s essays were of a style that would attract readers and they contained messages that were thoroughly evolutionist. They were placed in a location where science gained access to channels and networks of readership which the scientific naturalists desired. Allen’s essays were thus gaining himself and naturalism exposure and publicity through a variety of journals including non-science periodicals, which was critical to the support for science.

Grant Allen pursued popular science as a way to gain a reputation and stature, and he was advancing his own position by propagating the interests of the scientific

naturalists. By extolling the virtues of science to the public, Allen also publicised his own skills, his own allegiances and his own marketability. Allen was enhancing his own authority and status by popularising a particular and partisan version of science and evolution. It did not go un-noticed that Allen was appealing to the public through his work, that this was in the interests of science, or indeed that Allen was advancing a very particular version of nature and science to the public. A review in the *Athanaeum* of *Vignettes From Nature* described Allen's book as a collection of "agreeable little essays on natural history", but noted that when reading them "we suddenly find we are being lectured on a scientific point in the interests of a very fully developed evolutionism" and that the essays were written in an "exceedingly positive tone."⁸²

Reviewers of Allen's work often noted specific qualities in the writings themselves. They noted the quality and "elegance" of the writing and that the essays were bright, lively, pleasurable, and amusing. Reviewers also testified to the accuracy of the works, their familiarity with modern science, their fresh and enjoyable tone, their careful and knowledgeable consideration of nature, and Allen's ability to convey his knowledge of nature to others which endowed the essays with an exceptional "readableness".⁸³ The *Leeds Mercury* summarised these points thus: "the author is a naturalist of the highest type; he has acquired an insight into the workings of nature which nothing but a close personal study of her manifold processes can give; and his command of clear expressive language is as complete as his knowledge is extensive."⁸⁴ Moreover, Grant Allen's writing was noted among reviewers for its imaginative and aesthetic qualities, and the manner in which he could address common subjects and embellish nature and science with colour, texture and beauty. Richard Le Galliene wrote that Allen was a populariser of "hidden knowledge" and that his "individual clearness came of imagination, as his charm came of an illustrative fancy, and a gay humanity applied to subjects usually immured from traffic with such frivolous qualities."⁸⁵ The *Academy* also noted that Allen's work

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straddled some indefinite border between science and art and commented of *Evolutionist At Large* that “these essays are quite as much bits of literary art as bits of scientific exposition”.⁸⁶ The *Athanaeum* review of *Common Sense Science* commented that Allen “is never dull, and if he does not teach much that is new, he puts old facts and truths in a quaint and fascinating way....”⁸⁷ It was this “grace of style”, *Nature* noted, that rendered Allen’s “essays the most entertaining in the kind of literature to which they belong.”⁸⁸ *The Saturday Review* was aware that the essays had a wide appeal; “On the whole anyone who knows natural selection as a theory, but has not realised its varied applications in the most familiar facts of animal and vegetable life, can hardly find a better aid to his imagination than Mr. Grant Allen’s volume.”⁸⁹ On the publication in 1892 of *Science in Arcady*, *Nature* again noted that “this volume will fully maintain Mr. Grant Allen’s reputation as a popular writer on science”, while the daily *Leeds Mercury* with its cumulative weekly circulation of about 4000 considered *Evolutionist At Large* to be “one of the best specimens of popular scientific exposition that we have ever had the good fortune to fall in with”.⁹⁰ These comments suggest that there was a quality to Allen’s work and that his essays were attractive to the public.

More significantly, both privately and publicly Allen’s work was praised and welcomed by the scientific naturalists and those associated with them. The partisan content of the essays pleased both Charles Darwin and Thomas Huxley who wrote to Allen after reading collections of his essays. Huxley, who was himself a highly skilled exponent of the popular essay, wrote to Allen after reading *Evolutionist At Large* and said “I have no fault to find on the score of accuracy wherever I have dipped or rambled through your book; on the contrary, I find much to admire in the way you conjoin precision with popularity-a very difficult art.” These words may have been just to ensure Allen’s commitment to the naturalists, but Huxley was aware of the impact such essays could have and that this was not something established without difficulty and skill. Huxley told Allen, “I would not wish for a better lure to

the study of nature.” Huxley, whom Block Jr describes as establishing “a standard for popular scientific writing which has lasted into the twentieth century”, perceived excellence and distinction in Allen’s work. Darwin similarly considered Allen’s essays to be attractive both to the man of science and the public, because they could be pleasurable to both. Darwin was especially struck by the style of the essays in *Colin Clout’s Calendar*, and he told Allen “I quite envy you your power of writing—your words flow so easily, clearly and pleasantly.” But again, it was not the pleasantness that really appealed, it was the effect this could have on the public that mattered, and Darwin wrote to Allen saying “who can tell how many young persons your chapters may bring up to be good working evolutionists!”⁹¹

Nature the journal of scientific opinion, sanctioned and approved the work Allen produced. George Romanes wrote in *Nature* that “of all the writers in this country who seek to render the facts and theories of modern science attractive to the public, Mr. Grant Allen is in our opinion among the most successful.”⁹² This was because the essays were capable of attracting readers and of inspiring further interest, as *Nature* noted “no reader who would consult that class of publication for scientific ideas could help being interested and, would, we should hope, led on to further inquiries by it.”⁹³ A.R.Wallace noted that Allen was exceptionally versed in naturalism, writing that Allen had appeared to have “thoroughly mastered its principles, to have read and assimilated all the best works on the subject, and to have so imbued himself with its leading ideas that he is able to apply it in an intelligent and often original manner to every natural object.” Indeed, Wallace went as far as stating in *Nature* that “certainly Mr. Grant Allen stands as the head of living writers as a popular exponent of the evolutionary theory.”⁹⁴

The relative reception of two of Allen’s books in the journal *Nature* also suggests the standing we might attribute to Allen and that the identity he was afforded within scientific circles was one of making more widely known evolutionary ideas. The *Nature* review of Grant Allen’s *Force and Energy* (1889) by the author of *Elementary*

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Mechanics Oliver Lodge was universally damning. The review stated that Allen had misunderstood the facts and theory of physical knowledge, and stated that “the performance lends itself to the most scathing criticism; blunders and misstatements abound on nearly every page, and the whole structure is simply an emanation of mental fog” and that it would thus be best to let “the work sink into oblivion unnoticed.”⁹⁵ Moreover, Lodge appeared to be attacking Allen as a Spencerian and as a “amateur...who has devoted a few weeks or months to the subject.”⁹⁶ Such criticism might be expected given Allen’s extreme materialist associations and Lodge’s connections to Cambridge, his interest in religion, psychical research and spiritualism, but even so Lodge’s criticisms of Allen were based as much upon Allen’s straying into subject matter upon which he had no right to comment, as much as the actual content of the book.

Nature’s reaction to Allen’s *Flowers and their Pedigrees* (1884), though critical of some of Allen’s thinking and the accuracy of his facts, was far more positive about the book, its intentions, and Allen, noting that “the articles are written in the author’s well-known pleasant style, and cannot fail to attract and interest many who have never previously turned their attention to the study of our common weeds.”⁹⁷ Moreover, the review comments that “the book is nicely got up, and the language is in that easy and fluent style in which Mr. Grant Allen is so proficient, and which goes far towards investing the driest details of science with a poetical and even romantic interest.”⁹⁸ These works were addressing radically different audiences, the physics one to a small select audience, and the botany to a more popular or wider audience and the craze for naturalism. Where Allen was accepted was as an evolutionist improving the image of science and increasing public awareness of science.

Allen’s essay writing then was capable of establishing for himself esteem and recognition within the scientific naturalist camp. By supporting their agenda effectively in public, they then supported his work. By thus becoming a prominent member of that group he could acquire social status and cultural distinction, and

could align himself to a section of the scientific field that was rising in prominence. To an extent this strategy had worked when Allen developed his work on aesthetics, but once the impact of that work had subsided he needed to find another source of status within that circle. This became his popular writing and his speciality became as a propagandist. Popular writing was capable of creating status and reputation for Allen among the scientific naturalists, and his promotion of their programme outside of science could have positive effects for him within the sphere of science and in that community.

Conclusion

The *Nature* review of *Colin Clout's Calendar* expressed clearly the agenda and aims of Allen's popular science writing. The review noted that "the function of the popular writer is to make his material attractive to the general reader, and if he succeeds in doing this for science, we think that he deserves to be encouraged by scientific men."⁹⁹ Grant Allen certainly tried to make science attractive for readers, and in return he received the encouragement and respect of many of the leading figures of scientific naturalism. Though Allen may have thought some of his writing inconsequential, its purpose was of great importance to those dedicated to the new naturalism as it took the image and knowledge of science to a wide and unscientific audience. Grant Allen was a skilled writer, who possessed an ability to convey science to the public in a style, language and location that was accessible to all. Moreover, Allen was able to create an impression of skill in his ability to write for the public and was able to suggest a demand for such skills, yet a scarcity of those who could provide it. He was thus able to carve for himself and occupy a niche in the market for cultural goods.

I have suggested in this chapter that there are two elements that play a part in popularisation, that is the popularisation of the author and the quest for distinction in the field, and the impact of systems of large-scale production on works of science. Grant Allen enhanced his position in the field by pursuing a niche market which

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required its own skills and abilities for success. Allen's style was a product of his own fashioning of identity and credibility, and of his attempt to produce work that would gain him respect and credibility in the scientific naturalist fraternity, which editors would approve of, and that consumers would and could read.

The process of popularisation was beneficial to a variety of groups representing a spectrum of interests. To the individual agent and writer, popularisation presented an opportunity to earn much needed income and status, and it was an avenue through which a distinct position in the field and market could be produced and pursued. To the men of science, popularisation established and advanced similar interests, it could provide a platform by which the ideas and status of science could be disseminated to a wider and diverse audience, through a medium that could influence the lives of readers in a way that serious books could not. Moreover public interests could be harnessed to bestow status upon science and be utilised as a way to make claims culturally and socially about the importance of science. Popularisation served not just to take science out to a wider audience, but also as a resource to claim a legitimacy for science. Such a process could not have been established had not the opportunity for dissemination been available. Science could bestow a respectability to publications which were otherwise collections of stories, news and gossip parading as news, as well as giving a variety to publications that could maximise the audience who could purchase them.

Chapter 4 Strange Stories

A man who can write a serious work at the present day may well hesitate whether it would not be better to write a sensational novel. Fortunately, the causes that impel him to work are generally too strong even for his self-interest.

Grant Allen writing in 'The Ethics of Copyright', 1881.

In his judgement, all fiction was, to borrow a term from chemistry, allotropic.

Edward Clodd on Allen's Fiction. ¹

Introduction

Grant Allen's novels were perceived by various contemporary parties as light literature, written for mass consumption which appealed to the most sensational gimmicks to attract attention. George Gissing, author of the perceptive 1891 novel *New Grub Street*, wrote in his diary that Allen's novels were "trash", though he still kept returning to the library to borrow Allen's novels. ² Indeed, the context of Gissing's novel, the poverty and prostitution of commercial writing, perfectly captures the predicament of Allen himself, that of the author reduced to sensationalism for the sake of livelihood and success. ³ Indeed we could identify Allen with a number of the main characters of the book, Edwin Reardon the novelist who will not forego his principles, Alfred Yule the serious writer whose work goes unnoticed, and Jasper Milvain the novelist whose material success is grounded on a total disregard for art but the highest respect for the market. Allen finds himself in the position of all three of these characters; he won't compromise his science, his serious work had not brought the critical acclaim he had hoped, and he was reduced to writing gimmicky novels to suit the public taste. But Allen, unlike these characters, was able to reach a compromise and retain in his novels the core of his scientific naturalism, and indeed he may well have succeeded as a novelist because he made his science the basis of this sensationalism and made his books individual and identifiable through that. Like the characters in Gissing's novel, Allen held principles and faced market realities. In this chapter I wish to discuss how Allen negotiated these and ultimately turned them to his advantage. Though certain wide-ranging

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changes framed the work Allen could produce, and certain demands placed constraints on the content and style of his writing, Allen was able to establish his own science agenda within his fiction and use that fiction as a way to spread the word of science.⁴

Over a period of fifteen years Grant Allen wrote forty three books of fiction of which approximately eight were collections of stories and the remainder novels. Moreover, Allen's work was thoroughly infused with scientific naturalism and he used stories as vehicles for his science. He shaped the plots and morals of his tales from an evolutionary and rational framework, and he took the themes and concerns of science and made them into works of literature, using the novel as a basis to explore the philosophical aspects of evolutionary psychology, biology and sociology. Allen was working through the ideas of evolutionary science, but in the peculiar and particular context of sensationalist popular fiction or novels, and as Richard Le Galliene noted, "their success was that they lost nothing of narrative interest on that account."⁵ It is, thus, Allen's thorough and focal use of science in sensational fiction that makes his work of interest.

Allen's scientific naturalism was portable and capable of sustaining a feasible literary universe, but there were complications for him when articulating that project in public, particularly with respect to his reputation, but also in relation to how he could break into the literary market. This chapter begins with a consideration of Allen's motivations for writing fiction and the problems he faced when moving into the fiction market. It then turns to an examination of the way in which Allen made his stories a vehicle for his science, and the way in which he invoked his evolutionary beliefs and scientific values as a framework within which to situate those fictions and by which to differentiate them. What inspired and structured Allen's literature, and indeed his move into literature at all, was not just his framework of evolutionary beliefs and his popularising zeal, though these were very important factors, but was that the market and the public increasingly demanded sensationalist fiction. What I

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wish to suggest is that Grant Allen was responding to wider market trends in his writing, and that in his use of science he sought a basis to make his fiction distinct and special. Moreover, fiction afforded the possibility of reaching a wide audience, and as such Allen loaded his fiction with evolution and messages about science so that they could be taken to a wider public. Popular fiction was potentially a prime site for the dissemination of scientific knowledge and Allen used that to increase public awareness and knowledge of evolutionary ideas.

The Field and the Market

The trends noted in chapter one and three, of an expanding literary market, increasing readership, growing demand for cultural goods, and an intensifying demand for light fiction, had consequences for the kind work Grant Allen produced. Newspaper and periodical sales boomed in England after 1850. Between 1816 and 1836 sales had increased by a third, and between 1836 and 1856 by 70%. Between 1866 and 1881 however they grew by 600%.⁶ *The Daily Telegraph* for example steadily expanded its readership by 50 000 per decade between 1860 and 1890, while the *Lloyds Weekly Paper* increased its circulation from 170 000 in 1861 to 1 million in 1891.⁷ Periodical literature similarly expanded, with an increase in the number of titles and sales. Alfred Harmsworth's *Answers* for example sold 12 000 copies in its first week of issue in 1888. This expanded to sales of 48 000 by the end of the year. When the periodical offered a competition to win £1 a week for the rest of your life the circulation grew to 325 000.⁸ In 1864 the total circulation of non-daily periodicals published in London reached 2 203 000 for newspapers, 2 404 000 for weeklies, and 2 490 00 for monthlies.⁹ Prices of these publications also fell, with half penny papers arriving in 1861, and the *Times* even reduced its price by 1d in that same year. *The Daily Mail* reduced its price to a half penny in 1896. Even for those who could not afford to purchase papers, the libraries provided access to them at a low annual cost, and in civic libraries access was free. Book sales however remained sluggish in

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comparison, mainly due to the high cost of 3 volume novels which could be as much as 10s 6d per volume. Nevertheless, even these sales grew in the 1880's, and in any case the libraries and the periodicals provided an opportunity of access to the most recent works by popular writers.

Moreover, tastes shifted to a demand for fiction. Mudie's catalogue contained 44% fiction and they bought in large numbers of the most recent and demanded novels. Mudie's stocked historical novels, adventure stories, sensational novels, sports tales, and romances, from a wide range of writers including Julia Balantyre, Wilkie Collins, Mrs Oliphant, R.M. Ballantyne, and W.H.G. Kingston. Taste was not just for the classics, but also for the "legion of half forgotten" names which constituted the "stars" of the book trade.¹⁰ As Terry notes, readers liked a good story, well told in realistic terms. It is possible to note, however, connections between fiction writers with naturalism and even Victorian Scientific naturalism. James Sully for example was a novelist and a psychologist, and there were other writers who worked evolutionism into their novels, such as George Meredith, and in many ways Thomas Hardy develops many of the themes that Allen does in his work. Fiction and science shared a common culture, and books with meditations on science, such as William Winwoode Reade's *The Martyrdom of Man* of 1872, and science fiction such as Chesney's *The Battle of Dorking* the previous year, made their mark on the literary scene. Tess Cosslett has noted the assimilation of scientific culture into literature and that science and fiction shared common concerns for society and nature. For example Tennyson and Eliot were especially seen as writers contemplating evolutionism and science, while writers such as Huxley used metaphor in their science essays. Eliot is also interesting because she had a very close attachment to Spencer as did Allen, and her novels take up themes of philosophy and science. Eliot's work has what one historian has described as having a "seriousness" about it in terms of intent and manner. Her fiction is steeped in a background of "rationalist journalism" on religion and philosophy, and takes within its concerns agnosticism, morality, politics, the rise

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of the professional classes, and links these to contemporary science and concerns about heredity, determinism and free will. There was thus a commonality developing or existing between science and literature, but Allen's fiction is notable because it was avowedly cheap popular fiction for the mass market. Fiction may have become more popular than science, but science adapted to fit that trend.¹¹

The Victorian, then, had the money, opportunity, ability and inclination to read. Indeed so strong was the reader's influence, that changes in the taste of the readership would have effects on the inclinations and choices of publishers, editors and writers. There were market constraints upon Allen's writing, and as market demands shifted toward an increased desire for sensationalist fiction, Allen found himself in a position where he needed to be able to supply what editors and publishers wanted. A neat example suggests the way and extent to which the changing market for cultural goods moved Allen's work in a particular direction. On the same day in 1883, Grant Allen received, "by an odd coincidence" two letters from the new editor of the *Cornhill Magazine*, the novelist James Payn, which would dramatically alter the trajectory of his project.¹² One letter was addressed to 'Grant Allen' and informed him that as the magazine was under new editorship and was responding to market pressures, it was changing its format and content to reflect the tastes of the public. It was thus going to print less material about science and had, as Allen put it, "determined in future to exclude everything but fiction from the magazine." Thus the *Cornhill*, which had published more of Allen's science essays than any other journal, no longer required Allen's essays. The other letter, passed to Allen via his publishers Chatto and Windus, as Allen wrote "was addressed to me under my assumed name of J. Arbuthnot Wilson, and begged that unknown person to submit to Mr. Payn a few more stories."¹³ Evidently the stories proved popular, were well received, and met the demands of the new direction of the magazine. This episode illustrates a number of points: Allen's ambiguity between the fields of literature and science, his susceptibility to market change, the response of periodicals to those market changes,

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and the role of the editor as a conduit of public opinion. Most significantly it highlights the fact that there was demand for Allen's fiction when there was not demand for his science. As demand for his science faded, Allen had to find a way to establish a niche in another market and make his own goods desirable. He achieved this by turning to sensational fiction. Moreover, fiction was beneficial to Allen as it not only permitted him to tell a story about science that was accessible, but the medium of fiction itself gave Allen access to a wider and different audience from his usual scientific writing. Allen thus wrote fiction to clarify his scientific thinking in the sense that fiction offered a way of thinking through impossible experiments, and as a way of presenting science to the general public in an accessible way. Allen's stories and novels existed and functioned therefore for the purposes of illustration, experimentation, and education.

Between 1877 and 1881 Grant Allen's output was limited to science articles of various kinds and the occasional essay on historical issues or social and philosophical questions. In the introduction to *Twelve Tales*, Allen's 1899 collection of short stories published after the financial success of *The Woman Who Did* in 1895, he wrote about his initial ventures into fiction and explained why he came to take up a profession for which he had had no previous inclination. "For many years after I took to the trade of author" Allen wrote, "I confined my writings to scientific or quasi-scientific subjects, having indeed little or no idea that I possessed in the germ the faculty of story-telling."¹⁴ Though there was among Allen's very early writings for his Oxford magazine a short story, and Allen's popular fiction was rich with dramatic and literary qualities, fiction was very much a departure from his established field, both in terms of reaching beyond the sphere he had specialised in, and in terms of the writers he had associated with. In Allen's account of his move into fiction it is noticeable that he states that he wrote fiction for no particular purpose other than to make his ideas clear to the public. Allen wrote that "on one occasion, about the year 1880...wishing to contribute an article to *Belgravia* on the improbability of a man's

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being able to recognise a ghost as such, even if he saw one, and the impossibility of his being able to apply any test of credibility to an apparitions statements, I ventured for the better development of my subject to throw the argument into the form of a narrative.”¹⁵ Though there is certainly truth in this, there were more reasons than this for Allen’s move into fiction. It was not just an accident that Allen became a writer of fiction. There was a coincidence of the waning of Allen’s work on aesthetics and the physiology of colour, and his turning to fiction. As was the case with Allen’s popular science, this fiction was the product of his searching for an avenue down which to pursue a literary career. Allen was not just wanting to clarify science, he was looking for new possibilities, and in combining his evolutionism with his fiction he carved out a niche in the market.

Allen’s fiction served a personal economic need and it should be noted that there was a substantial economic imperative in Allen’s fiction writing. As was detailed in the last chapter, Allen was in need of money and was looking for whatever work he could find. In a letter, written on February 23rd 1885, Allen wrote openly about his thoughts on the matter, stating “I never cared for the chance of literary reputation except as a means of making a livelihood for Nellie and the boy: I can now do that easily: and I ought to turn to whatever will make it best.”¹⁶ Clearly Allen considered he was writing solely for reward and was willing to be sensationalist to maximise that. In another letter to Croom Robertson, reprinted in Clodd’s biography of Allen, Allen seemed resigned to the fact that he would sacrifice the quality of his work for income and steady work, and wrote “it would be best for me not to try and write a really good novel....would it not be a pity by pursuing a will-o-the-wisp of reputation to endanger a now fairly ensured position of a good sound hack?”¹⁷ Though the economic aspect should not be over played, especially as Allen’s wife asked Edward Clodd not to use this information in his biography as she did not think Allen was as cynical as this suggests, Allen did enter the realm of fiction with a purpose of making money for himself and his family, and was willing to do what was able to provide the

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best income. This crucially made him susceptible to the whims of the public and the market.

Allen was aware of, and reacted to, these market constraints on his fiction; that is the demands for certain types of literary goods, the desires of the publishers and the public, and the incessant demand for sensationalism and what could sell over what was true and what a writer actually wanted to write. However, Allen was able to subvert the market constraints to a degree in his work, and infuse that work with science, and indeed emphasise the scientific content of his work so that it became a virtuous and vital aspect of his stories. Though initially cynical toward the market and fiction, Allen turned the problems he perceived to his advantage. In the introduction to *Falling in Love* (1889), one of Allen's collections of science essays, he wrote of his scorn of the novel as a leisurely and intellectual pursuit, as in his opinion it drew attention and valuable resources away from more important matters. As he wrote, "I do not approve of novels. They are for the most part a futile and unprofitable form of literature; and it may be profoundly regretted that the mere blind laws of supply and demand should have diverted such an immense number of the ablest minds in England, France, and America from more serious subjects to the production of such very frivolous and, on the whole ephemeral works of art."¹⁸ This seems a perverse statement given that Allen had been a professional writer for almost 10 years and had produced a significant number of such futile works at that point. Allen's comment though needs to be understood as a reaction against the constraints of the market and consumer led demand, as for the most part Allen was able to use the market to his advantage, popularising science through the novel, and securing himself a profitable position in the field of literature. Allen made science the basis of his stories so that evolutionary ideas underpinned his fiction in the same way it informed the whole of his philosophical and social system. This gave his stories a particular quality and Allen a particular identity.

Allen was sensitive to the desires of the market and he was specific about how the

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structure of the publishing business structured the fiction he wrote, turning it into a product that was marketable and that could produce a return for the publisher. “Most novels”, Allen wrote in the introduction to *The British Barbarians* (1895), where he reflected upon his life as a novelist, “have to run as serials through magazines or newspapers; and the editors of these periodicals are timid to a degree which outsiders would hardly believe with regard to the fiction they admit into their pages.” This was crucial because the serial rights of a novel were “three times as valuable, in money worth, as the final book rights.”¹⁹ Though this comment was written later in his literary career, when Allen had acquired the reputation and finances to escape the market, we can see in it Allen’s deliberation over his relationship with the market, and that that the issue had perplexed him over time. Moreover, Allen wrote in an article in *The Idler* magazine in 1892 about his novel writing that “the education of an English novelist consists entirely of learning to subordinate all his own idea and tastes and opinions to the wishes and beliefs of the inexorable British matron.”²⁰ What the author kept in mind was the wants of the public.

A cluster of financial, economic, moral and social factors limited and structured the content and form of Allen’s work. These affected the length and structure of the stories and novels and their subject matter and tone. Allen perceived this as a negative constraint upon his writing, and he stated that “it is almost impossible to get a novel printed in an English journal unless it is warranted to contain nothing at all to which anybody, however narrow, could possibly object, on any grounds whatever, religious, political, social, moral, or aesthetic.”²¹ These contentious issues were exactly the ones Allen wanted to write about. Allen overcame these problems to some extent by writing a small number of his most contentious books under pseudonyms (and more shall be said on this later), and by placing his very contentious work with close publisher friends. He was also aided in his literary career by a sympathetic publisher in Chatto and Windus, who were also the publishers of his works of popular science. They evidently had an interest in promoting Allen as a writer, and allowed him some

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freedom in his writing, but nevertheless Allen still felt the pressure of the public and the publisher on his writing.

In a letter written after the publication of his first full length novel in 1884, Allen commented to a friend that, "I shall doubtless write more novels, many of which will hit the public taste better than 'Philsitia', for I am learning to do the sensational things that please the editors." Indeed as he produced further novels, he noted in another letter that he was "trying with each new novel to go a step lower to catch the market."²² We can see here Allen considering adjusting his own work to suit the demand, and realising that if he wanted success and financial reward he would have to do this. Allen realised that the same trends which constrained his writing, were the same ones that could lead to success. He was aware that the mechanism to get his work to the public was the publishing system and that if he wanted his novels to do well he would have to appeal to the taste of the public and the publishers. He thus adjusted his writing to appeal the market and made his work as sensational as possible in order to make more widely available and known evolutionism and science.

Allen achieved this sensationalism by developing certain thematic elements in his stories and filling them with events that would shock and engage the reader. The stories meditate upon socialism, female emancipation, the legitimacy of marriage, contain criticism of the Christian church and the social establishment, attacks upon capitalism, and they deride the social customs of English society and have a total disregard for conventional morality or ethics. Moreover, the stories are full of sex, murder, suicide, dramatic disasters, sexual and political intrigue, sinister plotting, romance and love, exotic locations, tragedy and sheer improbable plots. These plots crack along at a rapid pace and the writing style is light and racy, and story-lines change direction and twist upon themselves, holding the reader in suspense but feeding their desire for a story that moves along at a pace and that can be read with ease and speed. Thus the subject, content and form, lent themselves to stories and novels that were shocking and digestible, even if they may have had to have been to a

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degree throwaway.

The quality, sensationalism and individuality, were elements that reviewers noticed in Allen's work, and though Allen reluctantly took to fiction, he eventually became a critical and economic success. Though *The Contemporary Review* commented in 1895 that Allen could "never produce a story of real abiding literary value and a work of art",²³ there were more serious underlying themes to Allen's work which were commented on by reviewers of his novels. *The Academy* review of Allen's 1891 novel *Recalled To Life* commented that Allen was "successful in fiction of an essentially superficial and popular type" and a reviewer of Allen's second novel, *Babylon* (1885), stated that "one cannot escape the thought that if all novels were as good as Babylon the life of the reviewer would be better worth living".²⁴ Though reviews of any work can be mixed, Allen's reviews contained sustained and consistent praise, and what these comments suggest is that Allen occupied a particular place in the market and developed a reputation for producing good quality light fiction. This led one reviewer to comment that Allen was a "master of his craft" even if it was a minor one.²⁵

More pertinently, reviewers noted that what made Allen's "shilling shockers" stand out was the use of science and the reliance upon sensationalism.²⁶ *The Athanaeum* reviewer of *Strange Stories* for example noted that there was a "psychological meaning underlying his sensational tales".²⁷ Similarly the *Athanaeum* reviewer of *The Devils Die* commented that "those who like their novels highly spiced will rejoice" in the book. This was because the book contained "plenty of cheap science, cheap humour, cheap sentiment."²⁸ What reviewers continually note were the "startling incidents" that fill Allen's books.²⁹ The reviewer of *For Mamie's Sake* (1886) described the tale as "outrageously improbable".³⁰ On another occasion a reviewer commented of Allen's stories that "there is plenty in them to annoy some classes of readers, but no -one will be able to say that the stories are dull."³¹ I note these comments here to illustrate the perception of sheer sensationalism and populism in

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the works Allen produced. This located Allen in the popular dimension of the literary field, and echoed Allen's intention that he was willing to write whatever would sell. As *The Academy* reviewer of *Strange Stories* commented in 1884, Allen need not apologise for his work because he had "fully established his claim to be heard henceforth as a story-teller."³² By the mid-1880's Allen had successfully transferred from one field to another. However this movement and success was not easy to achieve, as there were preconceptions and barriers Allen had to overcome to gain access and acceptance into the field of literature and establish a reputation in it. Grant Allen was conscious of intellectual and cultural boundaries and took measures to protect his reputation and give his work credibility, viability and uniqueness. This perception of territoriality framed Allen's identity and led him to adopt pseudonyms for some of his work, especially when he first entered the fiction market and when he issued contentious books. We have to consider why Allen deemed it necessary to adopt pseudonyms, why he was pre-occupied with his reputation, and why he was sensitive to the transgression of boundaries and the perception of the existence of differences and distinctions within and between fields. I would suggest that Allen was attempting to protect himself in one sphere while developing a niche in another, and he found it necessary to adopt pseudonyms to minimise conflict in one field and maximise his acceptance into the other. Moreover, he was able to draw attention to the scientific aspects of that fiction once he had moved across the fields.

Central to Allen's thoughts and actions throughout this period and through the writing of his early stories and novels, that is between 1880 and 1884, was a concern for his reputation, both in the sense of the loss of what he had already accrued with his work on aesthetics and his popular science, and the construction and fashioning of something new in a different field. While wishing to preserve status in one field, Allen wanted to establish it in another. Allen was concerned about the image his stories would project about him among his friends and he was often derogatory about his novels and about the novel in general. Richard Le Galliene noted that on

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becoming a friend of Grant Allen one had to promise never to read one of his “commercial novels”.³³ In anticipation that such frivolous commercial activity which might reflect badly on him, Allen took the precaution of pseudonyms for his early fiction. When writing about his first forays into fiction in the introduction to the collection of stories *Twelve Tales* (1899), Allen wrote “I did not regard these my tentative tales in any serious light: and fearing that they might stand in the way of such little scientific reputation as I possessed, I published them all under the prudent pseudonym of J. Arbuthnot Wilson.”³⁴ For Allen fiction was secondary to science, but he had serious concerns about how this fiction might effect his credibility as a man of science, and he thought this so important an issue that he had to explain this and account for it in public.

Writing fiction jeopardised Allen’s credibility, whether this was due to the work itself or the financial reasons behind his entry into the field. Hiding behind pseudonyms protected Allen’s scientific reputation from being tarnished, but also permitted him to re-invent his image for the field of literature so that assumptions about him and his literary past were not imported when the initial fictional works were submitted for public consumption. Thus Allen published these “divarications from the strict path of sterner science...incognito”.³⁵ Anonymity and pseudonymity allowed Allen to enter a field that might have been closed to him if he had used his real name, and it prevented him from becoming alienated from his scientific contacts. When Allen published his first novel he emphasised to the publishers Chatto and Windus that he wished “to keep my authorship of this book quite private.”³⁶ This pseudonymity was premeditated and Allen prevaricated and deliberated the names he chose to publish under, searching for the correct image by which to portray himself. For example while writing his first novel *Philistia*, Allen discarded both ‘Cecil Strong’ and ‘Cecil Force’ as possible names before settling on ‘Cecil Power’ when the book was actually published. This continued throughout his literary career, and Allen took on a number of pseudonyms after using ‘Cecil Power’ for his early novels

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and 'J. Arbuthnot Wilson' for the early stories. Once he had revealed these identities and established himself in the market, he took on the names 'Olive Pratt Rayner' and 'Martin Leach Warborough' for some of his later works.

We can divide this process of adopting pseudonyms into two phases, firstly when Allen first entered the field of fiction with his short stories and his first novel, and secondly, the later pseudonyms which were used sparingly and applied to particular titles. The majority of Allen's books were published under his real name, and by taking these pseudonyms Allen was hoping to distance himself from his initial entry to a trade which others might see as trashy, and from books which might have contained controversial messages. Allen stated that he wanted to distance himself from the stories, because, as he wrote to Mr. Chatto about his very first pieces of fiction "they might stand in the way of such little recognition as I possessed."³⁷ Allen's books were often politicised and sensational, he had turned to the trade for financial reasons, and he had taken up a trade outside of science. Each of these potentially had consequences for the reputation of his scientific work and of himself as a man of science. So to protect that reputation, he was careful about the fictional works he publicly identified himself with, to the point of revealing some of those identities post-humously.

This pseudonimity perplexed reviewers, and *The Academy* reviewer of *Philistia* pondered on the authenticity of the author and commented that the book was likely to "be the venture, under a new name, of one of those old stagers who have not wholly incomprehensible fancy for playing the part of MR. Alias,"³⁸ and even more accurately noted that the author was likely to be "a student of science forced to be a writer." By the time Allen's second novel, *Babylon* (1885), was published, Allen had revealed his identity in the collection *Strange Stories*, but there had been speculation about his writing and comment in the reviews.

Allen's pseudonyms were initially used to protect him from criticism when he entered the field, but he continued to use pseudonyms because the particular content

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of some of these works contained extreme messages about politics, religion, and sexual equality. Writing under an assumed name allowed Allen to venture opinions which he otherwise could not have. As Allen put it “the convenient cloak of a pseudonym” gave him the protection and disguise “under which one can always so easily cover one’s hasty retreat from an untenable position.”³⁹ Some of Allen’s fiction dealt with issues that were scandalous and were always contentious. His first novel *Philistia* was a novel about socialism, his second *Babylon* was a socialist critique of colonialism, *The Woman Who Did* and its numerous forerunners dealt with female emancipation. These were not subjects that were welcomed by either the reading public, the editors or by the men of science that Allen was associated with, and so it was wise of him to bide his time until his reputation was established. But to follow Allen’s point, within fiction and through pseudonym he could write on topics and in a manner that he could not have had he written under his own name. There is a further dimension to this, that Allen may well have wanted to conceal his identity so that his fiction would have a chance of success in a field to which he was new, but to which his previous work generated preconceptions.

Moreover, it is interesting that Allen anticipated the need to explain to his audience why he wrote his fiction, and why he turned to fiction at all. This in itself suggests some perception on his part that there was something unusual in his enterprise, or that he was trying to emphasise that there was something unusual in his project, that there were certain elements that marked it out from other work. Allen developed a concern for his reputation because he was aware that he was crossing boundaries, and that crossing boundaries was potentially commercially and critically sensitive. Allen thus initially concealed his identity to protect his reputation and gain access to the literary market, but once his authorship of fiction was known, Allen very early on openly addressed the market and made his tales as marketable and sensational as possible, because this was ultimately an opportune way to create a niche in the fiction market and to spread more widely the ideas of science.

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There pervades Allen's commentary of his fiction a sense of territoriality and market constraint. Allen needed to be tentative, not just because he was addressing sensitive issues and because his reputation was at stake, but because he was crossing and transgressing boundaries which demarcated fields of expertise and areas of speciality. A reviewer of one of Allen's collections of science essays *Falling in Love* commented that there was "an order of mind which is scientific and there is another which is unscientific...There is no intermediary stage."⁴⁰ At that precise point Allen sat at some point between the two, with articles of science at times sitting alongside his stories. Allen's concern was how he could transfer across from one field to the other without losing credibility and how he could establish a unique position in the field.

Something that is very apparent throughout Allen's writing is his continual articulation of a vocabulary of territoriality and violation. Allen constantly refers to where he has come from and what he is going to do, and this extends to almost excusing having written fiction. But we have to ask, what is he apologising for, what is it that he is excusing, and why does he feel the need to do this in public? On the face of it, Allen was nervous about publicly identifying himself with the stories he had written. "It is with some trepidation that I venture to submit to the critical world this small collection of short stories" he wrote in the introduction to *Strange Stories*, adding "I feel that in doing so I owe some apology both to my readers and to the regular story-tellers."⁴¹ Moreover he expressed hopes that "older hands at the craft of story-telling will pardon an amateur novice his defective workmanship".⁴² We can sense here the tentativeness of his position, that he knows he is a new entrant to an established and competitive field, and that he was treading on the toes of other writers. But there was more going on than this, I think. Allen may well have been attempting to pre-empt a critical rejection of his writing, and was presenting himself to others, and acting deferentially so that he could gain admittance into the field and mark himself out in it. This was the man of science moving into the literary field, and

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using that as a way to make that work appear different.

The language expressed in the introduction to *Strange Stories* (1884) was that of occupation, possession, legitimacy, and jurisdiction. There pervades Allen's writing a sense of the transgression of boundaries, of the perception of fields of inquiry and articulation. For example, Allen informs his readers that he had "been bold enough at times to stray surreptitiously and tentatively from my proper sphere into the flowery fields of pure fiction."⁴³ Again the presence of the perception of territoriality and transgression is apparent when Allen is writing about his fiction and he commented in respect to other novelists and writers that "I trust they will forgive me on this plea for my trespass on their legitimate domains, and allow me to occupy in peace a little adjacent corner of unclaimed territory, which lies so temptingly close beside my own small original freehold."⁴⁴ This was also noticed by reviewers, and the *Athanaeum* review of Allen's *Strange Stories* noted that though Allen was "invading the province of the story-teller...the field is open to everybody."⁴⁵ There are a number of points to address from this, the sense of legitimacy, of territory, of proximity and difference, Allen's sense of the minority of his own fiction, and the sense that he was encroaching upon staked out claims.

Yet, why should Allen feel this at all? Certainly there was intense competition within and between fields, and this would account for Allen feeling tension. More significantly, Allen articulated these opinions in public, and I would suggest that Allen was articulating this issue to create a perception of the distinct nature of his work. By identifying his transgression Allen could make reviewers aware of his work among the mass of other products, and thus give rise to contention in work that might otherwise pass unnoticed and unread. We can think of this as part of a strategy to create distinction, of Allen marking out his own territory by contrasting his position against and relative to others. Allen was aware that in publishing his fiction he was moving across contentious boundaries, and that this could have consequences for him. However, these need not have been negative ones, and Allen needed to find a

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device by which to make himself distinct. Such a mechanism for him was to highlight his use of science and his own ambiguous and potentially contentious position.

Wide ranging cultural and social changes established an agenda which directed Allen into fiction and pushed him in a certain direction, or rather presented him with a particular set of possibilities from which he could choose. The market for fiction and the demands of publishers further structured his work, and demanded certain qualities from him. Grant Allen, however, was an able writer of cheap fiction, according to reviewers, that appealed to a wide audience who desired a particular type of reading matter. Allen adapted and adjusted his work, and turned his circumstance and the genre he wrote in to his own ends so that he could convey science to the public and make that science a basis for making his work identifiable. Allen was thus able to use his science as the basis by which to forge an identity and mark his work out. Allen was using fiction as a vehicle for advancing evolutionism by placing ideas about evolution and science in a context where non-science readers would be exposed to those ideas, making fiction the extension of naturalism and evolutionism.

Facts and Fiction

Scientific Naturalism was an inherent aspect of Grant Allen's fiction in two particular ways, firstly Allen made his fiction a channel through which to publicise science and educate the public in evolutionism, and secondly he used that evolutionism as the frame to give his stories structure and meaning, forming from his science the morality tale contained within each of the stories or novels. In Allen's stories, characters advocated evolutionary theories, they acted by the laws of nature or contravened them at their peril, and the devices by which the plots turned were derived from natural laws and scientific themes.

Allen's fiction embodied and extended his popularising zeal, his inability to conceive of the world in anything other than Spencerian and evolutionary terms, and his dedication to the naturalist cause. Allen's fiction drew upon evolutionism and

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naturalism as thoroughly as his most dry physiological text, and he made his science form the architecture of his stories and the narrative framework from which they were generated. This had a particular consequence for Allen, in that it enamoured him to the literary market, yet also prevented him from becoming alienated from his scientific naturalist contacts. The combination of science, social themes and concerns, and the desire to tell a sensational story through which to educate the public, created fiction with a peculiar quality. It was by the nature of its target audience sensational and 'light', yet it took as its central themes serious contemplation's of nature and the evolutionary basis of society and psychology.

If we consider Allen's first published short story, (other than that in the Oxford magazine), 'Our Scientific Observations on a Ghost' published in the *Cornhill Magazine* in 1881 we can see that there were some serious points at stake in Allen's fiction and that this writing was not a frivolous whim.⁴⁶ The existence of ghosts had implications for two hotly contested scientific debates, firstly in respect to the authenticity of spiritualism and spirit life after death, and secondly in respect to the origin of religion, a topic Allen devoted his life to, and his writing on this was published in the large volume much later, *The Evolution of the Idea of God*. Allen used this story to work through some of his ideas, setting up impossible situations by which to clarify and test his thoughts.

Allen's ghost story concerned a debate between two sceptics discussing the grounds upon which it might be proven that ghosts exist, and in particular that "nobody could ever have any scientific ground for identifying any external object, whether shadowy or material, with a past human existence of any sort."⁴⁷ After an evenings discussion two medical undergraduates meet the ghost of Algernon Egerton and interrogate him on his reality and past to ascertain his authenticity. They perform experiments on the ghost, looking at its physical and chemical properties. No matter what the two students attempt the apparition could not be grasped, measured, weighed, no material could be established, though the 'ghost' could be seen. A chemical analysis was

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performed on the matter of the ghost, alongside that of some air, and this experiment concluded that the apparition consisted of the same materials as the surrounding air. Even attempts at vivisection were unsuccessful at demonstrating any special qualities of the ghost. The two students thus conclude that a belief in ghosts could not be maintained unless there was scientific evidence for this, and that even if there was evidence of a ghost, there was no reason to believe it an authentic ghost, and that all that could ever be said was that something had been 'seen'.

This story, then, was not just a discussion on the reality of ghosts, but went beyond these to a consideration of questions regarding the ascertaining of scientific proof and the reality of matter. Allen claimed that he "did not regard this narrative as a story" and wrote that he "looked upon it merely as a convenient method of displaying a scientific truth."⁴⁸ This was convenient in a number of respects, it was possible for Allen to write about the subject without regard to the technicalities of the matter, or the thought that his argument was open to scrutiny by his scientific peers, and because the story was published in one of the more popular and widely read Victorian periodicals, *The Cornhill Magazine* it could be accessed by unscientific readers.

What fiction could offer therefore was not proof or truth of science, but possibilities and clarity. In the introduction to *The British Barbarians* Allen wrote "to say the truth, it is absurd to suppose a work of imagination can prove or disprove anything...the author holds the strings of all his puppets, and can pull them as he likes, for good or evil: he can make his experiments turn out well or ill: he can contrive that his unions should end happily or miserably: how, then, can his story be said to prove anything?"⁴⁹ Fiction could be used though to provoke, and thus Allen's fiction existed, as he put it, "to make one's readers think about problems they have never considered, feel with sentiments they have disliked or hated."⁵⁰ The other aspect of his elucidation of scientific ideas was thus to make them accessible to the public. Fiction was both stylistically and generically suitable for this, as it was readable and accessible. Fiction for Allen was more than a convenient genre by which some clear

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exposition of complex ideas could be attained. The medium of the novel and the story lent itself to the education of the public in science. Allen was a campaigner, partly on issues of science, but also on his more personal crusades of socialism and female emancipation (which grew out of his naturalism), and he was thus always considering ways of reaching a greater and wider audience. As he wrote in the introduction to *The British Barbarians* the “business of the preacher is above all things to preach; but in order to preach, he must first reach his audience” and in Allen’s opinion “fiction is today the best medium for the preacher of righteousness who wishes to address humanity.” This was because the audience Allen wanted to reach as he perceived it, consisted of, as he wrote, “women and girls”, who were readily reached by fiction.⁵¹ Allen had serious matters he wanted to preach on, such as the importance of evolutionism and naturalism, and a critique of Christianity, but he also wanted to propagate ideas about socialism and the immorality of marriage. Moreover, in novels such as *The Woman Who Did*, *The British Barbarians*, and also *The Type Writer Girl*, Allen wanted to raise issues that specifically addressed matters regarding female emancipation, and so it made sense, as he saw it, to approach that through fiction. Fiction was a genre that permitted the telling of the truths of science in a way that was consumable, in the first instance because it made it palatable and digestible, but also because it made it accessible. Moreover, fiction formed the basis of the content of the various periodicals and the lending libraries, and it increasingly became the staple of these publications and agencies.

I now want to consider that fiction in more detail, to consider how Allen went about achieving this propagation, and the ways in which his science structured his fiction and gave that fiction an identity. The narrative universe Allen created was a version of the natural world, nature informed the basis by which character was established, it set the scenes through which those characters were pushed, and established the devices via which plots took their turns and from which the stories took their structure. What I wish to suggest here is that Allen imagined how particular

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individuals and groups would, given the laws of nature, react to one another and how events in their lives would unfold. He thus used science as the basis for his fiction to create a unique narrative frame for his stories.

Like all of Allen's other work his novels and stories existed in the world of Herbert Spencer's Synthetic Philosophy. Though Allen does not articulate this as such, Allen's literary landscape is the organic psychological and social world of Herbert Spencer, which Allen used as the frame within which all the action of his stories took place and from which all the devices of character and plot were derived. Allen used that Philosophy as the basis of the devices that made the stories work and that gave the stories, like evolution, direction and structure. Moreover, Allen used his fiction to think through ideas he was putting forward and his fiction became a way of experimenting on the social organism and on the psychological aspects of man which were otherwise beyond experimentation. By proposing a particular social or psychological scenario, Allen could imagine how, given certain situations, natural law might work and what the outcomes might be. Allen was testing out ideas about the evolution of human psychology and society by imagining the reaction and development of a set of characters and particular types of person as they were pushed through that evolutionary world. Allen's fiction was immersed in science, motivating characters, structuring plots, and arising in dialogue and exposition.

This frame generated three themes throughout Allen's novels and stories; firstly there were biological hereditary stories where the action is moved via a characters behaviour determined by his ancestral history; secondly there were stories based around psychological traits where an individual's psychology determines his actions, and thirdly the use of the structure of the Social Organism to push characters through, frame social interactions, and create structures that give the stories meaning. Therefore evolutionism and organicism are suffused throughout the works, shaping the plots and devices that made the novels work, the machinery that turn the stories, and even structuring the dialogue of the stories in the utterances of characters.

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Both overtly and covertly, consciously and unconsciously, Allen worked his science and evolutionism into his fiction. The clearest manner in which this occurred was to flood his novels with men of science and with characters who were sympathetic and enthusiastic about science and to make his characters extol the virtues of science. Many of the main characters in Allen's books are in some respect dedicated to the cause of science, whether they be explorers, anthropologists, scientists, or engineers. Allen actually makes the men of science engaging and their lives dramatic. Key characters in his novels are involved in science, and more than that, it is not a token characterisation, it is an integral part of their character and the connection of their character to the unfolding of the plot, that they are men of science. For example the hero of 'My New Year's Eve Among the Mummies' is an archaeologist who stumbles across an Egyptian tomb, the main character in 'Dr Gatreaux's Engagement' is the story of a genius physicist who falls in love and makes a great discovery of molecular physics, and the main character in *The British Barbarians* is an anthropologist showing the way to a more evolved morality and society.⁵²

In some ways this scientific universe was blatantly articulated and Allen made his characters speak about the value of science and the works of Spencer. As the reviewer of *Dumaresques Daughter* noted in regard to Allen "nothing is pleasanter for him than to make his characters talk of or illustrate his pet theories" and we can find characters in most of the novels extolling the virtues of reason and decrying religious belief.⁵³ Allen's use of science in the stories was usually more sophisticated than this, and Allen used the stories to illustrate ideas of science and to outline a morality that was derived from the laws of nature, and in more complex way used the laws of nature and evolution to construct the devices and machinery of his stories. This can be found in both the short stories and the full-length novels.

As has already been noted, Allen produced a great amount of work between his initial foray into fiction in 1880 and his death in 1899, publishing over 40 books in that period. Allen was an especially prolific writer of short stories though, and these

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usually appeared in magazines such as *the Cornhill Magazine*, *Longmans Magazine*, *Belgravia*, *Pall Mall Magazine*, *the Sketch*, *The Graphic*, *The Contemporary Review*, and the *Illustrated London News* before they were collected and issued in book form including *Strange Stories* (1884) *The Beckoning Hand* (1887), *Ivan Greet's Masterpiece* (1893), *The Desire of the Eyes* (1895), and *Twelve Tales* (1899). These collections of stories were among his best and his most appreciated work. A reviewer in *The Academy* for example commented that Allen's *Strange Stories* took "higher rank than any similar since the appearance of R.L Stevenson's *New Arabian Nights*."

⁵⁴ So Allen's work was appreciated, he was considered a pioneering writer of short fiction by some, and his work was widely published in periodicals and books.

The short stories illustrate very well the way Allen used his fiction to discuss or write about issues of science, and they also show very well the way that Allen used science to create devices and gimmicks to give his stories direction and twists that could grasp and hold the attention of readers and the editor. As a reviewer in *The Athanaeum* commented the stories were "designed to express in action some scientific or psychological idea."⁵⁵ Allen was clear about this himself and outlined this in the introduction to his collection of essays *Strange Stories*, the first collection of his work and the first time he revealed himself as the author of these tales. As Allen put it "though these stories do not profess to be anything more than mere short sensational tales, I have yet endeavoured to give most of them some slight tinge of scientific or psychological import and meaning."⁵⁶ Allen was thus making his stories the vehicle for science, and often contentious science at that. Moreover, we might suggest that Allen stated this not just because it was the case, but he articulated this because by doing so he could protect his status and he could also make the stories have a rationale that made them stand out. Allen noted in the introduction to *Strange Stories* that "almost all the stories (except the lighter ones among them) have their germ or primitive motive in some scientific or quasi-scientific idea; and this narrow link which thus connects them at bottom with my more habitual sphere of work must

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serve as my excuse to the regular story-tellers for an otherwise unwarrantable intrusion upon their private preserves.”⁵⁷ In this statement we have Allen citing a number of points, that the stories come from science and were intended to advance science and evolutionism through his fiction, that this is akin to his usual work, and that Allen was trying to occupy a particular place in the field of literature which he knew was contentious.

Allen’s short stories were thus variously concerned with some aspect of science, illustrating a principle or pet theory, taking a point of science and pushing it through an imagined situation to see its outcome, or were just meditations on some idea of science to see what further thoughts could be generated. For example ‘Janet’s Nemesis’ was a story concerning the importance of hereditary character and maternal instinct, while ‘Cecca’s Lover’ was a story which focused upon racial differences and marriage customs in respect to religion. The story ‘The Child of the Phalanstry’ was an especially grim story that focused on the issue of eugenics within the context of future society. In what is a critique of, and warning against, eugenics, Allen concludes that such practices would not be to the benefit of society, and considers what the practice of eugenics might be in a totalitarian state where marriage and birth are centrally controlled. The story centres on the actions and emotions of a couple who live in a society where every interaction is controlled. They go through the process of seeking permission to marry and have children, but have to kill their own child when it is born a cripple. In this tale, Allen combines his own advocacy of free love and a state free of marriage laws, and a critique of those who would want to establish a eugenic state, into a tale that is shocking in its matter and forthright style.⁵⁸

‘The Church Warden’s Brother’ was a study of psychology, comparing the actions and history of twins. This particular story concerns Edward Vernon, a Churchwarden of apparent high moral character who has “raised himself by industry and providence”, whose hereditary character emerges through his posturing when his twin brother, Norcott, is accused of being a murderer. The hub of the story is a

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contemplation of the idea of whether twins are psychologically different or not, whether hereditary family character is stronger than social influence, and how a state of nature can be reverted to. In the story the twins know every thought and feeling of each other. Each, despite initial apparent differences, shares the same “family vices”, including alcoholism, and by the end of the story the respectable brother has himself become murderous. Thus despite having lived apart for many years, and showing surface differences, the two brothers ultimately share the same hereditary characters, and indeed at the end of the story had both murdered their wives. Again this is a shocking story that is grounded on an exploration of the psychological aspects of heredity.⁵⁹

Another similar story, “The Reverend John Creedy”, which Allen considered to be a “study from within of a singular persistence of hereditary character, well known to all students of modern anthropological papers and reports”⁶⁰ is a study of an African who had been educated at Oxford and become a clergyman, who returns to his homeland and attempts to educate his people in English and Christianity but finds that his own instincts persist and that the Englishness that he had acquired is passed over while his language and customs come to the fore. The story is overtly racial, and has a sub-plot that considers the marriage of a “white woman” to a “black man”, but the over riding theme is the persistence of instinct and the hereditary nature of character and culture, and that there is a physiological basis for these.⁶¹

With ‘The Curate of Churnside’ Allen pursued a similar vein and he wrote in the introduction to the collection *Strange Stories* that he had “tried to present a psychical analysis of a temperament not uncommon among the cultured class of the Renaissance.... The union of high intellectual and aesthetic culture with a total want of moral sensibility is a recognised fact in many periods of history, though our own age is singularly loathe to admit of its possibility in its own contemporaries.” In this story an art-loving curate, Walter Dene wishes to propose to Christina Eliot, with whom he has had a sexual relationship before marriage. However, he lacks money to

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marry her, and in order to acquire some he breaks into his uncle's study, alters his will so that he is left a large inheritance, then kills his uncle with a knife on the moors. When a local poacher is tried for murder, Walter's conscience makes him defend the man, though he does not admit the murder himself. What I think Allen is trying to suggest here is that the development of a taste for fine art does not equate with a moral instinct, and that where social custom and law impedes sexual expression, instinct can override ethics.⁶²

Other stories addressed wider issues about the relations of power between science and religion. For example the story 'The Backslider' addressed both the common theme of the force of true love over contrived marriage, and contrasted the freedom of thought in science to clouded custom and religion. The story concerned the story of a Gideonite, Paul Owen, who is chosen by his fellows to be educated in Oxford for the sake of further propagation of the cause. While at college he falls in love with a girl called Meenie and discovers and reads the work of Herbert Spencer, whereupon he concludes that the religion he had held belonged to "the sixteenth century" while Spencer belonged to "some new and hitherto uncreated social world."⁶³ He thus gives up his religion, and a generous scholarship, to embrace both his fiancée and his new found source of knowledge. In this story, not only does Allen argue his general line of nature and instinct overcoming fabricated social practices, but also permits his personal dedication to Spencer and science to form a turning point in the story and make it a symbol for Paul's finding of freedom and truth.

Allen's novels developed these themes further, and even his lightweight books contained traces of the man of science in them, as in the case of the detective story *The African Millionaire* where scientific techniques are used to find and trap a master criminal.⁶⁴ The criminal here is examined as a psychological type and on physiological measurements so that he could be identified. Though the use of science is slight here, it is still evident, as is a socialist undertone of the legitimacy of fleecing the immoral rich of the wealth they have acquired at the expense of others. Allen's

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novels, moreover, are of interest because of the way that science was used as a device to create characters, develop plot lines and structure the interactions of the characters with each other and the world in which they existed. Allen combined science with sentimentality and sensationalism in a way that was able to explain the current theories of science and also draw attention to the value of science. Moreover, he was able to create a narrative framework from the most unlikely of sources, the work of Herbert Spencer and the evolutionists, and produce a body of work that was highly regarded in its time. I have chosen the following novels for further consideration for a variety of reasons, though mostly because they span Allen's career and interests and are representative of his fiction.

The British Barbarians (1895) relates the story of an 'alien' anthropologist from the 25th Century who is sent back to the late nineteenth century in order to study the customs and social life of man. In the story itself, the alien, Bertram, meets a small group of middle class people in the town of Brackenhurst, one of the towns he has been sent to study. While becoming part of that group to better observe them, he falls in love with the wife of one of the party, Frida, and they elope together, until they are found by Frida's husband who then kills the alien, before the wife commits suicide by turning the gun on herself.⁶⁵

There are two themes apparent in this novel, one is the critique of contemporary society and the oppressive social laws maintained in society, and the corollary of that, which is the prospect of development through evolution to a higher order of society. The alien is evidently from a future cast from Spencer's social organism, from a future society that has evolved so that its customs are radically different, where there is freedom for all, and where there is equality between the sexes and between all members of the society.

Allen here is offering a critique of the slavery he sees inherent in marriage, arguing that true love should be the instinct being followed, and that society will evolve in that direction. The alien is from a higher point of technological, moral and social

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evolution. The book discusses death taboos, and of course considers what Allen considers to be the constraints of the legal institution of marriage. The Alien views the society he has been sent to observe as a savage and barbarian one, where he realises that the priest and the soldier are symbols of evil and that respectability is something to be derided.

Within this novel there are a number of set pieces which are a critique of social manners, where characters discuss the ghost theory of gods, the laws of marriage, the nature of civilisation, evolution, and the possibility of life on other planets. Reviewers treated the novel with some trepidation, as it was Allen's first after *The Woman Who Did*, and the book was described as a "sermon-novel" in the *Academy*, and the *Athanaeum* noted that Allen's "latest manifesto is intended to be a scathing satire on our social customs and religious observances, and to show how they strike an enlightened stranger projected from the twenty-fifth century into suburban villedom."

⁶⁶ In this novel then, an evolutionary present and future, are used as the background to discuss the morality of marriage, through a romance story. Science sets the context of the story, the basis by which the characters interact, and the agenda that the novel addresses.

The Devils Die was a novel concerning a scientist, Dr Chicelle, who produces a form of germ warfare, which he threatens to unleash on the world, until he is thwarted in his attempts to do so. ⁶⁷ A reviewer of this book astutely commented that "it suggests, indeed, the possibility that its author, by way of ridiculing the successes achieved on the tragic stage by love, hate and ignorance, had set himself deliberately to prove that, with the help of the discoveries of science, a daring playwright may produce incomparably more startling effects." ⁶⁸ This is what Allen was doing throughout his project, stressing the imaginative aspects of science, highlighting the beauty possible in nature and the folly of romanticism. What is clever about Allen's work, and what marked it out, is that he took the ideas of science and used them in ways that were shocking to readers, pushing to an extreme the values that were

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permitted in popular literature. He uses science to create an “exhilarating rush” so that “when the language of the leading characters in *The Devils Die* is not taking ones breath away, their actions are making one’s hair stand on end.”⁶⁹ Such writing and stories were capable of enthralling and engaging readers.

Allen’s novel *The Great Taboo* is an excellent example of Allen taking a specific debate and text, and using it as a premise to both construct a story and convey the basic ideals of that theory. *The Great Taboo* took a general debate about the origin of religion, and a particular version of that in Frazer’s *The Golden Bough* and then took the central theme of that book as the basis and theme of the novel. Allen put it thus in the preface to the book, writing “I desire to express my profound indebtedness, for the central mythological idea embodied in this tale, to Mr. J. G. Fraser’s admirable and epoch making work, “The Golden Bough”, whose main contention I have endeavoured incidentally to popularise in my present story.”⁷⁰

The plot of the work concerns two survivors of a shipwreck, Felix Tristan and Murial Ellis, who find themselves on a pacific island, Boupari, surrounded by an apparently savage race whose religious customs include ritual sacrifice and cannibalism. On the Island the survivors enchant the savages by using matches to produce fire from thin air. This endears them to the Fire God, Tu-Kila-Kila who is the chief of the Island and they are thus taken as spirits of the sun, given the protection of the Islanders and learn their customs. However, it becomes apparent to Felix that their fate has been postponed, and that they will be eaten when they have been fattened up, and he sets about learning the religious practices in order to overcome their fate. On exploring the Island Felix finds another God like themselves, Tula, God of the Birds, who indeed is a Frenchman, Jules Peyron, who informs Felix that in 6 months time they will be sacrificed and eaten. A chance of escape is offered though if they can learn *The Great Taboo*, at which point they intensify their study of the Islands religion and discover that the Islanders, “hold that the gods are each and several incarnate in some particular human being. This human being they worship and reverence with all

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ghostly aspect as his incarnation.”⁷¹ To overcome this God, his successor must kill him and thus assume his position. Moreover, the person to succeed him must take a particular leaf from a sacred tree where the God’s soul resides before combat can be undertaken. Felix finds this golden coloured bough, and then challenges the God to hand to hand conflict, and kills Tu-Kila-Kila. As the new God, Felix bans what he considers to be their barbaric customs, appoints another the new God, and awaits a ship to take all the Europeans home.

The novel thus explains the ghost-theory of the origin of religion, by allowing the reader to discover the knowledge of the origin of religion as the characters of the novel have to overcome their own fates. The reader thus learns that each God is a live man, and that on that man’s death, another man assumes his position and name. Thus Gods are just the incarnations of dead men who have been “strong and lusty” enough to attain the highest position in society and the respect of their peers. Allen takes the opportunity to structure around this a story that entails the drama of discovery and adventure, the seeking of knowledge, intrigues and set-piece scenes of cannibalism, fighting and romance. The novel was thus as much an anthropological treatise as a novel, discoursing on the origin of religion, the evolution of belief, and the basis upon which other cultures, languages and religions can be understood.

The Duchess of Powysland (1892) is another of Allen’s novels worth considering in detail here, as it blended together many of the aspects suggested above, and indeed it was one of Allen’s most successful novels, critically, commercially and artistically.

⁷² It encapsulates many of the points that could be made about other novels individually, it takes themes from evolutionary science, structures a story around that, preaches to the audience about a morality that is derived from nature, sets its characters personalities and actions in the context of natural law, and extols the virtues of reason. It is thus a good example of how Allen used principles of evolutionary science, mainly heredity and instinct, to move the action and establish his characters, and as *The Spectator* commented, ““The Duchess of Powysland” is the

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best story we have had from its author since the days when to the novel-reading public he was only 'Cecil Power'.⁷³

The book concerns a pair of bachelors and one of their brothers, Douglas Harrison, Hubert Harrison, and Basil McLaine, their housekeeper Linda Amberley, her brother Cecil, the Duke of Powysland and his sister Sabine Venables. Douglas Harrison falls in love with the housekeeper, Linda, but is dissuaded by the socially aspirational Basil, much to his regret, from pursuing her because of her economic and social position. Basil busies himself in wooing the sister of the Duke of Powysland, Sabine (though he is thwarted in this). During a conversation in the house, Linda is insulted, and the housekeeper and her brother leave for America where he becomes rich via his invention of an engine and a patent he holds on it. On their return, Linda weds, contrary to her instinct, the Duke of Powysland, which in turn leads to heartbreak for Douglas the lawyer who is in love with her. Unfortunately for Linda, the Duke, faces financial ruin through gambling and he commits suicide. Linda is then accused of his murder, and is only found innocent when the budding lawyer Douglas Harrison, who had always loved Linda, argues in court that it was the hereditary nature of the Duke that led him to kill himself, and that indeed this was not murder at all. After Linda is freed, Basil Maclaine visits her and claims to be in love with her, though he only wishes to possess the new title of his previous housekeeper. However, Linda is aware that he is lying and she states that she wishes to marry Douglas Harrison, who she has always loved and who indeed has always loved her.

The primary theme of the book is that hereditary traits cannot be escaped, that they have a bearing upon how individuals act, and that what traits exist within families, persist within families. Heredity is used to further the action of the novel in that an initial suicide leads to a new Duke inheriting a title, and then his own suicide leading to crisis within the family. These suicides are turned into a family trait to account for the suspicious death of the Duke at the subsequent murder trial of Linda. Allen thus educates his audience in heredity by engaging them in a plot to which it is central.

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The novel also develops another of Allen's favourite themes, that is the significance of instinct in governing behaviour. Throughout the novel following instinct reaps reward, but contravening nature leads to danger. This follows both in terms of the fulfilment of love and in terms of social aspiration. In the novel those who follow instinct in love find themselves romantically successful while those that seek romance for social advancement find themselves at a loss. Similarly, those who attempt to follow contrived social aspirations fail in those ambitions and those that follow instinct are successful. The moral here is that nature must be obeyed, and that tradition or taboo should not be permitted to override nature.

These are the devices that move the story along, as the *Scottish Leader* noted "the most impressive part of the work is the use of an hereditary family taint to forward the action."⁷⁴ Heredity is not just a moral theme, but a mechanism by which events happen, characters interact, and the plot turns. There is also a social critique underlying this plot, or rather it is overlaid on the facts and theory, in that those who generally find success in life and love are the young professionals of the book, the lawyer, the journalist and the entrepreneurial technologist, while those that find themselves on the demise are the aristocrats and anyone who tries to become part of the aristocracy.

The Duchess of Powysland thus contains most of the elements that could be said of Allen's fiction, its plot turns on a device derived from evolutionary biology, it teaches the reader the value of allowing nature to have a free reign in the world, that instinct, and especially love, should be permitted to be expressed without reservation, that evolution takes the race and the nation on an upward path, and it takes as its centre piece a variety of shocking episodes to engage the reader.

For Mamie's Sake similarly takes some these themes and entwines them with one of Allen's major concerns, the emancipation of women.⁷⁵ This novel, published in 1886 with the subtitle 'A Tale of Love and Dynamite', combined a variety of elements into a story that was essentially a thriller and a romance: the romance centring on the

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“ardent love passages” and the falling in love of the two main characters, Mamie and Adrian, the thrill from the means by which they attain and fulfil that love.⁷⁶ Science forms the basis of the plot in that it is used to establish the personalities and justify the motivations of these characters, in terms of instinct and sexual attraction, and the way it is used to turn the plot in the way scientific discovery supplies the characters with devices to fulfil their desires. Moreover, the book contains sub-themes of the heroic basis of scientific discovery, the interactions of nature and the environment, the value of science over all forms of knowledge, and the workings of natural evolutionary laws.

In the story, a socialist and agnostic sea-captain raises his daughter, Mamie, without her mother, allows her no knowledge of the bible, educates her in the “Spirit of Reason” free from “all nonsense, all hypocrisy, all humbug of every kind” and teaches her to detest all authority.⁷⁷ Mamie falls in love with a tutor of logic from Oxford who makes “hot love to Mamie”, as a review put it, but is unable to marry her despite their mutual affection because he is already married.⁷⁸ This situation is compounded when Mamie is forced to marry another man after her father dies and she is left with no income. However, Mamie and Adrian’s love remains strong, and he murders his own wife to free him from marriage. Mamie then attempts to murder her own scientist husband using his latest invention of silent dynamite, making the murder look like a suicide. When the husband survives this, Adrian attempts to kill him again, but is unsuccessful. After this incident, Mamie’s husband, Sydney, fakes his own death and changes his identity, and goes underground, whereupon Adrian and Mamie get married amongst gossip of murder. However, upon seeing the happiness Mamie has with her true love, and hearing rumours that she is suspected of murder by some, Sydney commits suicide so that her secret will die with him.

The story was sensational in many respects, challenging ethical and social values, scandalously allowing a murderer and murderess to escape a crime without punishment. As *The Athanaeum* noted, the novel contained “moral

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confusion...nihilism and dynamite, poisoned cigarettes, drowning and burning...horrors of a physical nature”⁷⁹ It is also notable for the way science is used to move the story, in the way that the scientist husband produces an explosive which makes no noise, and which permits his wife to kill him without being found out, and the way in which the attraction of the two main characters is attributed to a natural instinctive love that must be fulfilled above all other matters. Logic and reason, as embodied in Adrian and Mamie, thus overcome the immoral religious and social customs Allen portrays. This encapsulated the extreme evil that could arise if natural law was not permitted free action.

Though *For Mamie's Sake* was a scandalous book it was *The Woman Who Did* that became Allen's most subversive and successful work, drawing its notoriety from the fact that the story concerned the exploits and thoughts of a woman who decides to live her life in a way she chooses, and in the course of such has no need for men, marriage or the law. I wish to emphasise here the scientific aspects of the book and the basis upon which the plot of the novel and the themes of the book are established. They are I suggest no different from the sources upon which Allen's work on aesthetics or evolution were generally derived.

The novel is one of Allen's shortest and the plot straightforward and simple, though its ramifications were racy and outrageous. Herminia Barton, a woman educated at Girton College and whom entirely supports herself, falls in love with Alan Merrick. Alan, mutually attracted to her, asked her to marry him, but she refuses, stating that she could “never” marry him, as marriage was “part and parcel of a system of slavery.”⁸⁰ However, they mutually agree to live a life whereby they have contact, but do not live together, and instigate a friendship that would allow Herminia to fulfil her “natural functions.”⁸¹ They thus have a child through a free-union which gives Herminia the happiest six months of her life, despite her having to endure hostility of the life she has chosen. To escape this pressure the couple go and live in Italy. However, while travelling in Italy Allan takes ill and dies, leaving Herminia in effect

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a widow, though she is deprived by law of the estate of the father of her daughter. On her return to London Herminia finds work and rooms and begins educating her daughter Dolores in free love and free expression. She takes up journalism, but after a novel she writes is given poor reviews, she gives up any hopes of literature and dedicates the next 17 years to bringing up her daughter. However, Dolores rejects the values of her mother and takes the name of, and lives with, her grandfather. Herminia finds this unbearable and she commits suicide, writing to her daughter, "I thought you would thank me for leading you to see such things as the blind world is incapable of seeing".⁸²

The book thus draws upon a number of points for its drama, the scandal of the flouting of law and custom, the call for the freedom of women to choose their numerous lovers, and a critique of manners and expectations. What Allen urges in the book is that the laws of nature should be permitted to act freely in the governing of society, and specifically in respect to the choosing of women of their sexual partners, so that the oppressive and immoral laws of marriage can be overcome. This is essential not only for the freedom of women, but also for the improvement of the race. However, the problem perceived in Allen's suggestion, is that the role he anticipates for women, is a maternal one. Women will become legally and economically free to pursue their natural maternal instinct, but what women will be free to be, is mothers. What Allen argues is that free union will lead to women choosing the best partners for their children, and through this process of selection, they will advance the qualities of the race. The influence of evolutionary ideas here is critical, and Allen draws upon his understanding of Spencer and Darwin to construct the plot, thinking through what would happen if such and such were to occur, give the prevailing context in which the action would take place. The plot is not just a fancy, it is the working through of what in practice a theoretical proposition might produce. *The Woman Who Did* was a scandal, and it sold vast quantities, making for Allen an income that lasted the rest of his life.

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What is evident in Allen's fiction is the way in which political persuasions and moral values were not only being fully articulated in these works, they were also informing the framework in which they existed and from which the stories were generated. This is of course no different from the same frame and values within which Allen's science works were produced, but in those the values were, and were necessarily, concealed. There was a portability to Allen's evolutionism that meant it could equally serve as a source of explanatory power for accounts of development and structure in Nature, and could become the machinery through which dramas and human stories could be imagined and told.

I have tried in this section to give an indication of the ways in which Allen used his science to dramatic and literary effect, and of the extent to which Allen's fictional work was an extension of his scientific project, even if on the face of it this may not be apparent. It is interesting to note that a letter in the science journal *Nature* concerning Allen's novel *This Mortal Coil* admired the conjoining of "Fact and Fiction", but was disappointed by the compromise Allen made about science so that he could make the plot sensational. As the writer of the letter put it "while it is not undesirable that scientific fact should be imported into modern fiction, it is surely important that it should be fact: loose statements are apt to perpetuate themselves."⁸³ Allen took what facts were of interest, and the ideas which were arresting, and turned around them into tales which though not conveying all the truths of science, engaged readers and got his books noticed and read. This in turn permitted the ideas to gain a wider audience.

Conclusion

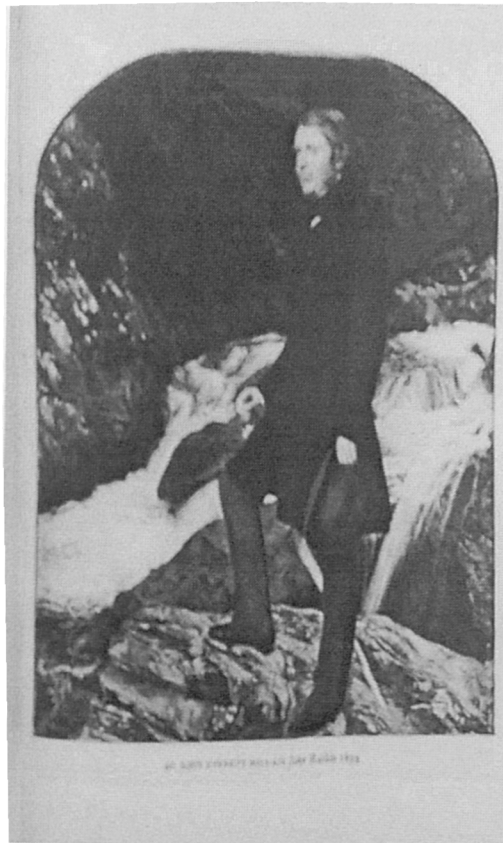
It is possible to draw a parallel between Allen's own move into fiction, and the wider relations of science to other parts of the Victorian cultural field. It is tempting to assume that Victorian culture was colonised by the men of science and by evolutionary thought, and that there existed some form of hegemony relating to

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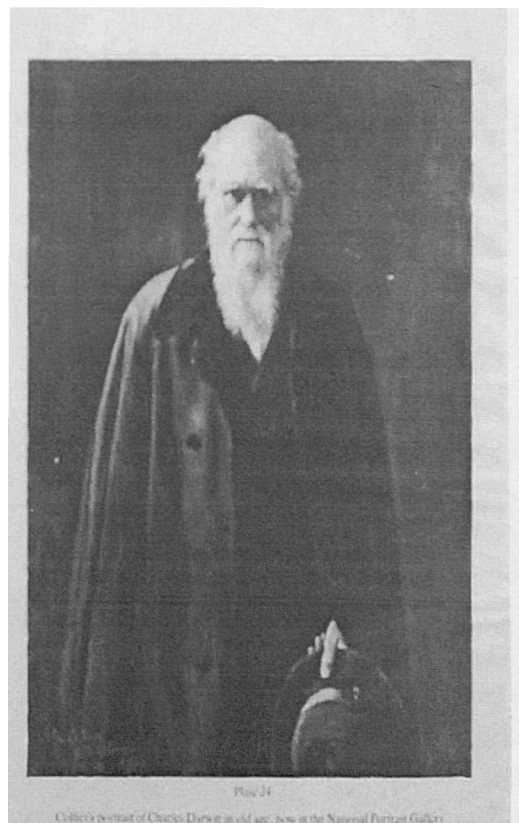
science. What I think a consideration of Allen's fiction suggests is that the opposite may have been the case, and that literary men and the public were setting an agenda within which science had to be articulated and expressed. So though it may be that matters of science entered the arena of literature, the question that has to be asked is was this an invasion based on the expansionist policy of scientific naturalism, or is it that the dominant part of the cultural economy was a literary one, and that if science wished to gain support, it needed to address that section of cultural life for credibility. Allen's fiction can thus be seen as a microcosm of the relations of scientific naturalism to wider Victorian culture, in that though it was a vibrant and powerful movement, as Allen's science was vibrant and powerful to him, scientific naturalism was subsumed under more popular and marketable cultural forms, and was responding to an agenda established and dominated by others.

In Grant Allen's writing, there was an ambiguity between science and fiction, there was also an ambiguity between the scientific and literary aspects of Allen's identity and intellectual project, and these reflected wider complexities and distinctions between science and literature in the cultural field. Allen's scientific naturalism was able to be utilised in his fiction, as he had been able to transfer it to the study of art, as he had been able to formulate it into a popular account of science, and as he had been able to transfer it to a variety of branches of science. Moreover, Allen was able to use popular fiction to discuss and articulate complex ideas to a wide-ranging audience. Allen made his characters conduits for his own evolutionary and radical opinions, and could through them reach a particular audience. The structure and framework of the plots of his novels was contrived from principles of science, often from evolutionary psychology, sociology and biological heredity, and thus the values and ideas of science were built into the fabric of the stories.

Ruskin and Darwin: Romantic and Evolutionist



Ruskin by Millais



Darwin by Collier

Chapter 5

The Evolutionary History of Art and Architecture

In these papers it is my intention to take certain products of early Italian art, and show how closely their evolution resembles that familiar process of “descent with modification” which Darwin pointed out for us in fish and insect, in fern and flower.

Grant Allen, *The Evolution of Italian Art.*¹

Introduction

I want to begin this chapter by considering two paintings, one of Charles Darwin and another of John Ruskin, each of which, as well as being good portraits of their subjects, embodies particular viewpoints on nature and a set of cultural networks. The two portraits capture rivalries and networks and embody the relations and values of the respective factions. The 1854 portrait of Ruskin by Millais is typical of the work of one of the most significant Pre-Raphaelite painters. In this portrait, Ruskin appears against a backdrop of richly detailed and coloured nature, heroically standing against a flowing waterfall, a romantic image of the romance he projected on to nature, and the artists on to themselves. Ruskin is portrayed as the champion of nature, standing astride a flowing river, amidst rocks and greenery, proudly posing and posturing among a beautiful depiction of a serene and peaceful nature. John Collier’s 1880 painting of Darwin is starkly different. It is almost devoid of colour, has no natural setting at all and indeed the background is a murky darkness of black and brown, and Darwin himself is dressed in dark clothing, though his face shines luminously against this background. Darwin, however, appears sorrowful and looks as though he is suffering intensely. He looks as though he lacks hope, appears frail and frightened, having a tenuous hold on the world, as if he has peered into the future and past of mankind, and seen the relentless struggle that faces man in the natural world. The portraits, of the romantic Ruskin and the scientific naturalist Darwin, thus suggest different aspects of these individuals, which embody distinct views of nature which were 25 years apart.

John Collier and John Millais held very different allegiances with groups which

were competing for cultural prestige and position. For example, Collier was intimately involved in scientific naturalist circles. Collier was Huxley's twice son-in-law and painted other members of the naturalist group, including Huxley himself and William Kingdom Clifford. Moreover Collier's view on art, as expressed in his *Primer in Art*, was that it was "a creative operation of the intelligence, the making of something either with a view to utility or pleasure."² Collier was thus well connected in scientific naturalist circles and developed that in his view of art. Equally, John Everett Millais was a key figure in the Pre-Raphaelite brotherhood, he was a romantic and sentimental painter of historical scenes. Moreover, he was a long time friend of Ruskin, though the portrait was painted the year before Millais' scandalous marriage to Ruskin's wife, Effie. Millais was personally guided by Ruskin so that his paintings attempted to capture the accuracy and poetry of God's creation that his mentor demanded of art. Ruskin was the Christian, anti-industrial, socialist, Darwin the figurehead of the secularist, liberal, men of science. The paintings encapsulated the nested political, social and cultural rivalries of the romantic naturalists and the scientific naturalists and how values extended to different ideas about nature and art.

It was these distinctions between nature and culture and art and science that were the central concerns Allen took up in his writing on art and architecture, as expressed in his series of articles on art and in his *Historical Guides*. In these works Grant Allen focused on what the nature and subject of history and art-history ought to be, not on art as romantic but on art as rational. Allen thus, in his essays on art and in his historical travel guides, challenged traditional notions of art history and artistic genius, critiquing classical and romantic views of history and aesthetics. What Allen was doing in his books was trying to educate readers to see and frame objects in a particular way (and these gazes are ideological) and interpret particular places, objects and experiences in a certain fashion. Allen was trying to turn places and experiences which were generally non-scientific, into sites and practices that entailed the articulation of a scientific viewpoint, making the tourist gaze an evolutionist one.³

In Allen's framework both fine art and household objects were given a common

explanatory basis and were subject to the same laws of evolution. Allen placed at the highpoint of aesthetic experience and interpretation the intellectual analysis of art. This opened up the claim that a rational and naturalist explanation of art was a superior one to other forms of analysis. Allen was attempting to further extend the reach of scientific naturalism and expand the aesthetic franchise, by confronting the romantic gaze upon art and history, and replacing that with a view which was evolutionary, rational and populist. Allen framed evolution in such a way that he made it especially applicable to art and culture, imploding the natural and the cultural, resulting in the combination of the two into a single system that was capable of endowing evolution with an all encompassing explanatory power.

This chapter examines Allen's work on the subject of art history and art-criticism, focussing on his writing on the evolution of painting and architecture, as published in his periodical essays and series of *Historical Guides*, considering the ways in which Allen made the objects of art the subject of evolution. In the same way that Allen's aesthetic physiology had both advanced his own interests and those of the scientific naturalist, his work 22 years later on an evolutionary history of art could make him distinct both in the literary market and the scientific field, and yet could attempt to consolidate, extend or re-establish that naturalist ideology. Allen was therefore extending his naturalism and evolutionism into other cultural forms such as art, tourism and leisure.

On The Evolution of Italian Art

The concluding chapter of Grant Allen's first book, *Physiological Aesthetics* (1877), took as its subject 'The Imitative Arts'. In this chapter Allen shifted the focus of his book from the physiological process of the origin of aesthetic experiences, to the manifestation of those faculties in the production of pieces of art. Allen took as his subject the ways in which the sensuous, ideal, emotional and intellectual pleasures in painting and sculpture had come into being and evolved. Thus, he noted that paintings produced by savage races was devoid of colour, harmony or form. Egyptian

art was a step higher with powerful colours and greater symmetry and representation, Chinese Art was an improvement again with better shading and colouring, while Classical Painting represented an “enormous advance” which was harmonious, graceful and contained narrative.⁴ The Italian revival and the Post-Raphaelites then raised art to a higher plane, moving away from religious subjects and producing faithful depictions of nature. Allen thus tentatively attempted to extend the scope and power of his evolutionary framework from the theoretical analysis of beauty, to a more practical analysis of the evolution of the form, style and content of painting, sculpture and architecture.

Allen considered this topic further in a number of essays written in the early 1880's, notably in the *Cornhill Magazine* pieces ‘Colour in Painting’, ‘Pleased with a Feather’, and ‘Cimabue and Coalscuttles’.⁵ In these essays Allen began to outline a consideration of the work of artists themselves, and set out an agenda by which the man of science could legitimately analyse all artistic products and not just the physiological basis upon which they were appreciated. In his 1880 essay ‘Cimabue and Coalscuttles’ for example Allen argued that the “scope” and “domain” of art was widening, and that while art had been the preserve of a rich elite a new aesthetic consciousness was filtering through the nation and the middle classes as they sought to beautify their homes and everyday lives. The prestige and privilege of high art was being undermined by a widening of the scope of objects described as art, and by an increase in the section of the population who could evaluate such works. The middle classes had perceived art and everyday life as separate entities, so that Art was rare and was only to be experienced in the National Gallery, Rome or Florence, but since the Great Exhibition, Allen argued, the middle classes had become more critical and appreciative of art. This had led to a fashion and craze for aestheticism, where the preaching of Ruskin, Eastlake, and Morris encouraged the decoration of homes with art inspired by gothic and ecclesiastical design.⁶

Allen's point was that all art, from the medieval master to the current aesthetic crazes, were subject to historical and evolutionary analysis. The great painters such

as Cimabue became markers in an evolutionary history of art. As Allen noted, “he, like every other early painter, like the Egyptian, Assyrian, and Etruscan, forms a moment in the development of art.”⁷ Cimabue brought grace and realism into painting and his anatomical knowledge and accurate depiction of nature proved a turning point in the history of art. Equally, the taste for beautifying the home “like Cimabue himself...formed a passing moment in our aesthetic evolution.”⁸ Fine Art and the everyday were thus reduced to a common factor, of being points along the development of human (evolutionary) aesthetic consciousness. Thus, in these early works on aesthetics, Allen had begun to float the idea that not only could art theory be aligned to evolutionary theory, but the subject of art and of the history of art could be treated as a biological and evolutionary one.

After the publication of *The Woman Who Did* in 1895, Allen returned to the subject of art and began to expand upon the ideas and concerns he had expressed in his earlier work. Instead of considering the theory or philosophy of aesthetics, he specifically turned his attention to the study of the objects of art themselves, picking up where he had left off with the history of painting and architecture. In the way that *Physiological Aesthetics* levered evolutionism and science into the space of aesthetic theory, Allen injected those same concerns into art criticism and history by constructing a system of appreciation that was organic and scientific. In the May to December 1895 issues of the *Pall Mall Magazine*, a series of articles of Allen’s were published ‘On The Evolution of Art’.⁹ The series consisted of nine articles in total, each taking a theme in Italian Art and subjecting it to an evolutionary analysis. These essays were collected (though only published posthumously) into book form as *The Evolution of Italian Art*. This series of articles and the subsequent book are of particular interest because they outlined the ideological aspects of Allen’s historical analysis of art and through them we can see that Allen was trying to distinguish his work by claiming that fine art could not only be subjected to scientific analysis, but could be better understood by that analysis, as art was the product of the same evolutionary laws that governed biology, psychology and society.

This was not necessarily a unique standpoint. Alfred C Haddon, Professor of Zoology at the Royal College of Science, Dublin, for example was able to write in his 1895 book *Evolution in Art*, that though he professed to be neither “an artist nor an art critic, but simply a biologist” he was able to study art from a very particular point of view, where “the decorative art of a particular region has been studied much in the same way as a zoologist would study a group of its fauna, say the birds or butterflies.”¹⁰ In his book Haddon was concerned with what he described as “primitive art”, that is cave painting and carving, as he saw this as a simpler form from which to begin to explain the evolution of art. Nevertheless, he sought to “deal with the arts of design from a biological or natural history point of view.”¹¹ This entailed for him a comparative methodology, the mapping of the distribution of styles and variations in species, accounting for the diversity of form, ascertaining the place of a designs origin and evolution and the migrations from it, and then tracing the stages of development of a design. We could also make similar comments in respect to Henry Balfour’s *Evolution of Decorative Arts*, published in 1893. Balfour was an anthropologist and devotee of Edward Tylor, and became curator of the Pitt-Rivers museum in 1891. This was clearly visible in his work, which concentrated on the evolution of the arts from an ethnological point of view, with special focus on primitive and prehistoric material culture.¹²

Notwithstanding these works, Allen contended that, “the conception of the individual composition as an organic type, evolving along lines of its own, is a new and fruitful one.”¹³ Allen perceived himself to be, or claimed to be doing something, that was unique and that was of value. Though there were trends toward interpretations of art in an evolutionary manner prior and alongside Allen’s, what made Allen’s work different, or by which he could claim it was different, was firstly his commitment to Spencerian and Darwinian evolution, secondly his extension of this evolutionary analysis not just to “primitive” forms of art but to the fine art of Renaissance Europe, and thirdly, the way Allen sought to reduce particular paintings to products of natural law, and not personal genius or creativity, seeing paintings as

organic products, not painters as producers. It is this naturalising (or we might say de-aestheticising) of fine art in a structured evolutionary framework that is the key aspect of Allen's work. He saw painting, sculpture and architecture not as pieces of art, but as artefacts that demonstrated and illustrated the nature and structure of evolution, bringing to a conclusion the work begun in 1877 and for which he had received much recognition. Indeed, Allen claimed and identified his position as a unique one in *Evolution of Italian Art*, and noted that during his extensive European travels he had collected facts and examples and that he was "emboldened now to lay my results before the world because I believe I have certain neglected aspects of the case to present which are relatively new, and which may prove interesting even to connoisseurs by virtue of being taken from a fresh point of view of the subject at issue."¹⁴ Grant Allen, thus constructed art in a manner that opened the subject up and made it accessible to science, and in doing so challenged established versions of the history and understanding of art, extending the aesthetic franchise so that all could be aesthetes. The objects of art could be analysed using a methodology derived from science and which could be used to highlight the superiority of that point of view, which constructed those objects as specimens, analysed them as organic bodies, and which framed their production within the context of autonomous natural selective evolution.

As with *Physiological Aesthetics*, Allen sought to establish his own authority and the explanatory power of evolution by distinguishing between the artist and the man of science and the privileged access each might have to the subject of art. He identified a distinction between the Artist and the Scientist and the methodologies that separated them, by arguing that art criticism ought to be scientific. By injecting scientific theories and ideas into the analysis of art and its history, he claimed a legitimacy for the evolutionist studying art. Allen wanted to establish not only the right of the man of science to analyse art, but also the superiority of that point of view as a way to understand and explain the development and meaning of art. These distinctions between art and science manifested themselves as methods and

techniques, and it was Allen's contention that the comparative and analytical skills of the man of science lent themselves to the comprehension of art. Allen thus tried to establish the superiority of the man of science on the basis of his claims to knowledge and the techniques used to derive that knowledge.

Allen was extending the scope of the scientific gaze into the realms of history, art and the gallery by stating that though there were differences between the way science and art criticism operated, science had a legitimate and superior role to play in understanding art. This was an idea that chimed with the position of others in related fields. The follower of Herbert Spencer, William Flower, appointed curator of the Natural History Museum in 1883, (symbolically succeeding Richard Owen), and one of the "greatest museologists in Britain during the Victorian period" according to William Stern, saw the role of the museum as one that encompassed art, and wrote that "an anthropological collection, to be logical, must include all that is not only in the British Museum, but the South Kensington Museum and the National Gallery."¹⁵ Flower himself set out clear guide-lines for the arrangement of museum objects, which emphasised the progression from the simple to the complex, the division of the museum into segments illustrating differences in "structure, classification, geographical distribution, geological location, habits of evolution of the subject dealt with".¹⁶ All subjects were a matter of Natural History and could form part of the museum, but that museum was underpinned by a logical arrangement of objects that showed evolution from the simple to the complex.

The museum envisaged by Augustus Henry Lane Pitt-Rivers also established history through evolutionary classification. Pitt-Rivers envisaged a scheme which emphasised a progressive version of history, a progress established through change and differentiation. His most specific interest was in the evolution of technology, and especially warfare technology, but his museum scheme expanded to cover the whole of human material culture. Pitt-Rivers designed a museum which would be circular, consisting of concentric galleries, expanding outwards from the centre. The centre was to be left empty, to allow for displays of the earliest examples of man when they

were found. The next gallery was for Neolithic man, the next for the Bronze Age, the next for the Iron Age, and then a gallery for the Middle Ages. Finally, the perimeter was to host the arts of modern man. By walking from the centre to the perimeter it was possible to travel through the course of cultural evolution, and by walking around one of the circles to view the variety of artefacts from around the world.¹⁷ Sir William Flower admirably noted of Pitt-Rivers' suggestion that "by such an arrangement, that most desirable object, the union of palaeontology with zoology and biology of existing forms in one natural scheme, could be perfectly carried out."¹⁸ With this scheme then, culture was ordered in an evolutionary manner, with progress built into the fabric of the design, a design which established industrialism as the culmination of human history.

Even classical history was not beyond the reach of classificatory schemes and evolutionary analysis, and those involved in science were not overawed by the classics, quite the opposite, they subjected classical history to the needs of evolutionary science. Thomas Huxley, an advocate of liberal education, wrote in 1868 that "there is no investigation in to which I could have thrown myself with greater delight than that of antiquity." But for Huxley this was not an immersion in romanticism, it was to approach the classics as a branch of "palaeontology...as a preparation for the discovery of the law of progress."¹⁹ This was explicitly an attitude towards history which was evolutionary, and was applied by Edward Clodd in his *Childhood of Civilisation*, Spencer in his sociology, Grant Allen in his work on architecture, and even by Darwin in the *Descent of Man*, where he considered the Ancient Greeks and Romans and gave consideration to the decline of civilisation in respect to natural selection.²⁰ Even the British Museum re-organised its ethnographical section in 1860, so that the Greek, Roman, and Assyrian collections were arranged in a "logical and modern manner."²¹ Classical culture was not beyond the scope of those who saw progress and order in civilisation and nature. The history created by those romantic writers, of a rural, feudal, unchanging past, did not go unchallenged either, and there existed a more progressive and positive stock of

images and metaphors to be drawn upon. In any case, not all those who had reservations about modern civilisation were anti-industrial. Similarly, not all appeals to the past to enlighten the present were romantic or nostalgic.

Grant Allen had a common agenda to that of William Flower, Thomas Huxley and Pitt-Rivers, and in his writing he encouraged readers to visit such sites as the National Gallery and use their resources as specimens in the analysis of art. Moreover, Allen noted that in the Pitt-Rivers anthropological museum objects were laid together in the “probable order of evolutionary development” and stated that in “somewhat the same way I am endeavouring to arrange certain subjects of early Italian Art.”²² Similarly, Allen noted that “in organic evolution one can best understand the close inter-relations of genera or species when one examines a large number of allied forms in a single museum. It is the same with pictures.”²³ Allen was thus drawing a comparison between the way natural history museums operated, and the way the art gallery should be organised and experienced. We can compare Allen’s ideas with the those of Charles Lock Eastlake, who became Director of the National Gallery in 1855 and Keeper and Secretary in 1878, a position he held until he retired in 1898. The original National Gallery buildings were completed in 1837, but they were expanded during the 1870’s and again in the 1880’s, all under the auspices of Eastlake. Eastlake oversaw the construction of the extensions, and then re-hung the collections within them so that the paintings were arranged by school, and so that certain rooms were dedicated to particular painters, as was the case with the rooms dedicated to the work of Turner. As Carol Duncan has noted, galleries have tended to stress the viewing of works and artists in isolation, rather than comparison, and this seems to be the case with Eastlake, who arranged the paintings by painter and school.²⁴ In Allen’s opinion however, the National Gallery should be treated in the same way as a natural history museum, as a resource for comparing painting types, and by arranging paintings, by subject, style, and theme, so that comparison became the essential mode of analysis. Allen was thus advocating the extension of the realm of the man of science into the spaces and ideas related to the consumption of art, and a shift from

the contemplation of paintings as individual pieces to them as types of art.

The distinction between Art and Science, and the basis for a scientific understanding of art was outlined explicitly in the opening sections of *Evolution of Italian Art*. Allen stated that there were “two fundamentally different ways of regarding nature and the works of man” and that these were “usually found in different persons.”²⁵ It was crucial that Allen could make the comparison and draw the distinction between them, as this established the basis upon which he could make a move on to that ground. This was that “some men have the eye for likeness; some men the eye for difference” and even though the two were combined in everyone “in some men the one faculty immensely preponderates, and in some men the other.”²⁶ It was the man of science that saw the similarities. These different outlooks refracted into different principles upon which a methodology was based, and Allen commented that he thought it was “usual for the artist and the art-critic to be most deeply impressed with the differences of things; while the man of science is more deeply impressed by their likenesses.” Moreover, he argued that “the perception of likeness in the midst of diversity is fundamental, indeed, in the scientific intellect; it forms the very basis of the evolutionary spirit.” Systems of classification depended upon the idea that there were similarities between organisms, and indeed Allen suggested that the idea of descent with modification was grounded on the acceptance that there were similarities between organisms and that these similarities pointed to persistent and consistent relations between those organisms.²⁷

In Allen’s opinion the scientist looked for deep-seated resemblances rather than superficial diversities: he “overlooks the outer mask, and sees beneath it to the structural identity.” The artist on the other hand looks at the “surface diversity of things”, at matters of texture and shade.²⁸ The art specialist looks for signs to tell the difference between one painter and another, noting the minutest differences, ignoring the underlying structure and the composition of works. In Allen’s opinion, art-critics were fascinated by two particular aspects of art, the surface appearance of the pieces themselves, and the cult of the artist, that is seeing the producer of the work as the

basis of its singularity and its unique beauty and meaning, where individual works of art were products of individual artists, gifted with the skills and qualities to produce art which others did not possess. By comparison, the Evolutionist who approaches art “with the preconceptions formed in very dissimilar fields of study, may sometimes see certain unessential yet interesting aspects of art more vividly than they are seen by the artist or the art-critic.” There were different, incompatible, ways of seeing, and Allen argued that from “this fundamental distinction of aim distinctions of judgement must invariably arise.” This was because the cognition and understanding of any subject was based on resemblances and because all schemes of nature were established on the “recognition of similarity”.²⁹ The ability to make comparisons was thus essential to true understanding, and that made science the ideal process for studying art. There was therefore built into this conception of different ways of seeing and different ways of acting, a sense of distinction based on status. Allen heightened the sense that one way of appropriating a piece of art was superior and not just different to another, and that the man of science had a valid and valuable contribution to the study of art. A scientific analysis of art was not just possible, it was desirable and beneficial.

Grant Allen argued that paintings and other objects of art could be analysed in the same terms of descent with modification as the biological world could be. Art passed through stages of development, evolving and differentiating step by step with each generation. Each individual painting could be analysed as an organic type, varying from a central form and producing its own descendants. In ‘The Evolution of Italian Art’, and in the *Historical Guides*, Allen outlined the differentiation from simple to complex forms evident in each incarnation of a variety of themes in Italian painting from the 12th Century to the 16th, suggesting that each picture be viewed as a variant from a central type and that these variations followed fixed laws of nature. There were thus three crucial points upon which Allen based his analysis: firstly that art followed the same principles as nature, secondly, that pictures could be understood as organic types with ancestors and descendants linked through a series, and thirdly that

this development was governed by laws of variation and differentiation producing evolution by descent. There was thus a uniformity and universality to the natural evolutionary process that could be applied to art. I now want to take each of these points and discuss and illustrate them further, before turning to look at one example of this theory and method in detail.

Allen's general argument was that art was like, and could be analysed in the same way as, nature. This was central to any argument that art had evolved. If he could not argue that art was just like any other natural phenomena, then the transfer of the scientific naturalist ideology across to the sphere of art would not hold. Moreover, if art was not like nature, or did not follow the same laws as evolution, then Allen could not legitimately justify and claim superiority for the method and analysis he advanced. Allen argued therefore that there was a commonality between the working of laws in biology and the same laws working in the sphere of art. This argument entailed the assumption and assertion that "phenomena well known in the organic world have their counterpart and parallel in the super-organic", and this was especially so in the realm of the arts.³⁰ This was straight out of Spencer, who had not only developed the idea of super-organic evolution in the *Principles of Sociology*, but had also expressed the idea in some of the essays he had written on the subject of art and architecture. It is also not dissimilar to, though had a very different consequence from, Wallace's suggestion that biologically man had evolved as far as possible, and that where evolution would continue to work would be in relation to his psychology and his cultural and social life. Though Allen was not a spiritualist like Wallace, he was extending the sphere of the process of evolution to cultural products.

The evolution of art was something that was self-evident to Allen, or at least this is what he tried to persuade his readers, and he wrote that from "the first day when I began to look with interest at Italian art, the singular similarity between the course of its evolution and the course of evolution in animal and vegetable life struck me most forcibly."³¹ Allen, therefore, outlined and applied an organic, evolutionary and naturalistic account of Italian Art. What is most interesting about this is that Allen

identified this process as akin to a natural process of selection and descent with modification. Nature and culture were governed by the same laws, and thus comparison was the best way to grasp the understanding of art. Allen proceeded on the basis that “the development of the various products of man’s collective action closely resembles, in not a few respects, the natural development of plants and animals”, and thus that the laws that governed that evolution in animals were the same for cultural products.³² In doing so he naturalised and made ‘obvious’, a claim that was not necessarily justified.

Allen naturalised art by extending the workings of natural law to the production of paintings, and this entailed for him the construction of each painting as a specimen of a particular type of organism and then tracing the evolution of that type of painting through subsequent generations. He best expressed this in the conclusion to *The Evolution of Italian Art* where he wrote that when looking at a particular painting, “we should look at it as a specimen of its own genus as specially developed by such and such a school, and as conditioned by the general advance of art at such and such a period.”³³ This meant that a particular painting should not be considered as a Giotto or as a Raphael, but as a ‘Nativity’ or as a ‘Paradiso’, or whatever the subject may be. This is indeed how Allen divided up the articles and the sections of the book, not tracing the evolution of the styles of one painter to another, but taking each theme such as ‘The Annunciation’, ‘The Presentation’ or the ‘Madonna and Child’, and then tracing the development of the depictions of that theme in an order that highlighted the variations from the central theme, yet contending that they were all of the same type. Though the paintings changed over time, the typical elements of the painting remained the same, and the “modification is only in detail.”³⁴

Allen thus considered each painting as a specimen and as an example within a series. This was the case for example with the Sposalizio paintings in the National Gallery, which contained “two specimens” of the painting. One of these was by Niccolo Buonacorso which was “earlier in type and is extremely rude in execution.”³⁵ Allen wrote that “every subject or theme in Italian art starts, like an organic type,

from a special central form, Byzantine or Giottesque, as the case may be; and varies therefrom by descent with modification". Moreover, the resulting varieties were also influenced by environmental factors so that specific forms could be located in particular environments.³⁶ Thus the Sposalizio of the Umbrian and Sienese forms were influenced by the piety and spirituality of the St Francis of Assisi and St Catherine of Sienna. The Florentine versions were more cultivated and reflected humanism with a sense of grace, poetry and idealism. Venetian commercialism led to the direction of luxuriance and voluptuousness, and the Lombardian version was more gracious and scholastic, reflecting Padua.

Each of these "organic forms" could be "derived from a single ancestor", and though themes might become more elaborate and differentiated over time. Allen noted that "we find in every school the elements of the structure in each subject remain ever the same, while all the parts can be directly traced back as individual variations upon the corresponding parts of the primitive type to which they owe their origin."³⁷ Paintings were akin to one another, and Allen argued that in the same way one would be able to lay out the divergent species of an animal the same could be done with paintings. In the case of the 'Madonna and Child' this would have been an arduous task, as a "complete collection of specimens" would extend into thousands, but Allen claimed this made an evolutionary treatment even easier and that it would be possible to show a continuous series of paintings from the rudeness of Christian Art, to the grace of Lippi and the lushness of the Renaissance in the work of Corregio, each of which developed the same species of painting.³⁸ Allen thus suggested that "it would be possible to arrange one's groups of Madonna's in divergent lines as to represent their differentiation into the diverse schools - Florentine, Sienese, Umbrian, Lombard, Paduan, Venetian." Moreover, in the case of the Madonna, where "each picture must be viewed as a particular variant on a central type" Allen said it was possible to show the sub-branches of the species, so that there developed different kinds of Madonnas, including the Madonna Enthroned, Madonna and Child with the Infant John, The Holy Family, and the Madonna and the Angels.³⁹ Within Allen's system, each

painting was conceived as an organic type, varying from a central form and producing its own offspring and descendants.

A consequence of this methodology and the values that underpinned it, was the critique of the idea of genius and the removal of the individual painter from this consideration so that art products became the focus of attention, not the painters of them. Allen wrote, "I do not propose to enter in this series into any question of attribution, because I am only concerned with the subject and time from the point of view of evolution. It is the period, not the painter, that matters for our purpose."⁴⁰ Allen was trying to shift the focus from an idealistic and romantic view of individual sense of genius, and stated that he had a "desire to speak rather of the paintings as products than of the painter as producer."⁴¹ Moreover, it was not even the individual piece of art that had a meaning, it was that work's relationship to other pieces in an evolutionary series that gave the piece significance. Thus the individual became removed from the analysis to be replaced by universal natural law. Allen maintained that this "point of view is not indeed of the sort familiar to artists" but this did not mean that it was not of value, and that "even artists will perhaps admit that it is calculated to make the outside observer look closer at works of art, and so to lead him on to higher appreciation of their technical and aesthetic aspects."⁴² This analysis thus framed the paintings and their interpretation in such a way that science had a legitimate and distinct position within that field, and suggested the superiority of such an analysis.

The process that drove this change was evolution by descent with modification and selection and it was Allen's intention to "trace the evolution in the treatment of each particular theme from the earliest possible examples to the full Renaissance, exactly as one might trace the variations in structure and function of an organ or an organism."⁴³ Allen took as the focus for his study of art a period of Italian painting spanning the work of Duccio to that of Raphael, Michaelangelo, and Titian. He chose this period to illustrate the principles he had in mind for a number of reasons, firstly there had been a rapid development in art during that time, and secondly because

Italian painters had kept a tight repertoire of subjects and themes during that times which aided the tracing of ancestors and offspring. Allen wanted to “trace a few successive stages in the evolution of painting in Italy”⁴⁴ and he commented that during the period between Duccio and Raphael, “art passed step by step with accelerated haste through many successive stages, so that every half-century of that brilliant time marks a distinct advance upon the half-century that preceded.”⁴⁵ These painters focused upon a set of particular subjects, the elements of which were prescribed by religious convention, and because of this they produced a limited range of painting types. There was thus a subject matter for his theory which could be used to show the evolutionary principles working in the history of art.

It is not clear in Allen’s work what he envisaged as the culmination of evolution in respect to this artistic progress, and in particular what the final stage or end point of that evolution might be. Indeed, Allen did not posit a particular end or beginning in the process. In selecting the series of paintings Allen did, Allen was placing an artificial frame around history to limit the scope of his inquiry, so that the period selected illustrated the process of evolution, not the product or end product. Allen’s suggestion was merely that there was a tendency through selection for art to become more secular, more structured, and more symmetrical rather than that there was specific end point to be attained, and his book and the sample he selected was designed to illustrate the working of that process.

In Allen’s work therefore each painting by a particular painter was an organism which formed one specimen in an evolutionary series that was progressive. What Allen wanted to suggest was that “the variations themselves follow fixed laws of development, and are due in part to a general stream of evolution.”⁴⁶ The subjects themselves advanced from simple forms and types, gradually accumulating small changes as innovations were made by each painter who was commissioned to produce a version of a particular theme. This tended to produce complexity, as it did in biological organisms, and Allen stated that “each step in the evolution shows greater heterogeneity, greater coherence, and greater definiteness than the stage that preceded

it.”⁴⁷ The wording here is very precise, and is an exact definition of evolution as produced by Spencer in his early work. Evolution was therefore not just change over time, it was a particular kind of change over time that was based upon the shift from the simple to the complex where previous changes or modifications were accumulated. Allen did not therefore just contend that there was just an evolutionary progression, he argued that the mechanism of that process of evolution was descent with modification, and that from one central form, others descended with variation and differentiation producing numerous forms, some of which themselves produced further descendants, with their own variations and common features.

We can see this conception of evolution by descent with modification in Allen’s analysis of the theme of the ‘Annunciation’, which he noted as a good example because in this theme “evolution is more marked” than in any other subject.⁴⁸ Allen suggested that this theme had gradually accumulated changes that had taken the painting from a religious depiction and biblical scenery to one of the civil life of Renaissance Italy, but that at the polar ends of this development, and all the points in between, the typical structure and elements of the scene persisted.⁴⁹ Allen stated that Ruskin’s suggestion that the original scheme of the Annunciation was the product of a dream was an “inherent improbability” and that Ruskin did not consider enough examples. To counter this kind of suggestion Allen analysed the theme in a way that was “more reasonable and more evolutionary.”⁵⁰ Allen thus conducted a thorough analysis of the history of this scene and noted that there were hundreds of such examples of the Annunciation, though he picked out for attention those by Giotto, Neri de Bicci, Fra Angelico, Fillipo Lippi, Botlicelli, Carlo Crivelli, Lorenzo de Credi, Fra Bartholomeo and Paolo Veronese, whose painting Allen described as “an example of the final stage in the evolution of the subject at the high tide of the Renaissance.”⁵¹ Examples given by Allen of ‘The Annunciation’ by these painters can be seen at the end of this chapter. These paintings were noted by Allen as demonstrating the process of evolution in art. What Allen saw evolving was the elements of a theme and the structure and style of the painting. He saw a basic form

differentiate over time, with complications and continuities. Thus the key parts of the Annunciation story of Gabriel's visit to the Virgin Mary, were depicted with the formal elements of a cloister, the Angel with folded hands on the left hand side of a wall, and the Virgin sitting in front of a reading desk on the right inside the cloister. The Virgin is holding a sceptre or a lily and in the heavens there is a dove looking down. These factors were the typical elements of the scene of the Annunciation.

In each of the versions of this painting, Allen detected some small additions and changes of composition and style. Thus Giotto's version originated a wall and a division of the Angel and Mary, a product of the architecture of the building this painting decorates, but which becomes a fixed feature in subsequent versions. Giotto's painting is symmetrical and has the haloed Angel to the left and Mary is to the right in front of a reading desk. The next three paintings noted by Allen resemble each other very closely, and are described as early versions of the Annunciation. De Bicci's version, mentioned out of sequence because it was a "pure survival of the Giottesque model in a later generation", has a double cloister and places the figures at great extremes of left and right.⁵² Fra Angelico's version, simpler than those that followed it, was a fresco in San Marco, and adds greater decoration to the cloister and the garden, gives the Angel coloured peacock feathers and has him kneeling and hands folded, while the Madonna is no longer at the reading desk. Filippo Lippi's version keeps the main structure, but this takes place inside the cloister, both figures are kneeling, and the painting further elaborates the detail of the Angel.

With Botticelli's depiction, Allen suggested, there began great differentiations from the original Giotto. The Botticelli retains the cloister and the garden, but the landscape has become Italian and naturalistic, the Angel's wings have become more swan like and the clothing more elaborate, while the Virgin has become more ascetic and her face more expressive. The lily persists, but the dove has disappeared and Angel has opened his previously folded his hands. Carlo Crivelli's version adds a "mass of detail" to the scene, and the figures become accessories to a "labyrinth of wholly extraneous ornament" so that the background has become the picture. Gabriel

is now in the street, while Mary is inside the building.⁵³ In Lorenzo di Gredi's version the landscape has become "increasingly naturalistic" and resembles the upper valley of the Arno, the Angel's halo has dwindled, and the drapery has lost its ornamentation and have become merely abstract sheets.⁵⁴ In Fra Bartholommeo's later painting, the clothing has been modernised further and the poses have become more graceful, and Allen notes that the event has become nothing, while the art is everything. The painting has the "essential properties" of the Annunciation, but all "virtue has gone out of everything."⁵⁵ In Paolo Veronese's painting, Gabriel is hardly an angel at all, the Madonna has become a Venetian lady, the buildings classical, the wall is gone, and all spirituality has been removed from the piece. But, Allen notes that "the past dies hard", and he finds even in this picture commonality with the early versions, through the formal garden, the cloister and the formal structure of the figures.⁵⁶

Here, then, a central form had evolved over time. By the process of selection and modification, particular elements were maintained while others were discarded and yet more elements added. The central shape and elements were present in almost any variety of the painting, but the style and structure were modified. There was, however, a subtext to this analysis, as it was not only the structure, composition and style that evolved, but also the meaning of the painting changed too. Allen saw in this scene a gradual and progressive secularisation of the theme, and indeed of art in general. Very gradually the scene changed from a specifically biblical and religious one, in terms of the setting of the scene and characterisation of the figures, to one that depicted the civil life of Renaissance Italy. The message here, then, is that progressive evolution was not just limited to technical or structural matters, but also related to issues of intellectual and social advance.

I now want to consider the way Allen used this naturalism, organicism and evolutionism in the analysis of Italian art by considering one example in detail, 'The Spozalizio', or 'The Marriage of the Virgin', in which Allen illustrated the evolution of an identifiable kind of scene through a variety of incarnations as produced by a number of painters. This was a painting type which Allen analysed as a "subject and

time from the point of view of evolution.”⁵⁷ This was established by identifying a set of common and continuous characteristics in the painting, and therefore creating an expected structural content or composition for the painting. Allen then looked at the changes to the painting over time and location, spotting variations from that central form, noting the continuities that persisted and the variations that emerged.

As with the Annunciation, Allen began his analysis of this theme by identifying the basic features of any version of ‘The Marriage of the Virgin’. In this case, the central structural and compositional features consisted of the main action taking place near or in a temple, present would be a bearded high priest who would normally be in the centre of the painting, with Mary on one side of him and on the other side Joseph who would be holding a budded staff with a dove sitting on it. Mary and Joseph would be holding hands. Behind Joseph were the suitors, one of whom was normally breaking a rod of some kind, while the other attempted to strike Joseph. These were the necessary elements of the story taken from the Protevangelium and the Nativity of Mary, as they were represented in the Sposalizio around the time of Giotto. Moreover these were the elements of conventions that would be demanded by a patron requesting a depiction of The Marriage of the Virgin. Allen firstly identified these essential elements in the work produced by Giotto in his treatment of this theme as displayed in Padua. In Giotto’s painting Allen noted the key elements and traced from this version the development of the structure and elements of the theme in general. Allen therefore took Giotto’s painting as the type from which all other variations were descended, and then looked at other examples of paintings of The Marriage of the Virgin for those variations.

Allen next turned to Taddeo Gaddi’s version of the painting, located in Florence. In this version Allen noted the duplication of the essential elements of the square temple, the high priest in the centre, Mary and Joseph have joined hands, there is the rod-breaker, but there is also the addition of various children in the picture, the inclusion of palms and vegetation and musicians. Moreover, Allen noted that the picture contained more expressive features and more animated attitudes, which also featured

in later incarnations of the painting. Allen therefore concluded that in Taddeo Gaddi's *Marriage of the Virgin* it was possible to note "many distinct marks of upward evolution."⁵⁸ This was both in the sense that there had been changes to the formal structure of the painting and inclusion of the extra figures in the painting, but also in the greater variety of attitudes and action in the poses.

After considering Gaddi's painting, Allen then decided to omit "many intermediate stages" as he put it, and turned to a consideration of the *Sposalizio* by Fra Angelico, also in Florence. In this painting Allen again noted "an immense advance in grouping and in treatment" resulting in the major elements of the subject being combined with greater decorative detail, more ornate robes, and finer and more exquisite features.⁵⁹ There was a more orderly arrangement of the figures, especially in respect to the crowd who were this time outside the temple. Everything that was present in Taddeo Gaddi's painting was also in the Fra Angelico and in the same order. Following from this painting, Allen passed over a "great gap", and considered the *La Spagna Sposalizio* at Caen and compared that alongside a *Sposalizio* by Raphael at Brera in Milan. In both he noted that the outline and arrangement were the same as in the previous incarnations, there was a temple, a long haired priest, Mary was attended by women, Joseph was joined by the hand to Mary, and in the background were the discontented lovers, and there was a hill-side setting for each. There were however divergences from this in each of the paintings. Raphael's painting changed the position of the Virgin so that she was to the right hand side of the Priest, while the *La Spagna* painting has no action in the figures so that symmetry and form come to the fore. Raphael's painting moreover is marked by grace and skill, it is picturesque and contains a poetical delicacy of an "Umbrian type," while with the *La Spagna*, the figures are distinct from one another, and are almost abstract. Indeed Allen commented that "the grouping is purely symmetrical and formal."⁶⁰ Two final examples of the *Sposalizio* were alluded to in the National Gallery, though with the very early painting by the fourteenth century painter Niccolo Buonacorso Allen commented that this even pre-dated Giotto's and was "rude in execution."⁶¹

In this consideration of the Sposalizio Allen only detailed “a few salient examples alone, omitting many intermediate stages.”⁶² The main examples of these were by Giotto, Gaddi, Fra Angelico, La Spagna and Raphael. Though overlooking some of the stages, which Allen claimed other examples could have illustrated, these slight modifications in each painting over time lead to substantial changes in the overall structure and texture of the painting. Each painting had deep-seated resemblances and structural affinities, yet also possessed slight variations that accumulated over time. The changes were only superficial, and no matter which versions were compared, Allen noted that “you will find they follow without a single exception precisely the same conventional order.”⁶³ Allen thus demonstrated the variation from a central form, and how that differentiation could produce diverging forms, while maintaining the central type. Raphael’s picture in Milan therefore needed to be judged or understood not by its own qualities or by those of Raphael, but by comparison to the incarnations of that theme which preceded it.

The example of the Sposalizio demonstrates the key points of Allen’s method and framework. He begins with a conception of a theme, identified through specific incarnations by certain painters, concerning himself with the structural and pictorial manifestation of that in a series of paintings. Allen then follows a method of comparing these different paintings, but stressing the commonalties between them and the structural affinities that exist and persist between them. He thus identified a central form from which there are variations and ancestors from which there are modifications and descendants. Moreover, this change over time tends from simplicity to complexity, and so though there may be a bare and sparse structure and style in an early incarnation, over time there is the addition of other figures, further decoration, extra elements to the scene and actions to the figures. These additions are accumulated over time and copied from one incarnation to the other, so that over time the theme becomes embellished and elaborated.

Grant Allen constructed a theory of art where each picture had to be viewed as a variation from a central type in a series that had become differentiated by the natural

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laws of evolution. In doing so he was both advancing an explanation, and legitimating the explanation, whereby the man of science could gain access to the history and artefacts of art. Allen therefore argued that the best way to achieve an understanding of art was to compare paintings and to visit the galleries where those paintings were housed and see the original paintings. This was not just a sterile theory or an empty suggestion, however, and the practical embodiment of this method was developed by Grant Allen in his *Historical Guides*, which informed the tourist how to view the towns, galleries and paintings of Europe as products of evolution.

Grant Allen's Historical Guides

Grant Allen's Historical Guides were his final series of sustained published works, though they had been in preparation over some 35 years. They thus capture Allen's views over a lengthy period of time, but they came to fruition and became crystallised in a very specific set of commercial circumstances. For Allen, these apparently innocuous books became a commercial enterprise, a way of differentiating further his own work and identity, and a way of furthering the ideological ends and cultural ambitions of the man of science. The books told the middle-class traveller how to be a special kind of tourist, and they told that traveller how to interpret art in a way that would give the viewer a privileged access to art that could not be attained in any other way. I wish to consider here three entwined and simultaneous aspects of the series of books, that is the commercial history and context of their production, the difference Allen attempted to stress was inherent in the books in contrast to other such guide books, and also the particular way in which Allen constructed and imposed an evolutionary gaze upon the history of art and architecture so that science was able to account for the most beautiful and complex cultural products.

The publication of *The Woman Who Did* in 1895 had made Allen a wealthy man, but the controversy associated with it had given Allen a reputation and he found it increasingly difficult to place his books with publishers. George Gissing noted in his diary that Allen had told him when they met at a Edward Clodd's house, that though

he was drawing a £1000 a year for life from *The Woman Who Did*, Allen could not get a publisher to take *The British Barbarians*, (though John Lane eventually agreed to publish this book).⁶⁴ This combination of financial security and literary suspicion gave Allen the possibility of developing other projects which he had been working on, but which had not come to fruition. One of these, as the next chapter notes, was *The Evolution of the Idea of God*, and the other was a series of travel books on the history of art.

The Historical Guides collection comprised Allen authored volumes on *Paris, Florence, The Cities of Belgium, Venice*, and *A European Tour* (especially aimed at American tourists, not surprising given the vogue for Spencer), and a further three volumes on *The Cities of Northern Italy, Christian Rome* and *The Umbrian Towns* which though not written by Allen, followed the style he established.⁶⁵ These guidebooks were intended for the burgeoning market of travellers and tourists. Increased access to the continent via the railway, with some 50,000 miles of line laid across Europe between 1850 and 1870 alone, and through provision of travel arrangements by travel companies, there opened up the possibility of a shift from an exclusive Grand Tour to the development of democratised travel and the mass tourist trade. Foreign travel was becoming a commodity. This was exemplified by the development of Cook's tours. Founded in the 1840's on excursions to Scotland and Ireland from England, Cook's first circular tour of the continent took place in 1856, and the business soon expanded rapidly.⁶⁶ Such a concept of mass travel and tourism was objectionable to some, and Ruskin for example commented that travelling by railway was not travelling at all but was "very little different from becoming a parcel."⁶⁷ As Boorstin notes, Cook himself described his tours as "agencies for the advancement of Human Progress" and that "railways and steamboats are the result of the common light of science, and are for the people".⁶⁸ Moreover, Cook considered attacks such as Ruskin's as elitism and commented that it was idiocy that "places of rare interest should be excluded from the gaze of the common people, and be kept only for the interest of the 'select' of society".⁶⁹ Travel and tourism were thus being

democratised and it was in this vein that Allen developed the *Historical Guides*.

Reading was an important part of travelling, and guidebooks played an integral part of the tourist experience. At the railway station for example the bookstall was, as Jeffrey Richards and John Mckenzie note, “indispensable” and reading was the “universal habit of the bourgeois traveller and was put within the means of even the lower middle class.”⁷⁰ Murray’s “Railway Readers”, for example, were intent on raising the standard of reading matter for travellers above that of cheap fiction, and Murray noted that the intention of these works was “to disperse sound and entertaining information and innocent amusement.”⁷¹ Guidebooks such as those published by Baedekker and Murray set the agenda by which the tourist experienced his new found surroundings, what he decided and expected to see, and how the places would be viewed and understood. Allen’s work wanted to draw upon that, and develop a niche within the market that was more rational than romantic. The launch of Grant Richards’ publishing house provided the commercial opportunity for that development.

All of *Grant Allen’s Historical Guides*, and nearly all of his works after 1895, were published by his nephew Grant Richards, and it is important to see these books as an integral part of the initial strategy of Grant Richard’s publishing firm, and that they, along with some other titles, were a favour to his nephew from Grant Allen. The *Historical Guides* were important to Grant Richards as they were the launch titles of the new Company which needed a known name to arouse interest in its output. Allen helped Grant Richards in a number of ways; supplying him with money, product, and contacts. Grant Allen loaned Grant Richards money to start the company (just as he had given John Lane £1000 to found the Bodley Head), he introduced him to his literary friends, including George Bernard Shaw who eventually published verse with Richards, and he guaranteed his nephew work to publish, including the aforementioned *The Evolution of the Idea of God*, the detective novels *The African Millionaire* and *Hilda Wade*, and the children’s story *Tom Unlimited*.

Allen did not give these works freely, however, and he agreed generous terms for the

Historical Guides with Grant Richards. Allen was to receive a £60 advance on each book, (though Richards claimed in his autobiography that he paid “£80 in advance of royalties for each volume”) and then receive progressively more of the profits as the books sold.⁷² For *Florence, Venice and Paris* Allen asked for 15% of the first 1000 sold, 20% from those sold up to 100 000, and then 25% of all others. Comparing this to Allen’s 12% on all sales for *Twelve Tales*, and 10% for the sales of *Colin Clout’s Calendar*, we can see that Allen stood to make considerable money if the books sold well.⁷³ They were thus an investment on his part. However, the series was not an initial profit maker, and Richards noted that “they and their successors had a warm welcome, but my aunt could never understand why it was that, in spite of what would nowadays be called a considerable fan mail, the series did not make our fortunes.”⁷⁴ Richards also commented that though many friends who went abroad saw tourists with the books, not many had sold. However, the accounts of Grant Richards suggest that the series was a good and consistent seller between 1895 and 1901.⁷⁵

Grant Allen’s Historical Guides were thus a commercial enterprise for both Allen and Richards and Allen was able to use his entrepreneur nephew as a source of publication when his usual and trusted outlets were closed off. As Grant Richards noted, though he never tried to make Allen’s books stand out on his lists, Grant Allen’s books were a banker for him and kept the company going. Having Allen’s association with the company, he noted, helped establish its “reputation” even though he initially lost money on the series.⁷⁶ *The Historical Guides* were thus a series which were intended to establish Grant Richards in the publishing market, and they were works which Allen hoped would help him regain his access to that market. It was imperative thus that the works were distinctive and could claim superiority from other such products if this was to be achieved. We can see in these books Allen’s continual stressing of their sense of difference and distinction, and again we can note that he was trying to develop a niche in the market by exploiting or creating a desire for a particular type of book. Allen looked to address a gap in the market which he thought existed, and attempted to fill that gap and make a place for himself in that market

with a series of works that were based around the scientific and evolutionary ideas that he held. Indeed, throughout the books Allen stressed how different and unique they were, and that through them the tourist could gain access to the history and art of the great cities that could not have been derived from other such works.

Allen noted in the introduction to the series that “the object and plan of the Historical Handbooks is somewhat different from that of any other guides at present before public. They do not compete or clash with existing works; they are rather intended to supplement than to supplant them.”⁷⁷ This was because the purpose of the books was very different from the normal guidebook which were all encompassing and comprehensive, detailing travel itineraries and giving day to day information on regions, towns and places of interest. Allen’s books were more specialised, and Allen noted that the purpose of the books was not to “direct the stranger through the streets and squares of an unknown town towards the building or sights which he may desire to visit; still less is it my design to give practical information about hotels, cab fares, omnibuses, tramways and other every-day material conveniences.”⁷⁸ Allen had higher ambitions than this, and he told his readers that “these guides do not profess to supply practical information.”⁷⁹ For details such as these “the traveller must still have recourse to the trusty pages of Baedekker, his Joanne, or his Murray”, though Allen’s own guides did state the location, opening times and cost of entry to each of the galleries or places of interest.⁸⁰

Allen’s books contained no maps or directions, whereas Baedekker’s were full of coloured maps, and details of train connections and price lists for food and lodgings. Moreover, the books themselves were grounded in different philosophies, with Baedekker utilising Ruskin and *The Stones of Venice* in the Italian volumes, while Allen notably omits any mention at all of Ruskin in his *Venice* volume. Allen’s works were different in purpose and philosophy from other travel guides, and it is worthwhile contrasting Allen’s books with those of Baedekker, to see how they differ, and by doing so suggest how Allen’s attempts at market differentiation were combined with ideological concerns. Allen highlighted the principle differences

between his books and Baedekker's, and wrote, "Baedekker's Guides are so printed that each principal portion can be detached entire from the volume. The traveller who uses Baedekker is advised to carry in his pocket one such portion, referring to the place he is then visiting, together with the plan of the town, while carrying this book in his hand."⁸¹ Indeed, Allen's books were physically designed for that purpose. The books were especially portable, and were designed in a way to make them easy to carry round and to refer to on travels and when viewing architecture. The books were printed in a small and compact size, with especially rounded edges that made them easy to place in and out of pockets. The typeface, as with similar books, was small and compact, though with Allen's work, as he put it "keynote words are printed in bold type to catch the eye."⁸² This was in a way an embodiment of the portability of his own evolutionism and organicism, that it could be taken anywhere and easily be applied to whatever objects or artefacts were being observed. The key difference in Allen's work though was in the nature of the experience they opened up for the traveller and the tourist, and this was that they outlined an evolutionary history to the reader.

When considering the detail and framework of *Grant Allen's Historical Guides*, there are two dimensions in particular I want to identify, that is what the books say about the history of art, and what they suggest about the practice of tourism. These books were a particular kind of guide that appealed to a niche market and they extolled and articulated a particular version and experience of history which stressed its evolutionary nature. Evolution was explicitly identified in the texts, was implicit in the structure, content and description of the sites Allen advised the tourist to visit and it informed the way Allen told the tourist to interpret and see those places. Evolutionism was the factor that marked these travel books out as different, and it was evolutionism that made the version of tourism Allen suggested, in his opinion, a more rewarding and real experience. The books thus instilled a special way of seeing in the tourist, placing an evolutionary frame around art which granted privileged access to the past, and structured the past in a particular way. Allen thus noted in the

conclusion to the *Florence* book, that he would be “content if my readers find...that it has helped to teach them how to see Florence.”⁸³ *Grant Allen’s Historical Guides* were therefore simultaneously a discussion on the history of art (and the history of the history of art), and a set of instructions to the tourist by which to understand the places they visited.

The history which Allen outlined and drew upon in these works is notable in a number of ways, firstly in terms of the structure of the books and the terminology adopted by Allen in them, secondly in terms of the nature of the conceptual framework he constructed and the way that that manifested itself as a tourist practice, and thirdly in terms of the scope that Allen claimed for and permitted that framework. Allen’s usage of the language of science, the way he made history evolutionary, and the way he absorbed into that version of historical evolution all of human culture, including art and religion, constructed a version of history and structured the past in a way that emphasised continuity yet identified change.

To an extent the descriptions of the art and architecture in the guidebooks is non-directional and they are not necessarily specific to an evolutionary project. The descriptions might have come from any guidebook, not just one that pertained to evolutionary history. For example, entries for certain pieces seem merely descriptive, as in room 6 of the Uffizi where there is a “a Florentine altar-piece, where the Madonna and Child are flanked by the patron of the city (St. John the Baptist), and the local bishop, San Zobi, identifiable by the Florentine lily on his morse or buckle.”⁸⁴ Similarly, in relation to Botticelli’s *Primavera* in the Belle Arti, Allen writes without a suggestion of evolution that “it is probably one of four panels representing the seasons. In the centre stands the figure of Spring, who is therefore significantly painted as pregnant.”⁸⁵ However, both these subjects were located within an evolutionary series and Allen told his readers how to construct that series. Evolution was thus present in the themes he identified as of important concern, in the pattern and order of works he drew their attention to, and in the cross-references he made to the various pieces. The entries themselves, when related to each other, and

the directions given in the text, created an evolutionary pattern. With respect to the example in the Madonna and the Child in the Uffizi, for example, this description comes within a section that relates to a great number of examples of the Madonna and Allen cross references between them. The meaning of evolution becomes conveyed in the pattern of the works identified and the routes tourists were recommended to follow.

The evolutionary aspect was therefore reinforced in ways other than through language. It framed the methodology in the book, it was reflected in the order in which objects were described and mentioned, in the selection of which objects were described and in what pattern they are identified and cross-referenced, as well as being implicit in the directions by which Allen told the reader to proceed. These aspects cumulatively suggested gradual progress and complexity, and so even if Allen was not continually referring to the works in scientific terms, the form of the books framed the descriptions as evolutionary ones.

At times, however, the terminology employed by Allen drew upon geological and biological language to describe and illuminate the methodology he developed and the view he held on the history of art. Allen envisaged art being evolutionary and its development was an extension of the process and laws that had governed the evolution of man. Moreover, the scientific language was utilised at key points which framed and directed the attention of the reader, such as in the opening sections of the book, in the early sections of chapters and when mentioning key paintings or themes in paintings. This language reinforced the principles expressed in the opening sections of the book, and which were implicit in the structure and order which the presentation of the objects took. Allen appealed to established terms within evolutionary science and transferred to art and architecture that same terminology, and in turn, transferred some of the credibility that that phraseology suggested. Thus Allen talks about the strata of buildings, the organic structure of the art and architecture and the process of evolution they have gone through to produce the particular types and aggregations.

This structure and language expressed the underlying conceptual framework that informed the ideology and purpose of the books. The books were an extension of the articles Allen had written on Italian Art, and indeed he mentioned the articles in these books, using the information contained in them as source material for these guides. The ideology and framework of that evolutionary analysis of art was therefore imported into the practical matter of visiting and viewing art, of being a tourist. In the introductory section of each of the books in the series, which set the agenda for the rest of the text and framed how what is written after is interpreted, Allen described and established the scheme that he would apply to his analysis of the particular town or city and the artistic products it had developed. In the *Historical Guides*, Allen sought to give an overall evolutionary history of the town, and in accordance with that the plan of each book was along these lines; Allen would focus on a “Great Town”, then consider why that town came to be at a particular location and “what induced the aggregation of human beings rather there than elsewhere”.⁸⁶ He would then consider why that town became of economic and social importance and “what were the stages by which it assumed its present shape”.⁸⁷ After setting this environmental context, Allen turned his attention to “that higher form of handicraft which we know as Art” and the particular specialities and peculiarities of that town. After this Allen stated that he would “take in detail the various strata of its growth or development, examining the buildings and works of art which they contain in historical order”.⁸⁸

Moreover, this was not just an arbitrary historical analysis. As far as possible, Allen said that when looking at towns, buildings and paintings, he would be “tracing the causes that led to their evolution” and “in particular, we shall lay stress upon the origin and meaning of each structure as an organic whole.”⁸⁹ Allen was therefore adopting the methodology and ideas developed in his work on art and transferring this across to the way towns, galleries and objects should be interpreted and understood. In the way that Allen had extended the gaze of the man of science in a theoretical way to the analysis of art, he was also extending that gaze into the very locations where art

was viewed and appreciated. Allen turned his ideas about the evolution of art and architecture and made them into the itinerary contained in the books themselves. The tour had an evolutionary pattern of development, and the descriptions of the subject for the purpose of tourism were informed by an evolutionary framework. Allen constructed places not as romantic destinations, but recommended tourists consider “each town...mainly as a museum of its own history.”⁹⁰ The world thus became naturalised, and all the principles by which nature could be understood and conceived could be applied to the entire town. Allen thus transferred the scientific way of seeing into the practice of tourism. This was further evident in the instructions Allen gave the reader on how to use the book, in the structure of the book itself, in the way Allen tells the reader how to experience and visit a building or a location, and in the way Allen told the tourist how to look at and understand the art they encountered on their visits.

At the beginning of each of the volumes of the *Historical Guides* Allen included a section which gave instructions to the readers about how to use the book and indeed about how to be a particular kind of tourist. In the “how to use these guidebooks” section, Allen told his readers that they should first of all read the book “at home” before taking the book on tour, to use the brief portion relevant when on the spot, and then to use the book as a reference book afterwards. Moreover, Allen told the readers that “by following strictly the order in which objects are noticed in this book, you will gain a conception of the historical evolution of the town which you cannot obtain if you go about looking at churches and palaces haphazard.”⁹¹ The tourist ought not to look at objects in isolation, as in Allen’s view “the way to comprehend early art is by comparison.”⁹² This order and pattern created an itinerary that was structured in such a way as to highlight the evolutionary development of the town, and Allen wrote that “the order is arranged, not quite chronologically, but on a definite plan, which greatly facilitates comprehension of the subject.”⁹³ This was a programme encouraged elsewhere in the books and Allen thus stated in the *Florence* guide that, “if you visit the various objects in the order here enumerated, you will get a better idea of the

development of Florence and Florentine art than you possibly could by haphazard sight-seeing.” Moreover, Allen added that “you will find that the earlier steps explain the later.”⁹⁴ Indeed in the *Paris* volume Allen wrote that he “strongly recommended the reader visit the various objects of interest in the exact order prescribed” otherwise all the points made about evolution would be missed.⁹⁵ This even entailed visiting certain sites in a specific order. For example, in *Florence* Allen told the tourist to visit the Santa Maria Novella after having visited the Santa Croce, and that he had placed it “later in the order of the tour, because it contained works of art of later date.”⁹⁶ Allen structured tourist actions by giving information that would permit tourists access to a particular version of the world and by suggesting that they follow a set of instructions derived from a special view of that world.

This entailed the tourist approaching his or her tourism in a particular way with the expectation of deriving a certain kind of understanding about art from that experience. This applied whether the subject was a town, a building, or a painting. When Allen accounted for the origin and development of Florence, he noted that the town stands on the Arno and that this was the making of the city and that the area was populated in prehistoric times by the intellectually and artistically gifted Etruscans, whose “blood still runs in the veins of the people of Tuscany.”⁹⁷ The town grew up around the defences that guarded the crossing of the Arno, and the town became the capital of Tuscany, the people of whom had “inherited” the traits of the Etruscans.⁹⁸ In Allen’s view the richness of the land made the area “naturally predestined” to be a great town. Up to the Thirteenth century it was a small town, which through commerce, the influence of the Medici and through the religious zeal of the monasteries and churches, increased its wealth. This led to the construction of grand churches such as the Santa Croce and the Santa Maria Novella. Allen thus here mixes together a variety of factors to explain the origin and development of the town, environmental factors, hereditary and racial influences and social and political changes. The environment evolved and this created a context from which art of a specific kind could flourish and evolve. That environment also shaped the nature,

structure and meaning of the art. Heredity and environmental influences combined to shape the nature and style of the art of the area.

This comparative evolutionary approach was also refracted into how tourists were advised to approach and experience particular buildings and the art within them. Allen told the tourist how to walk around the building and how to compare the pieces within them, and thus the experience of the tour became one of tracing the evolutionary development of the buildings and the paintings within them. Such an approach was employed by Allen in all of the travel guides, and we can see this methodology in the treatment of the art of the Santa Croce and the Uffizi in Florence. At the Santa Croce, Allen began his analysis with a consideration of the buildings and how the site of the Cathedral had evolved over time, stating which parts of the site should be visited first and the others in a certain order so that it was possible to see the progression from the “primitive design” of the old buildings before taking the reader on a tour of the frescoes by painters such as Giotto and Gaddi and the many subjects which the frescoes covered. Indeed, Allen recommended that visitors spent some “hours” comparing the frescoes in the various chapels to trace the evolution of the themes.⁹⁹

Within the Santa Croce Allen also identified certain types of painting and encouraged their comparison, noting their evolution over time. These included the versions of the Spozalizio mentioned earlier, and Allen noted for the reader the conventions of the subject, cross referencing the versions here by Giovanni da Milano with those of Giotto and Alinari. When identifying the frescoes in the building Allen not only gave a description of the pictures, he told the reader that “I strongly advise the very long and close study of these frescoes...for comparison both with those originals and with the later imitations...They cast a flood of light upon the history and evolution of art.”¹⁰⁰ Allen thus turned his evolutionary ideas into a framework for visiting and understanding the places the tourist would encounter.

The Uffizi section of the Florence book also illustrates this well, as at the time of his writing the galleries were being reorganised and Allen had to refer to the paintings

room by room rather than by school. However, he superimposed on this disorganisation his own scheme, and told the reader and the tourist how to approach the paintings on the second floor so that “in this long corridor you have just been able to trace the gradual development of Tuscan art...from the earliest date known to the high Renaissance.”¹⁰¹ He thus contrasts the crucifixes in rooms 3, 5 and 6 which contain “all the salient elements which you will find, improved and transformed, in later versions” contained in rooms 12, 13, and 27.¹⁰² When considering the Crucifix in room 5 he stated that the reader must look at the different versions of this painting throughout the Gallery, (and gives the numbers of them) because they were variously precursors and descendants of each other. Thus the Crucifix in room 5 “by Guido de Sienna, an important early Sienese master, marks decided advance upon 2, and leads the way to the later Sienese manner, which is already present in embryo in this picture.”¹⁰³ The Annunciation in room 23 is described in great detail with all the elements listed, and indeed this itinerary reads like one of the sections from the *Evolution of Art* book. Moreover, when Allen comes to the other versions of this subject in the Uffizi, in rooms 22, 28 and 53, he writes of the treatment by Agnolo Gaddi that it is “an usually good specimen” and urges the reader to compare this to other paintings. Similarly the 10th Century Madonna in room 1, which was a “representative of the starting point of Italian art”¹⁰⁴ is contrasted with the later ones in rooms 9, 11, 46, 48, 51, and 54, which among them contain later variations and developments. Allen thus tells the reader to not just look at the Renaissance paintings but to look at the earlier ones too, as “without them you can never intelligently understand the later ones.”¹⁰⁵ Allen may not have always been able to treat art thematically as his method demanded, but he continually cross referenced the paintings he noted, so that they slotted into and maintained the evolutionary pattern he envisaged.

We can note these points in Allen’s guide to the Louvre in the *Paris* volume of the guides and see how Allen would treat a subject thematically and set out the method he proposed for the reader to follow, again structuring their tourist practices, their

experiences of the gallery, and their understanding of art itself. For example, Allen encouraged the tourist to spend one whole day in the Louvre to solely study the specimens of the Madonna in there. Before beginning this study he wanted the reader to understand the principles of the subject and he began his analysis by outlining the types and varieties of Madonna that could be identified. Within each of these he set out the grouping and composition of them, and the variation that occurred in each of them. From this he compared the nationalities and schools of art that produced these various types and “sub-types” of painting.¹⁰⁶ These mainly consisted of the “simplest type of Madonna” which was the Madonna alone with the infant, sometimes varied as the Enthroned Madonna. This led to a second group, the Madonna with the Angels where the grouping “deviates more and more from the early strict architectural symmetry.”¹⁰⁷ A variant on this type was the Madonna with Child and St. John. One final type noted was the Madonna with the Saints. Each of these types was modified by other variations where for example the Madonna might be kneeling. What Allen was concerned with most in these types was the analysis of the changes in “grouping” and “composition”, and in particular the relationship of the figures and the depiction of each of them.¹⁰⁸

After setting out these types and the remarks about how they varied from each other, Allen for the purposes of “testing these remarks” set out a tour of all the Madonna’s in the gallery, room by room and version by version, telling the reader the order of the rooms to visit, what to notice in each of them, and the comparisons to make between the paintings. Thus the analysis of the Madonna’s, and the tour to view them, began in room VII where Allen notes the Madonna’s by Cimabue, Giotto, Neri de Bicci and Botticelli among others, and which also contains versions of the various types and sub-types of Madonna such as the Madonna with Child, the Madonna and the Angels and the Enthroned Madonna. Next he moves the reader to the Long Gallery to see the versions by Cima, Perugino, La Spagna and Lorenzo di Credi, which show additions such as landscape and changes in arrangement of the same themes. In Room X, Allen draws attention to Madonna’s from other countries, and contrasts these to the regional

variations in Italy. Thus Allen guides the tourist from room to room, and from painting to painting, via a route and a pattern that firstly emphasises the themes of the various Madonna's so that the paintings come first, and which also embodied the gradual evolution of those themes over time, and especially noticing the "evolution of the grouping."¹⁰⁹

Allen concluded this analysis of the Madonna's in the Louvre by reiterating his method and principles, telling the reader that to understand art they needed to be "continually comparing", regarding each work as a representation of "such and such" a subject "falling into its proper place in the evolution of its series".¹¹⁰ He then told them to note each example as belonging to a school and a Nationality, and as a representative of "an age in the historical evolution of the art of painting", before finally noting the painting as a style of a particular painter. Allen thus set out an analysis of the types of a subject, the pattern of a tour in the gallery to grasp the evolution of that type, and then the categories by which the tourist ought to comprehend the paintings. Moreover, Allen told the reader that this method could be applied to any theme they chose, such as the Adoration of the Magi or the Nativity, and that the subject could be traced through examples in the gallery. Thus Allen told the tourist that he could not recommend enough that they should "go from one picture of a subject to another of the same in this collection, observing the chronology of the works, and the evidences which they show of progress in art-evolution."¹¹¹ Allen's own method of comparison and looking at similarities was encouraged in the way he told the tourist to walk around the gallery and what to look for in the paintings, and Allen encouraged the tourist to take his method and used it for themselves, finding their own evolutionary series in the galleries.

When we turn to the scope that Allen permitted evolution we can see that it was all encompassing, not just in the sense that it is wide-ranging, but in that all aspects of any part of human culture were stripped of all but their evolutionary meaning, so that religion and art were reduced to aspects of evolutionary history, superseded by the plan Allen imposed upon them. Not only could evolution explain the development of

human history, it was all that was needed to explain the development of human history. Evolution could explain the origin and development towns, the situation of them, the rise and fall of dynasties, economic change, regional and national development, the plan of the town, the design and structure of the architecture, and the meaning and function of the artefacts in the town. Evolution could encompass economics, politics, and society, but it was as an interpretation of art and religion, and of them solely as illustrations of the process of evolution that the power and range of this framework was most crucial. Allen envisaged evolution as a universal scheme that could be applied to the town, the buildings within it, the art in each of those, and the structure and themes of those paintings.

The *Historical Guides* demonstrate how a scientific naturalist framework could be expressed within a commercial context, and how Allen took his theoretical analysis of art and made it into a set of practical instructions so that evolutionary science could be made the selling point of a series of guidebooks. He extended the scope of the evolutionary framework, both in terms of the subjects it could be applied to and the locations where it could be mobilised. Ideology could be commodified and consumed, and indeed this was an ideal way to transmit that message to a wider public and to address subjects which it might be suggested were outside the remit of science. As Allen wrote in the conclusion of the *Paris* volume, he would be satisfied if the works aroused “curiosity and intelligent inspection of works of art or antiquity, in place of mere listless and casual perambulation.”¹¹² The evolutionary framework encompassed both the understanding of art and its production, and the practice of viewing and visiting the sites where that art was situated.

Conclusion

The Evolution of Italian Art and *Grant Allen's Historical Guides* combined were an attempt to create an evolutionary theory and history of art that extended to the practice of the appreciation of paintings and architecture. Grant Allen perceived significant differences and distinctions between art and science, and he resolved these

by defining art as a part of nature and by extending the principles of evolution to the study of art. This naturalisation of the world imploded nature and culture, art and science, the high and the low, and Allen's version of evolution broke down established barriers and encouraged the interpretation of art through what he envisaged to be a common-sense view of the world that was accessible to all. In doing so, Allen questioned what was the authentic experience of art and its history and suggested a frame within which paintings were appreciated and observed that made them specimens within an evolutionary process.

This involved the extension of the scope and use of the scientific gaze and the evolutionist's principles so that evolution and science could be mobilised not just in relation to the theoretical aspects of physiological appreciation, but to the structure of the paintings themselves, and how they should be interpreted. Allen therefore approached "art with the eye of the evolutionist [rather] than with the eye of an artist or a technical critic." In Allen's opinion this made his view superior, and he noted in the *Venice* guidebook, that taking this point of view was not just another way of looking at art, it was crucial as "a strictly chronological comprehension of the various stages of growth is essential to a right judgement."¹¹³ A scientific analysis of art was a superior understanding of art. The portability of Allen's evolutionism allowed him to extend the principles to the understanding and experience of art.

The analysis of the history of art became for Allen the analysis of those paintings as organisms or types which had evolved over time by a process of differentiation and variation. It was thus the theme of the painting that was of utmost importance, not the painter, and great knowledge of an artist's biography or the detail of paintings was not needed to appreciate them, nor was a training in art history, because they could be understood as points within an evolutionary series and products of natural law. Moreover, the places the tourist visited could be understood through a frame and gaze that was structured by the principles of organic evolution. As Lenoir and Ross have noted, "authenticity in touristic experience is not simply there for the taking", and Allen attempted to naturalise the visit to the Gallery and the act of tourism in a way

The Evolution of Art and Architecture

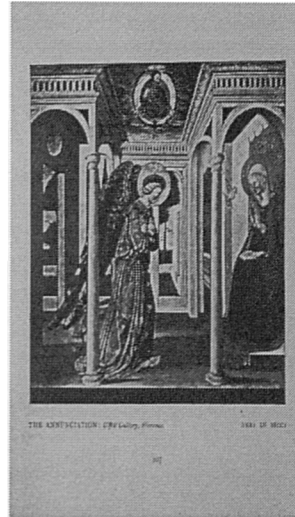
that could create what he considered to be the most authentic experience of those places, that is he constructed a *natural history of art that made the world a museum*. Allen wanted the National Gallery and the Grand Tour to become transformed from romantic and exclusive experiences, into ones which were democratic and scientific, shifting from an elitist experience, to a collective one, and from an emotional to a rational connection with art.¹¹⁴ Evolution, therefore reached out not just to the theory of art, but to the products of art, and indeed into the places where art was exhibited and viewed.¹¹⁵

'The Annunciation'

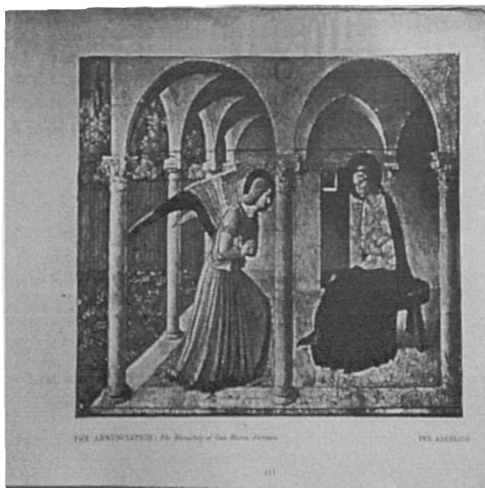
Grant Allen included these paintings as illustrations of the process of evolution in Italian art. The series followed Giotto, Neri De Bicci, Fra Angelico, Fra Filippo Lippi Boticelli, Carlo Crivelli, Lorenzo de Credi, Fra Bartholomeo and Paolo Veronese.¹¹⁵



Giotto



Neri De Bicci



Fra Angelico

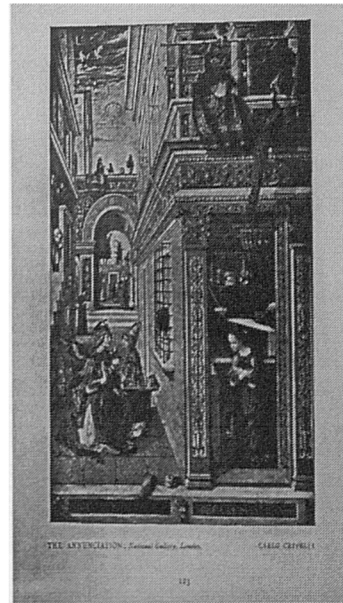


Fra Filippo Lippi

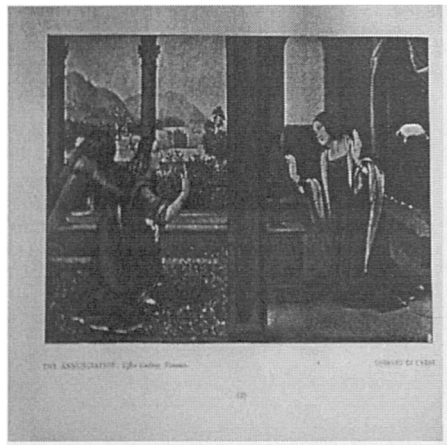
The Evolution of Art and Architecture



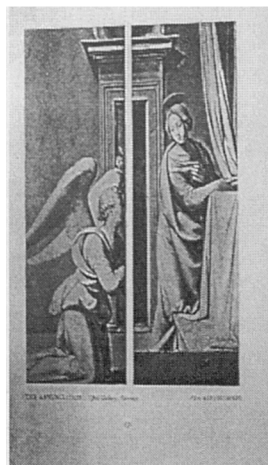
Botticelli



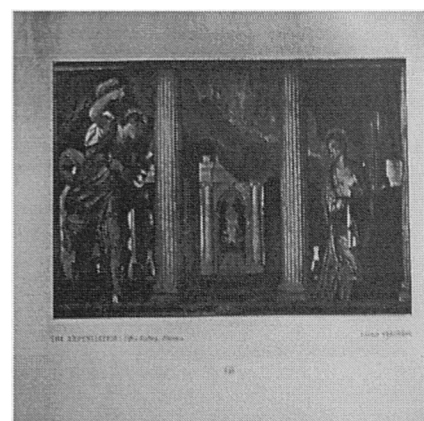
Carlo Crivelli



Lorenzo De Credi



Fra Bartholomeo



Paolo Veronese

Chapter 6

The Evolution of the Idea of God: The Science of Religion in Victorian Scientific Naturalism

Introduction

The memorial address at Grant Allen's funeral service was written and delivered by one of the leading figures of English Positivism, Frederic Harrison, whom had become a friend of Grant Allen's during the final months of his life. The address contained within it an unequivocal exposition of what has become described in respect to Victorian science and religion as 'the warfare metaphor'. Throughout the eulogy Harrison pursued two themes, that this was not a religious ceremony and that Allen, among others, had devoted his life to fighting against religion. As Harrison put it,

"We meet, I say to utter the last words of Farewell to one we have known, to one of whom the world has heard - not to take part in a religious ceremony. It would be to outrage the life and last wishes of Grant Allen that any theological hopes and invocations should be uttered over his helpless body now resting in the solemn silence of death."¹

This was to be a theology-free service, even free from Harrison's own Positivism because Allen himself had "lived free of all bonds."² Moreover, this rejection of religion was expressed by Harrison in militaristic terms and he appealed to a long term attrition embodied in Allen himself and those he had associated with. Despite a Rev. G. B. Stallworthy being among the mourners, Harrison declared the congregation

"plain laymen, taking final leave of a lay thinker whom we have known in life, and not pretending more than soldiers do, when on the battlefield they lay a dead comrade in the ground whereon he has fought and bled."³

Such appeals to war, battles and soldiers is striking in this context as this was not a propaganda piece comparable to a Huxley review, a Tyndall lecture, or a polemical book like Draper's *History of the Conflict Between Religion and Science*. This was a

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private service to a select audience consisting of a few friends and family, including Allen's wife, his son, his father in law and the poet Richard Le Galliene, though the service was reported in the *Times* and privately circulated in booklet form, and so we might think it was heroic for the sake of generating a positive image of Allen.⁴ The theme of death in battle was echoed in the description of Allen himself. Harrison noted that "his life was a continuous battle against the creeds and the conventions of the world around him...he has died, like a soldier at his post under arms."⁵ This cannot be dismissed as just propaganda. Identity and experience was invested in this image and it suggests that the idea of conflict persisted beyond the rhetorical and polemical essays of the scientific naturalist elite.

Harrison was not impressed by Allen's work, possibly due to Allen's connections with Spencer, but he was aware of the diverse work Allen produced. Harrison recounted these as works of "Science, biology, physics, botany, mineralogy, metaphysics, history, palaeontology, archaeology, theology, philosophy, sociology, ethics, art, criticism, fiction." However, from these Harrison highlighted one work which he considered Allen's "most important achievement...his great work on the Evolution of the Idea of God."⁶ It is this apparent antagonism between science and religion, Allen's contribution to it through this book and current historical debate on the issue that forms the subject of this chapter.

In some ways Harrison's portrayal of Allen engaging in battle was inaccurate. Certainly Allen was a "soul in revolt" and could enter into vitriolic attacks on religious authority. As was noted in the first chapter, Allen wrote to an anonymous cleric critic who had written to him about *The Woman Who Did* and gave direct attack upon that cleric's his beliefs by attacking the historical justifiability of Christianity. In his letter, Allen wrote

"I quite feel that I cannot myself associate with certain persons whose principles and actions seem to me debasing and degrading, and that I do some violence to my sympathies by even associating with those who appear to me to be enemies of human progress and moral order."⁷

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It would be difficult to consider the author of the above as someone other than an opponent of Christianity. The letter was loaded with aggression, made no apology for its tone or content and appealed to an agenda and language of conflict. Allen was willing to attack Christianity and be confrontational even to the extent of proclaiming it “evil”.⁸ In private correspondence at least Allen would attack religion. But Allen’s position and tactics were usually more sophisticated than this even if his fundamental hostility persisted. Allen rarely became involved in propagandist associations, for example, and when asked to contribute to Charles Watts’ *Agnostic Annual*, around 1884, Allen refused because of its campaigning style. “None but Agnostics read Agnostic reviews,” he wrote to Watts, “and it is no use trying to convert the already converted. Slow half-hints in the acknowledged organs of thought do far more good in the end. I have never believed in fighting; I believe in permeation.”⁹ Similarly, in the opening chapters of the *Evolution of the Idea of God* Allen stated that he thought the book conciliatory in some way and said “My method is therefore constructive, not destructive.”¹⁰ So, publicly at least Grant Allen was not willing to be aggressive and looked to subtle ways of persuading the public of his secular agenda. We must be careful then not to mistake public presentations of conciliation as absolute statements of a position. There was a complexity to the conflict and a complexity to Allen’s own aggression. Allen firmly held a strong materialistic and secular ideology, yet chose a subtle and accommodating strategy to persuade the public of its merits.

This sophistication of conflict is the theme of this chapter. A reconciliation between science and religion could be coherent but could generate conflict. The form and content of the argument within the *Evolution of the Idea of God*, no matter how carefully measured, was based upon a morality, epistemology and metaphysics which derided faith, challenged the existence of God, questioned the sanctity of Christ and the authenticity of the Bible. An examination of the production, content and reception of this project suggests that positions of assimilation were embedded in a context of conflict and that assimilation itself could be a source of such conflict.

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It is potentially problematic to focus discussion on one text, but there are good reasons for devoting a chapter to this particular work. This was one of the dominant works of Grant Allen's project and took 20 years to write. The book also sold many copies in numerous editions and was a popular text. The book was copious and extensive and was one of the books Allen was most satisfied with. The *Evolution of the Idea of God* was the culmination of much of his life work and interests and was one of his most popular and lasting works. Moreover, if we are generally examining cultural authority and conflict in Victorian society from 1870, the issue of science and religion is one which is continually articulated in debates, and so needs to be given consideration. There is also a historical issue at stake here in respect of the relationship of science and religion. This debate can be addressed through a consideration of *The Evolution of the Idea of God*. It was not a book written by one of the "loudest voices" as James Moore styles Huxley and others and thus offers a different perspective on the issues.¹¹ To an extent the book also encapsulates the period 1870 to 1900 as it was written over that period and responded to developments during that time. An analysis of this book therefore allows a consideration of a cluster of themes through a particular text.

The overriding theme of this chapter is that there was conflict between science and religion and that assimilation did not necessarily mean consensus. Where science and religion can be seen to be in accordance, this in itself could lead to discord. This chapter begins with a consideration of the merits of the warfare metaphor, then examines of the publication of Allen's book and then turns to the book itself and the reaction of reviewers.

Complicating the Warfare Metaphor

Recent historical writings concerning science and religion have questioned the notion of conflict and have identified and emphasised the complex ways in which science and religion have interacted.¹² However, attempts to escape simplistic

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conceptualisations of science, religion, conflict and consensus by pursuing a rich and nuanced history have tended to diffuse conflict and relationships of assimilation and continuity have been highlighted. This chapter injects competition and conflict back into the relations of science and religion by suggesting that assimilation was not necessarily conciliatory and that conflict was complex. Before considering this in respect to *The Evolution of the Idea of God* I wish to give some attention to one of the most sophisticated and successful rebuttals of the conflict thesis, that of James Moore in his book *The Post-Darwinian Controversies*, a study which is pertinent here as it addresses the period 1870 to 1900.

Moore argues that there is a need to be critical of the warfare metaphor and instead examine the Victorian “crisis of faith” for which ‘warfare’ was a symbolic response. This crisis of faith produced a variety of responses to Darwin, which Moore characterises as Darwinism, neo-Darwinism, Christian Anti-Darwinism, Christian Darwinisticism, Christian Darwinism, and Darwinism and Darwinisticism in theology. He suggests moving away from thinking about these responses in the violent terms of conflict and war, to thinking about them as a crisis of faith located in individuals. He thus encourages the examination of the continuities in the works of those who were working through their uncertainty. Moore notes especially the assimilation of science and religion which represented to many the most likely source of a resolution of the “cognitive dissonance” they were experiencing. Moreover, Moore suggests that historians should be critical of the warfare metaphor as it was a tool of propaganda used by both theologians and men of science. When the rich detail of historical works are considered, conflict dissipates and is replaced by a crisis of faith resolved by an assimilation of some kind of science and religion.¹³

Moore’s book is a comprehensive work which rightly emphasises the historical complexity of the relations between science and religion, however the methodology employed tends not to identify conflict. Moore applies a simplified version of the warfare metaphor to history, only to find that the metaphor is inappropriate. Moore

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identifies three elements within the warfare metaphor, organisation, antagonism and polarisation, then searches for a war along these lines between Victorian science and religion, but does not find it. From this he concludes that conflict did not exist and instead suggests that there were a complex of relations. Where there was polarisation this was “based on questions of freedom and authority which had long divided people....”¹⁴ The problem here is that conflict is itself complex and complicated, a complexity not captured by the assumption that war is polarised, organised, and antagonistic. Wars are complex affairs. They involve pacts, alliances and allegiances, espionage and covert operations. Often they involve more than two parties fighting on more than two fronts, with many issues and territories at stake. Opponents change sides, enemies are not fixed and parties sign accords and treaties. The warfare metaphor of Draper and White even admits conciliation. Draper’s book is saturated with aggression and the conclusion is very hostile. However, the preface suggests a limited range to this hostility and the vitriol is qualified. The concluding sections of White’s book also have a conciliatory tone. After outlining a history of conflict White perceives a present and future in which science can be active in the “recrystallization” of religious truth.¹⁵

Moore argues for plurality not polarity, uncertainty not solidarity, conciliation not hostility. But if the insistence is that we take a rich and nuanced approach to science and religion, then we should also look for the rich nuances to conflict. The conflict which existed was more complicated than the test Moore applied to it, but that does not mean there was no conflict, it is just that the conflict was complex. Moreover, Moore’s study focuses on the psychological process of crisis management which frames analysis in such a way that conflict tends to be dissipated. Central to Moore’s critique is the assertion that warfare is an expression of a widespread “crisis of faith”. The problem here lies not in the validity or explanatory power of a particular psychology, it is the focussing on psychological processes *at all* that is the trouble. This emphasis does not capture the social manifestation of conflict and struggle for

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cultural supremacy and authority. The conflict is a social one, and thus needs a sociological explanation.

This attention to psychology leads Moore to a close textual analysis of works and each book is taken as an example of the reaction to the process of crisis of faith, or as he puts it “each book had an author or authors; each author expressed in writing a discernible response to Darwin; and each response *ex hypothesi* was the product of at least a minimal crisis of faith.”¹⁷ But these texts are commodities which are connected to the market and an audience and there is a finesse to the texts in question which needs to be addressed. We need to think of the text as an active social artefact, which has meaning, purpose and an audience, and not just consider a book as the epiphenomena of a psychological process.

The cumulative effect of this framework is that assimilation is over emphasised and is never problematised. We need to take a rich and nuanced stance in respect to the interactions of science and religion, and one of those interactions was one of conflict. It follows that we should examine that relationship in a rich and nuanced way.

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Before Grant Allen’s *Evolution of the Idea of God* was published the project had been subject to a variety of processes which had shaped the content and framework of the book. The process of publication and the potential reception and marketing of the book had directed its agenda and style. Editors, publishers, agents and reviewers responded to a public agenda and debate about science and religion, and exerted via their choices, preferences and opinions the presence and dimensions of that debate which configured the inception, execution, and reception of the book. Assimilation was an outcome of the agenda of the publishing market and was a response to that agenda. However, despite the position Allen took up to accommodate that market, publishers were wary of the particular conciliation that he advocated and it was rejected by them. In attempting to articulate his opinions in a way that would least

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offend the publishers and the public, Allen only served to further alienate himself and accentuate the negative aspects of his position. We can see this conflict in Allen's consideration of the title of the book, his attempt to place the book with publishers and in the debate concerning animism which the book addressed.

The project and the alterations made to it were a response to public sensibilities about religion and especially Christianity. Herbert Spencer, whom Allen had contacted for advice and information on the writing and publication of the book, made a number of comments concerning the title which reveal an underlying tension and sensitivity to theological issues which suggest that conflict existed in respect to how publishers, the public and other writers would respond to the work. The title of the book, *The Evolution of the Idea of God* which Allen considered reconstitutive, addressed and generated a nexus of tensions. Two antagonisms are immediately apparent, and were suffuse throughout the book. Allen was treating God as only an 'Idea', a psychological construct having come into being to have some utility function. God did not exist and was merely a psychological phenomenon. God was a product of nature not its creator. Moreover, Allen was to trace the historical evolution of that idea and of faith. This reduced God to history and to contestable facts. Neither of these proposals were necessarily objectionable to Christians, but the combination of these claims was incendiary. So, Allen's methods and conclusions were radical, and the title pointed towards them. Publishers could have played on the contentiousness of the issues to generate sales, but the issue was sensitive and would have consequences for the reputation of publishing houses as well as individuals.

Spencer was particularly attentive to the preliminary title of the book, *The Evolution of God*, and his comments are revealing. "Let me beg you", Spencer wrote to Allen, "not to use the proposed title for your new book, 'The Evolution of God.' It will be a fatal step."¹⁸ Spencer argued that Allen's reputation was tarnished somewhat after the publication of *The Woman Who Did*. Demand for Allen's stories and articles was diminishing, and the follow up Hill-Top novel *The British Barbarians* had not sold

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well. Spencer was concerned that another scandalous book would damage Allen's repute and marketability. As he put it to Allen, "fathers and mothers, in a family where the girls get their books from the circulating library, would say when they saw a new novel of yours lying on the table, "What, another book by Grant Allen. Send it back"...And the local librarian would act upon the result, if, indeed, he did not anticipate it; and naturally, also editors would look askance at your proposals."¹⁹ Cultural intermediaries, here librarians and editors, were responsive to public tastes, and authors therefore had to be responsive to those tastes. Through these intermediaries' public taste acted upon works. Spencer was in no doubt that the title Allen suggested for the proposed series of books would be contentious and that the reaction would be negative and the consequences worse than after *The Woman Who Did*; "if you adopt the title 'The Evolution of God', you will produce a kindred effect, ever more disastrous...and you would tend by using it still further to diminish your public."²⁰ Such a perception of the public indicates that these issues were sensitive and that the radical opinions Allen advanced were unlikely to be received warmly. This reflected the underlying conflict or contention in the matter of science and Christianity.

Indeed, this was how the final version of the book was taken, even after a less provocative title was adopted. William T. Stead, a key figure in the Vigilance Society and a long term critic of secularists who had encouraged prosecution of those deemed to write blasphemous or obscene books, immediately highlighted the reputation of the author when considering the book.²¹ Stead's review in *Review of Reviews* was quick to note when assessing Allen's "character" and "credentials" the nature of the writer and his previous efforts. After describing Allen's arguing against all ethical teachings, Stead added emphasis to his suspicion of the author by stating of Allen's reputation that "On this point I need not dwell beyond reminding the reader that the author of "The Evolution of the Idea of God" is also the writer of "The Woman Who Did"."²² Spencer was not exaggerating the consequences of the

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provocative title and book. Audiences were aware of the issues and reviewers were willing to identify them and take on the contentious issues. Whatever the position advocated in the text, others would report wider meanings and connotations via a public discussion of the book in the periodical press. Even the title could not be conceived without regard to wider considerations, considerations which linked the subject matter, its treatment and theme not to a crisis of faith, but to cultural agencies and the public.

Allen had to take into account various elements that suggests that assimilation was no straightforward process. A provocative title would offend readers and editors, which would lead to a rebuttal of Allen, the book and his future output, as well as taint his respectability and character. This would cause a loss of market, not just for this one book, but many of the others he had written. Underlying this perception, however, was an agenda of hostility regarding religion, God and evolution and to radical positions such as Allen's. Assimilation might be tenable, but it was not amenable, and it was not marketable. This tension was embedded in the structure of the book market. The title of the book, then, was the outcome of negotiation, addressing the tastes of editors and inadvertently the public.

In Spencer's discussion of the book with Allen he revealed an antagonism and hostility in the title not just in terms of marketability but directly in respect to theological issues and their relation to science. Spencer suggested that the title of the book and its content was antagonistic and that what Allen proposed was not and would not be received as conciliatory. He wrote of the phrase 'The Evolution of God' that "the expression is sufficient to shock not only the orthodox, but no end of people who are extremely liberal in their theology...".²³ This was a measure of both the contentiousness of Allen's writing and the mood of those who would read and consider his opinions. Spencer was in a good position to evaluate the reception of the work, and he was sure that that reaction would be hostile and the climate conflictual.

Allen and Spencer were aware that these were contentious issues and sensitive

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matters. Moreover Spencer himself had a more intellectual reason to reject the title. The title was, he said, “illogical”, and added “you rationally trace the evolution of something you believe in as a reality. But you do not believe in God’s reality, and therefore propose to trace the evolution of a thing which according to you, does not exist.”²⁴ What could be more contentious than stating God did not exist, openly in the title of the work written by an author who disputed the reality of God and opposed the morality derived from Christianity? In every utterance of conciliation, Allen outlined the parameters of his distance from those who were Christians and those who wished to permit some deity into nature. A compromise was necessary, and Spencer provided two possibilities, which again suggest that they recognised these were contentious topics likely to be controversial. Spencer initially suggested *Evolution of the Belief in God* which he said was “a startling title” though “still not necessarily a hostile one...it would be quite sufficiently striking without bringing on you such ruinous results” and then added “perhaps the title “Evolution of the “Idea of God” might be worth considering?”²⁵

Evidently Spencer’s title was accepted, though not without some reservation and deliberation. Allen submitted the book to publishers under the original title of *The Evolution of God*, and Grant Richards the eventual publisher of the book was marketing the book under the original title almost until it went to print. Allen also told Benjamin Kidd, who had been an agent for the book, “I attach great importance to the retention of the title.”²⁶ There was a sensational nature to the title that touched upon sensitive issues, and the author, his circle of friends, his publishers were aware of this, and in the face of market pressures and theological hostility, Allen amended the title. Grant Richards noted that the title was changed to “deflect prejudice”.²⁷ Below the surface of this reconstitutive title, lay a nexus of constraints, antagonisms, pressures, and demands that necessitated diplomacy. This tension was refracted through the market place, overtly and covertly addressed by agents.

The publishing of the book also presented problems in terms of finding a publisher

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who would accept the book and place it on the market. To an extent Allen's decision to wait ten years before releasing the book was based upon his apprehension of submitting it to editors. Spencer recounted to Allen the apprehension Allen had had about writing and placing the book and wrote to him "I remember years ago your 'dare not' write because of the disastrous effect which would result supposing you could get a publisher."²⁸ Allen was aware then that the book would be contentious, and was aware that publishers would be unlikely to accept it. Not only did the decision of publishers affect the book, but the perception of their tastes and preferences, shaped the book he chose to write, the timing of the writing, and the final product. These were pressures which became apparent as he attempted to place the book once it had been completed.

Spencer and Allen's concern about the publication of the book was not unfounded, and Allen especially must have been aware of the politicised and sensitive environment of radical publishing. This was not only through his own experiences with *The Woman Who Did*, but also other cases such as the pressure by Stead to have the publishers of Zola's books prosecuted in 1889.²⁹ Allen would also have been aware of other instances of contention in the 1890's, the arrest of George Bedborough and the formation of the Rationalist Press Association. The context the book entered was one of hostility toward anti-Christian positions, and it was not just authors but also publishing houses that were under pressure.

In December 1898 George Bedborough, founder of the Legitimation League, was arrested for selling copies of Havelock Ellis's *The Psychology of Sex*.³⁰ This was the end point of a police investigation into the League and the Watford University Press, publisher of a variety of freethinking journals. Numerous writers and activists joined together to fight Bedborough's cause. The Free Press Defence Committee was established by the editor of the *Adult*, Henry Seymour, to publicise the matter. Its members included a mix of socialists and secularists, among them Allen himself,

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G.B. Shaw, the socialist author Edward Carpenter, G.W. Foote, editor of the *Freethinker*, M.P George Holyoake, leading secularist Herbert Burrows, and socialist H.M. Hyndman.³¹ Shaw wrote to Seymour that Bedborough was selling a “scientific book” and was glad that through the committee a “stand is going to be made for the right to speak and write truthfully and carefully on a subject which every rascal and hypocrite in the country is free to treat falsely.”³² The committee then issued a statement that “the line of battle is deploying itself so to speak towards a great engagement.”³³ Ultimately, Bedborough pleaded guilty at his Old Bailey trial and a number of books were then suppressed by the police. There was, then, an orchestrated effort by the authorities to put pressure upon freethinkers who perceived around them a conflict over free speech and free-thought on matters of morality, religion and sex.

In order to publicise their case and to keep free-thought available freethinkers, secularists and agnostics established their own publishing outlets. One such example of this was that of Watts and Co. Charles Watts and the Watts family had been involved in the establishment of a number of organisations publicising secularist material. These included the Agnostic Press Fund in 1893 and the Propaganda Press Committee in 1890. This then became the Rationalist Press Committee in 1893 and the Rationalist Press Association in 1899.³⁴ These ventures published various journals and books to appeal to popular agnostics and, as Bernard Lightman writes, “By capitalising on the appeal of the new agnosticism and disseminating it through innovative publishing strategies, [Watts] set about transforming dissident secularism into a respectable middle class organisation.”³⁵ This suggests two points. Firstly, secularism was external to mainstream publishing, a situation maintained despite the public desire for such works, and secondly, even milder versions of secularism which opposed Christianity were rejected by the mainstream press. Even agnosticism was perceived as radical because though it was tolerant toward religion it was not so towards Christianity and to Christian authority.

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These examples suggest the contentiousness of freethinking and freeloze in the late 1890's, both causes Allen was closely bound to. As Lightman notes, "The nineteenth century thus closed with a rout of the defenders of free publication and free speech."

³⁶ Allen must have therefore had in his mind the potential contention and consequences of advancing radical ideas. Allen was aware of the difficulties in finding a publisher for the book and to counter this he devoted time to revising the project, toning down the book so that it would not offend publishers and the public. Benjamin Kidd had read the book and agreed to act as an agent for Allen by putting it to his own publishers Macmillan. Allen wrote to Kidd that he did not think the book "would at all offend Macmillan's in the matter of aggressiveness," and he thought that he had "rather taken the view of regarding Christianity throughout as a religious standard."³⁷ This suggests that aggression was at least perceivable and that it was an agenda being addressed when writing the book and preparing it for publication. The publishers declined the book, however, thinking it contentious and as Allen put it to Edward Clodd, "Macmillan's won't have anything to do with a religious book."³⁸ Not only was the style and manner in question, the subject matter was too. Kidd was in no doubt "as to the scientific value of the book" and Spencer thought it an "achievement".³⁹ Yet Macmillan's rejected the book on account of its subject matter. It is apparent that the issue was and remained a contentious one. Allen became desperate and mailed the manuscript to Clodd and asked him to "suggest any publisher likely to take it" but none were forthcoming. Allen lamented to Clodd about the lack of response, "Is it not a funny fate which pursues me, that whenever I do a piece of work I particularly like, I can't get a publisher?"⁴⁰ When Allen expressed his true opinions, the publishing market could not accept them.

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Eventually Allen published the book through his nephew's company, Grant Richards, a house Allen himself had helped to found by investing £750 in the company. The book sold 750 copies in its first three weeks and the company accounts show that it then sold slowly but solidly over the next ten years.⁴¹ In 1913 the book was issued by the RPA cheap reprint series, in which it sold some 80 000 copies.⁴² It thus proved popular, yet, publishing houses had rejected the book. The issue of religion and the origin of Christianity considered in a scientific manner was a sensitive issue, and although Grant Allen was able to claim he had reconciled a version of evolution with a Christian outlook, that particular conciliation appeared to others to be potentially antagonistic.

How, then, are we to think of this in terms of assimilation, that is a combination of evolution and Christianity that is alleged to be threatening to neither, as generating conflict in relation to what the Bishop of London described as “a most dangerous book”.⁴³ The reaction of reviewers will be noted in the next section, but what is of concern here is how this relates to the area of publishing and the literary field. The apparent hostility to the book suggests an underlying tension on the matter and that though Allen was able to put forward a conciliatory position, that position was either not conciliatory enough, was illusionary, or that the conciliation itself was of a variety that publishers would not touch. Moreover, the position of assimilation was in relation to the field of authors and other agents and Allen's realisation that he had to write a conciliatory piece suggests that there was conflict there to be resolved. Assimilation, however, was not the solution to the conflict, it was a product and a persistence of it. Assimilation was either unmarketable or controversial, and publishers either could not sell a conciliatory position or did not wish to be associated with the book Allen produced. This was not related to the quality of the book or the

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bankability of the author. The position Allen adopted was a response to the literary market and what was acceptable to publishers.

Though the book was bound up in a general discussion of science and theology, evolution and Christianity, it was also addressing a very particular debate concerning the origin of religion and was a response to a specific argument between animists and humanists concerning psychology. Though this was apparently an innocuous and academic debate it touched upon other issues which had a very contentious history and had far-reaching and serious consequences. To talk about animism and humanism, was in other words to discuss the existence of spirit and matter and the relative merits of idealism and materialism.

Primitive animism suggested that all natural objects were animated by spirits, and that these were animated by God. This was an idealist and teleological point of view, that there was an essence that could be attributed to a spirit and that the spirit was directed by God. Humanistic explanations suggested that gods were dead men and that ghosts were memories. These were the product of men, not God, and they could be investigated in a materialistic manner. These issues then touched upon more important concerns, about the origin of religion, the role of God, the relationship of the mind to the body, and to wider concerns about philosophy and methodology. Indeed, the scientific naturalists were very concerned to undermine animistic explanations and frequently attacked such positions. The animating principle was rejected by many men of science who proposed an alternative psycho-physical parallelism. The idea of spirit and teleology was unacceptable to the likes of Spencer, Huxley, Tyndall and Allen, who accepted a conception of psychology which linked the physiological with the mental. This created a conflict along religious lines, as one necessitated the spirit and the other excluded it. Allen's conciliation touched upon

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the numerous contentious issues of mind and body, idealism and materialism, the existence of spirit and matter and the rivalry of philosophies. These were debates over cultural authority and religious dogma which had been protracted and intense.

Some of the most contentious attacks made by scientific naturalists were arguments against forms of animism. Tyndall's 1874 BAAS address was, as William McDougall puts it, "an inquest into the death of animism and a funeral oration over its corpse".⁴⁴ Adrian Desmond notes that Tyndall's address permitted evolution to explain "molecules and emotions alike" and that the address was perceived as "mad materialism".⁴⁵ This thus gave a far reaching scope to the methods and theories of science, removing spirit and soul from the automatons of the natural world. Other important works of scientific naturalism also took up this theme. Spencer's *Principles of Psychology*, for example linked evolution and physiological parallelism to the evolution of the higher faculties of man and suggested that the human mind was built up over generations of accumulated experience.⁴⁶ Similarly the continuity between man and animal suggested by evolution and the blindness of natural selection posed difficulties for the conception of man's soul and of injecting teleological factors into the origin of man's faculties. Indeed, the three key elements of the scientific naturalist doctrine, evolution, psycho-physical parallelism and mechanical atomism were each critiques of some form of animism.⁴⁷

In the introduction to *The Evolution of the Idea of God*, Allen claimed that he was trying to reconcile the positions of animism and humanism. This is not how the animist J.G Frazer perceived matters, or how Allen portrayed his own position to his friend and animist Edward Clodd. Frazer wrote to Allen in 1892 after Allen had sent him a copy of his translation of the *Attis*, and said "I have read with interest your instructive essay on the Origin of Tree-worship, but I cannot say I am convinced by

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it. You seem to reject the theory of animism, and to hold that the only spirits in which primitive man believes are the ghosts of ancestors. I, on the contrary, accept the theory of animism as established.” Frazer suggested that spirits in the primitive mind could be of various kinds, of which ancestors were just one, and that Allen was “mistaken” to have “discarded” the animist aspects of spirit worship as they explained the worship of the sun, the moon and other natural elements.⁴⁸ Allen wanted to attribute all spirit worship to the (Spencerian) theory of the ghost-worship. It is also clear from Allen’s letter to Edward Clodd of 1896 that Allen held this position over time, and he told Clodd that they would be “split on the rock of animism” and that when his “big book” on religion was published the “rock of animism is going to be ground to powder...”⁴⁹ If Allen was attempting to reconcile the animism and humanism, it was in such a way that emphasised the place of the ghost-theory in work such as Frazer’s and which transformed animist claims into versions of the ghost-theory of the origin of religion. Indeed, Allen promoted and praised aspects of Frazer’s work, but only the selected parts of the work that related to the relationship of the origin of religion to the deification of dead men. As was noted in chapter 4, Allen’s novel *The Great Taboo* took its plot from some of Frazer’s work, but whereas Frazer might have attributed the conception of a spirit within a tree bough to a general sense of spirits in nature, Allen located the spirit of a dead man in the limb of the tree.

The position taken by Allen is one taken in relation to the leading advocates of those positions, the humanist Spencer and the animist Tylor, and he was attempting “a reconciliation between conflicting schools of humanists and animists.”⁵⁰ There was conflict then within the history of religion over the primacy of intellectual claims and the adequacy of particular explanations, and thus the book was not an autonomous response to a crisis of faith, but addressed an agenda established by others, and

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attempted to find a position which was a unique and original response to those positions. It was a relational position in response to a wider debate which had a resonance with wider arguments concerning the origin of religion.

The animism debate was not just about the correctness of an explanation of the origin of religion, it concerned contending authorities and philosophies. The parameters of the debate were established along lines which were contested and contentious. By attempting a conciliation Allen recognised this conflict, but far from resolving it, he accentuated the problem by first of all finding a position that was potentially unacceptable to both animists and humanists, and by also advancing an explanation which for all its conciliation came down firmly on the side of the ghost-theory and of psycho-physiological parallelism. The reconstruction and conciliation Allen advanced only served to address long running hostile debates which highlighted conflict over philosophical systems and religious belief.

It would be inappropriate to explain Allen's *The Evolution of the Idea of God* in terms of a crisis of faith. Edward Clodd and also Allen's sister insisted he never had such an experience. Moreover, the book was subject to a wide range of modifying influences, influences that were the product of intellectual debate and the perceived conflicts anticipated by a variety of cultural intermediaries including, agents, librarians, publishers and reviewers and other writers. The tension between science and religion had become refracted into the marketplace, and so if not always overtly present, it was covertly being addressed by publishers and agents. The position Allen took was a response to the market and to the literary and scientific field as he looked for a position that was distinct and commodifiable. That position was in his eyes one of conciliation, but that was not perceived by others who saw in the book

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antagonisms. The next section of this chapter will consider how conciliatory that position was and how reviewers perceived and responded to it.

The Psychology, History and Palaeontology of Religion

The central aim of Allen's book was to consider religion as a branch of evolutionary history, anthropology and psychology. It was thus located within a wider framework of the evolution of man and his higher faculties and as an outcome of a process of natural law. For Allen this represented a structure which could reconcile and reconstruct the relations of animism and humanism. However, the theory he proposed was fraught with tensions and the book was laden with potential contradictions, contentions, and antagonisms. This section begins with a brief recapitulation of Allen's theory and then thematically discusses the work focusing on the evolutionary approach to religion, its Anti-Christian sentiments and its critique of theology.

Allen advanced an argument in the book which was an extrapolation of the ghost-theory developed by Spencer in his 1870 essay 'The Origin of Animal-Worship'. This theory argued that gods were the deified memories of dead men.⁵¹ Allen's version of this argument applied this to primitive societies and modern religion. He argued that the initial veneration of dead men arose out of an emotional impulse and desire to control the agricultural aspects of economic life. Thus, early gods were those associated with wine and corn rituals. In this context Religion aided some emotional impulse which was of benefit in the struggle for existence. Allen then linked this to an explanation of the origin of Christianity addressing the particular issue of how man had developed many diverse gods and then reduced that god to one. Religions had evolved from simple veneration of the dead, to complex ceremonies and beliefs centred around the worship of the spirit of a great God. All religions followed this pattern, that a dead man moved from the status of man to God, accumulating a multiplication of deities relating to different aspects of life with rituals and the

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priesthood equally becoming complicated and then refined.

The application of an evolutionary frame to Christianity was not necessarily antagonistic though responses to such accommodations could be so. Henry Drummond had encountered the criticism of both men of science and theologians in response to his combination of Christianity and Spencerian evolution. The physiologist Edward Carpenter, a critic of Allen, had also seen in evolution evidence of a deity directing organic evolution.⁵² Evolution therefore did not exclude God or religion and evidence of a deity could be discerned at the beginning, during, and at the end of the evolutionary process. Grant Allen was aware of these possibilities and placed a disclaimer along these lines in the introduction of the book. The Christian could approach evolution as the gradual revelation to man of his God, a creative God who might choose to reveal himself through “the same slow and tentative intellectual groupings as those by which he revealed to them the physical truths of nature.”⁵³ This was how William Stead chose to appropriate the idea, and advocated the book as an example of Christian Evidence.⁵⁴

This is not to say Allen approved of or pursued such an interpretation. The opposite was the case and there was something about Allen, the version of evolution he espoused and the meaning he attached to it that charged the idea with tension. Allen was not like Drummond or Carpenter, he was not a Christian and was not an advocate of Christianity. Allen was not attempting to entwine Christianity with science and this would have been apparent to his friends and those who had read and reviewed his earlier work. William Stead, for example, who had written a scathing review of *The Woman Who Did*, when reviewing this book on religion described Allen as “the very High Priest of scepticism.”⁵⁵ Allen was an atheist and critic of the church and its morality, factors which amended the meaning of evolution when attributed to him. Moreover, within Allen’s scheme there was no parity of status for evolution and God, one was clearly subject to the other. Evolution needed no guiding force. To say that the idea of God had evolved was not controversial. The antagonism depended upon

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who said it, how and why they did so, and how other writers responded. Allen's version of evolution was antagonistic because of his own reputation, his association with the scientific naturalists, the scope he gave to that evolutionary explanation was all encompassing, devoid of any deity, and undermined the authority of Christianity. As the *Folk-Lore* reviewer noted "if Mr. Grant Allen's object was to call down theological thunders, he will have been thoroughly satisfied with the result".⁵⁶

Allen located his study within the domain of established disciplines of science and one in which he himself had had extensive experience, as a study of man's consciousness and higher faculties. The book opened with the claim that "in the eyes of the modern evolutionary inquirer the interest of the origin and history of this widespread idea is mainly psychological."⁵⁷ God was considered "manufactured" and was "a problem of the process of the mind."⁵⁸ The deity was created by man for man. To an extent Allen wanted to claim that this was not contrary to any Christian position. Christians could view this as God revealing himself to man through the unfolding of the mind.⁵⁹ But Allen was not advocating a revealed Theism. He was concerned to establish a framework in which a deity was not necessary. The origin of God was derived from the mind of primitive man, and Allen attempted to trace how men "came to frame for themselves" the idea of a deity.⁶⁰ He traced the evolution of this aspect of human psychology from primitive man, who had no gods but worshipped corpses, through a process of differentiation where there became many friendly ghosts of the dead and there being many Gods, to the development of monotheism and of Christianity. This was to always link the evolution of God with the evolution of men's minds, so that the idea of God changed as those conceptions did. God was man made. Allen wrote that to consider the origin of a "concept" was not to question its validity, but to consider it a concept at all and to use the psychological frame he did, was just indeed to do that. God was not real, he was just the memory of a dead man. Such a legend could not be a guiding force for the course of evolution. Allen explained the difference to William Stead in a letter and stated

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“‘you’ think religion grew up thus by some divine fore-ordinance; ‘I’ think it grew up by false psychology; but we can both agree that from the beginning it contained the germs of the end...”.⁶¹ God was a product of human psychology.

The process of the conception of God and the subsequent refinement of that concept was framed by Allen in such a way as to devalue Christianity and envelope religion within another of the naturalists most powerful concepts, evolution. Allen indicated a general aim “to trace out in rough outline the evolution of the idea of God from its earliest and crudest beginnings in the savage mind of primitive man to that in contemporary philosophical and theological thinking.”⁶² There was then a lineage identified of the early manifestations of Gods in savages and the modern conception of the single God. This suggested that all religions had been subject to the same pattern and law of development. So Allen was engaged in the comparison of the development of religions around the world and over time and also tracing back Christianity to a “forgotten Semitic ghost of the earliest period.”⁶³ This detracted somewhat from the uniqueness and special nature attributed to Christianity, as Allen linked the development of Christianity to and from the earlier primitive religions. This had the potential of suggesting that Christianity was not divinely planted in the mind of man, nor was it revealed complete to man, because “it developed, bit by bit, for three long centuries, taking shape by gradual stages in all the teeming centres of the Roman world.”⁶⁴ Previous forms provided a direct lineage to modern religion. Thus modern religion was derived from, linked and akin to, previous doctrines and religions. Christianity was just one religion among many, a many from which it had borrowed and acquired elements. Christianity was especially indebted to the Hebrew and Egyptian religions. Allen saw the story of Jesus as a version of the mythopoeic legends of those religions and the Trinity as a version of the Egyptian trilogy of Gods, Osiris, Horus and Isis. The Christian religion was subject to history and to the evolutionary law that patterned it. Christianity was not a gift of God and it was not unique, “Christianity grew. It was a natural product.”⁶⁵

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To say that religion was evolving was one matter, to say why and by what means was another. In Allen's theory there was no suggestion that this evolution was being guided, had a particular direction, or that a direction could be discerned. If anything, the evolution was a production of "chance" or in the case of Christianity the evolution to monotheism was due to social contingency and "a certain general tendency in the Semitic mind" which was "naturally monotheistic."⁶⁶ There was no need for, or possibility of, a teleological explanation, as at no point did the process display signs of, or necessitate, guidance or did it suggest it would reach a particular end. The best account of the origin of religion was that the idea had gradually suggested itself and slowly evolved, a growth occurring because of a nature into which Allen had no need to introduce a God at any point. Indeed, Allen was not interested at all in asking questions about God in relation to the process. He was concerned "to leave entirely out of consideration the objective reality or otherwise of the idea itself."⁶⁷ This questioned the existence of God and indicated that the issue was not important. This study, Allen wrote, "does not concern itself with the validity or invalidity of the ideas in themselves" and he noted that the idea of God was generated from man's relations with the external universe, not instilled by God of whose existence man "had certainly in nature no clear or obvious evidence...."⁶⁸ A deity of some kind could have been posited in this process, as a designer or a force guiding or giving direction to the evolution, but Allen saw no reason for its inclusion.

If Allen was unwilling to admit teleological factors to any part of the development of religion, he was uncompromising in the scope he permitted the evolutionary process. Allen applied the idea of constant differentiation from simplicity to complexity to a wide variety of aspects of religion. Evolution could account for the development and form of religious ceremony, the structure and function of the priesthood, the complex advancement and changes in architecture and the production of a set of religious symbols. This process even displayed itself within the development of the sacred texts which by "a gradual process of selection and

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elimination...evolved from...heterogeneous materials; the historical or quasi-historical and prophetic Hebrew tracts were adopted by the Church, with a few additions of later date....”⁶⁹ This also extended to the creed of the church which underwent a process of modification, adding aspects to the faith such as the Unity of Substance and the Infallibility of the Pope as it went along. This reinforced the sense that religion was man made not God given and that Christianity borrowed ideals and ceremony from other religions.⁷⁰ The deity itself was also subject to this process of change and differentiation. It was the deity and religion that was evolving, not the deity that enacted the evolution. This evolution had taken the course of stages with religion evolving from the veneration of single god, to a polytheism, and then a refinement to a monotheism displayed levels of complexity in the Trinity. Similarly ideas about the dead had “naturally undergone various stages of evolution” from an initial conception of the dead as still living, to death being physical but only temporary, and then to a stage where the soul was distinct.⁷¹ At each stage complexity and differentiation occurred, and earlier forms were adapted and modified. There was no need to introduce a deity into the working of this process, as evolution could account for every aspect of it, from the architecture of the sacred buildings, to the conception and manner of worship of the deity.

An element absent from Allen’s analysis of religion was a treatment of ethics and morality. These matters had perplexed other scientific naturalists. Spencer had invested a great deal of energy working out his *Principles of Ethics*, and Huxley had gravely considered ethics and evolution in his essay on the subject. Allen sidestepped the difficult question by removing the issue of ethics altogether from the area of religion. Religion was for him purely a matter of practical concern for rituals and customs. These rituals become attached to objects, and it was to them that he looked for evidence of the course of that evolution. This mattered a great deal, as it removed from the debate questions of good and evil and contemplations of human suffering.

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Allen's concern in the book was to consider evolution "by reference to the earliest beliefs of savages, past or present, and to the testimony of historical documents and monuments."⁷² This led him to consider the evolution and differentiation of relics, alters, tombs, grave goods, stones, burial practices, temples, idols, objects and images. This was a product of his move away from utilising the linguistic evidence of religion, which he considered written versions of stories, to more concrete comparable elements such as art, churches and other religious buildings, alters, graves, relics and headstones. He was therefore concerned with what he considered to be the "living facts" of religion not its "primitive folk-tales."⁷³ Allen was not concerned with faith but with religion as custom and practice.

Implicit in this was the claim that Religion was not related to ethics and that once ethics were removed science could account for religion. Religion and morality could be separated. This removed the possibility of theodicy, as questions of morality, ethics, good or evil were placed beyond the remit of Religion. The question of God's benevolence was not an issue at stake as it had no place in the discussion. There was no pretence that this was an evolutionary scheme to account for God's actions, because God had been written out questions of ethics and His sphere of existence curtailed.

The *Contemporary Reviewer* could not agree with this and considered it usual for ethics to accompany religion.⁷⁴ Moreover, he noted that the origin of religion was not scientifically discoverable at all because "historical demonstration is impossible."⁷⁵ William Stead also criticised Allen's definition of Religion, because it ignored the divine soul, the importance of religion as a morality guiding family life, and because he entirely dismissed the spiritual dimension of the idea of God.⁷⁶ The *Monist* reviewer noted that if Allen wanted to make his work complete he ought to treat the evolution of the ethical side of Christianity as those moral ideas were as important as ideas about God.⁷⁷ Reviewers might disagree with the terms Allen used, the *Folk-Lore-ist* noted, but, he commented "we cannot profitably argue with a scientific writer

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unless we are agreed upon the use of the term. Some of Mr. Allen's critics have hardly recognised this, and have consequently failed to grasp the limitation which this definition sets upon the conclusions."⁷⁸ This reduction of religion to practice was not straightforward and was not perceived as such. By attempting to make Religion value-free, Allen had only embedded his own values into the subject, values those noticing the book did not accept. Allen attempted to devalue Christian and religious thought by removing from religion important aspects of a deity. He undermined Theism by making man responsible for his God and his understanding of him, had questioned teleology by replacing direction and design with chance evolution, and by ignoring morality had eliminated theodicy.

A major premise of *The Evolution of the Idea of God* was that science succeeded theology in respect to explaining the origin and development of Religion. The status of theology was demeaned and the scope of its explanatory power limited as Allen pursued a two-fold attack to move the emphasis and legitimacy of explaining the origin of Religion from Theological ground to a scientific one. He argued that theology was redundant because it did not possess the authority of science and that matters of religion were excluded from theology because they were matters of history and psychology. Allen therefore claimed a territorial affinity and intellectual superiority for his methods.

In the final paragraph of the book Allen wrote "folk-lore is the protoplasm of mythology, and of its more modern and philosophical offshoot, theology."⁷⁹ This indicated that Allen thought science could offer an explanation of religion which theology could not and that the status and methods of theology were insufficient to give that explanation credence. Allen was thus concerned to achieve the "demarcation of mythology from religion" which he accomplished by arguing that Religion was purely a practical matter, a series of rituals and customs.⁸⁰ Theology on the other hand was equated with mythology, and so the two were distinct in that "Religion is practice; mythology is story-telling."⁸¹ If Religion was just practice, then

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theology had no grounds upon which to enter the debate.

Theology was also unable to give an account the origin of religion because its methods were not critical or cohesive. As Allen put it religious thought “does not always pride itself upon the temporal values of logic or consistency”.⁸² This was in contrast to scientific thinking. “Rationalistic and reconciliation glosses” such as those he himself was claiming to advance “tend to arise with advancing culture.”⁸³ Theology, then was equated with a non-scientific subject matter, utilising methods of dubious authority in relation to questions upon which it had no claim anyway. Not only was the status of theology under attack, but its realm of explanation was being challenged by science. If this was not a course of conflict, then it was certainly a challenge to the authority of theology.

Theology was redundant, something akin to folklore which used inappropriate methods of inquiry and asked the wrong questions. Theology was like mythology, whereas science was more rational and practical. This agenda entirely dismissed the applicability and validity of theology in religious matters. If there was a lack of conflict in the text, this was because the debate had already been undertaken externally, and theological questions about ethics, morality and the existence of God, were excluded. Theology was redundant, because science asked the right questions, could provide the correct answers and the method of discerning them.

Allen was establishing an agenda which reduced the status of theology in relation to science and which configured religion in such a way as to exclude theology from the debate. However, he claimed he was being tolerant towards religious thinking, noting for example that men of science had not always given up a psychological attachment to religion. Allen also insisted that the book was not an argument against Christianity and maintained that Christians should have no difficulty in accepting his argument. Yet there were re-occurring themes which challenged some of the authorities and basic tenets of the Christian faith. The *Folk-Lore* reviewer was particularly aware that Allen’s treatment of Christianity in the chapters devoted to it were where “his

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theological offence is rankest.”⁸⁴ It is not difficult to find in the book sections which variously contested the existence of Christ and God, the authenticity of the Bible and the status of the information contained within it. As the following extract suggests, Allen made statements in his reconstructive work which are difficult to construe as anything other than an attack upon Christianity. In one of the chapters relating to Christianity Allen wrote,

“of the Christ himself, if a Christ there were, we know little or nothing. The account of his life which has come down to us in the Gospels is so devoid of authority, and so entirely built up of miraculous fragments, derived from elsewhere, that we may well be excused for gravely doubting whether he is not to be numbered with St George and St Catherine, with Perseus and Arthur, among wholly mythical and imaginary figures of legend and religion.”⁸⁵

There is much of contention here, Jesus did not exist, the Bible is not an authority and is a collection of untrustworthy stories, and the Christ story is just a myth. These are claims which cut to the heart of Christianity, and they were not just made once, they were repeated throughout the book. These claims will now be considered in more detail, especially those about the existence of Christ, the authority of the Bible, and the reduction of Christ to legend. These points also reiterate the issue that Allen was reducing Christianity to contestable facts, opening it up to anthropological and psychological study. He thus configured religion in a way that a scientific naturalist approach could be established and given precedence.

Allen was unwilling to accept that Christ had existed and insisted that there was very slender evidence about him even if he had done so. Allen’s friends however were well aware that he thought Jesus a myth, and he wrote as much in letters. The ambiguity in this book was due to Allen wanting to suggest that Jesus was a dead man to whom a cult was attached, and his desire to suggest that Jesus had not existed at all. Whatever Allen’s position, he was at the very least calling into question the status of Christ, asserting that he was a composite figure derived from a variety of religions. All that we can or do know of Jesus, Allen wrote was that he was crucified

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and that a legend then grew up around Christ, though “the evidence probably warrants us in concluding that a real historical man of the name Jesus did once exist in Lower Syria”⁸⁶ though he doubted “such a person ever really existed.”⁸⁷ This doubt was continually asserted, and Christ described as an “unknown person”.

Even in respect to the crucifixion, the one aspect of the Jesus story Allen accepted, he held radical opinions, that the crucifixion was on a post and that Christ was possibly even deliberately put to death as a sacrifice at Passover. This legend attached itself to other stories concerning other men and traditional myths related to corn and wine gods, gradually being elaborated, and Allen wrote “I hold that Christ was essentially one such artificial god.”⁸⁸ He thus configured the central figure of Christianity as a figure who might have existed, and whose life, if it had take place, was a fabrication hewn from a stock of “mythopoeic” tales and other religious traditions and “whatever the cult of Jesus lacked in this respect in its first beginnings, it made up for as it went, by absorption and permeation.”⁸⁹

The questioning of the existence of Christ was accentuated and compounded by a sustained critique of the Bible. This was inevitably controversial, and William Stead noted in his review of the book that “Mr. Grant Allen is much more uncompromising than even the most destructive of the higher critics in his rejection of the historical accuracy of the Bible.”⁹⁰ It is clear that Allen was following an Anti-Christian theme through his work and one of the key strategies was to contest the authority of the Bible which he did in a number of ways. He frequently described the book as being based upon unreliable sources, and that it was comprised of “four or five documents of doubtful age and uncertain authenticity.”⁹¹ Similarly, he described the documents as “garbled forms” rewritten over time to conform to and shape political events.⁹² They were not reliable historical documents and could not be trusted. The Bible he suggested was a series of “collected fragments of all the god-varying customs and beliefs” which might “have been written by any worshipper of Adonis or Osiris”. In the Bible Christ had “speeches put into his mouth by his biographers”.⁹³ Allen

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claimed the Bible was not authentic, and that it was a collection of stories which together comprised a legend about a man who might have existed. When these stories were written down they contained “rude guesses”, “conjecture” and even amounted to “forgery”. This reduced the life of Christ to a story and the Bible to a “mass of unhistorical myth”.⁹⁴ The sacred text was collated from all “ages and systems” and was thus a product of history, not a conveyor of it.⁹⁵ Allen called into question the major authority of the Christian world, turning it from a sacred text into a secular historical one.

The reviewers of the book were critical of Allen’s methods and beliefs. The *Athanaeum* reviewer noted “when Mr. Grant Allen comes to treat the historic religions of the Bible his method is even less satisfactory. While at times he speaks as if no reliance could be placed upon the sources, he makes use of the very words and metaphors to press his curious views.”⁹⁶ William Stead was scathing, but turned Allen on himself and wrote that “the triumph of Christianity is indeed a great miracle even if the whole of the Gospel story be accepted as gospel truth; but if there be nothing behind it excepting chance...then indeed, we are face to face with a still more marvellous miracle than anything that staggers the faith in the Scripture record.”⁹⁷ If the book was conciliatory towards religion, it was not so towards Christianity.

Grant Allen was attempting to secularise religion by removing from it any sense of faith, a deity or morality. Thinking about religion in a historical, evolutionary and psychological way need not have been conflictual, but Allen pursued the question of the origin in such a way as to eradicate theology and humble Christianity. Though he sought some conciliation between those of an idealist and materialist persuasion he produced a conciliation which signalled the superiority of science and the power of evolution. Allen may not have written about conflict or attacked religion openly, but he was addressing and contributing to an agenda of conflict by attempting to bring religion within the sphere of scientific naturalism and by making the history of religion a branch of palaeontology. In this palaeontology of religious forms, old

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religions became the fossilised forms of modern belief, and their history and relations could be established by comparing and arranging those forms. Moreover, the key to that arrangement was the pattern of evolution. Conflict was not expressed openly in the text, but it was implicit in the assumptions Allen made about his subject matter and the way in which it should be treated. Conflict framed Allen's critique of Religion and when examined in the public sphere of the periodical press these conflicts became apparent.

Conclusion

The specific terminology of the warfare metaphor may now be inappropriate as a frame for examining the relations of science and religion in Victorian society, but this is not to say that we should reject any notion of conflict. Conflict can be found in the nuances and intentions of texts and the agendas that shaped their production, in the social process by which books were written, published and reviewed, and in the struggles over cultural authority and territory. Moreover, assimilation involved the transgression of boundaries and the contesting of authority and was therefore not excluded from that conflict.

The origin of religion was a contested subject and while some offered a history of science and religion, Grant Allen offered a scientific history of religion from which theology was excluded. While appearing conciliatory, Allen's evolutionary and reductionist psychological account of the origin of religion generated conflict and with every claim of reconstruction he antagonised various parties. If we are to approach the history of science and religion in a nuanced and rich way this has also to apply to the analysis of conflict, and we need to look for conflict in the public space of the publishing market and the periodical press. There was a coincidence of interests between Allen's own personal desire to write and complete a book he had dedicated his life to, and was thus willing to compromise in terms of tone and content, and the desires of the publishing market which were wary of controversial

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works of religion. However, the issue was a contentious one and though the assimilation appeared conciliatory it was not intended, received or perceived as such.

Attempts to reconcile science and religion may have been just a matter of crisis for those writing them, but such attempts at assimilation antagonised other parties by claiming territorial rights to subjects, by inevitably being partisan to one cause or other, and consequently the reaction to them was hostile. St George Mivart saw no conflict between his Catholicism and his evolutionism, but others did so and he was excommunicated by the Catholic church and attacked in the scientific press.⁹⁸ The writers of *Essays and Reviews* embraced modern science in their theology, but 11000 people signed a petition attacking them for doing so and some of the essayists were tried in church courts for the heresy of questioning the bible.⁹⁹ Even agnostics were open to hostility, and it is an irony that though Darwin was buried in Westminster Abbey, the Agnostic Herbert Spencer, whose idea of the Unknown had for many left room for a deity, was denied a memorial in the Abbey. An individual writer might reach a conclusion which could resolve a personal crisis, but conflict remained *between* all of those individuals, whose own personal convictions were not always compatible. Conflict existed between writers and philosophies, and attempts to assimilate positions only served to accentuate the differences between them.¹⁰⁰ In the context of Victorian England conflicts over the truth of religion and struggles for cultural authority were synonymous and they addressed both the personal reputations of authors and the structure of the cultural field.

Conclusion

In cosmos and micro-cosmos, in the wonders of what went right in natural law, Grant Allen consoled himself for the marvels of what went wrong in human history.

Richard Le Galliene on 'Grant Allen', 1899.

'Why sow your ideas broadcast', many honest critics say, 'in novels where mere boys and girls can read them? Why not formulate them in serious and argumentative books, where wise men alone will come across them?' The answer is, because wise men are wise already: it is the boys and girls of a community who stand most in need of suggestion and instruction.

Grant Allen, *The British Barbarians*, 1895.¹

After the financial success of his novels *What's Bred in the Bone* and *The Woman Who Did*, Grant Allen purchased a plot of land on a hill-top at Hindhead in Surrey and had built there a house which he named 'The Croft'. Grant Richards wrote that at that time Hindhead was a "wilderness of gorse and pine and heather" and that when his Uncle saw the area he "succumbed at once to its wild and romantic beauty."² As neighbours Allen counted John Tyndall, H. G. Wells, Arthur Conan Doyle and Frederic Harrison, figures who encapsulated his various literary and scientific connections. This location represented for Allen a rarefied version of the natural reality he worshipped, a protected space from where he could expound and expand his evolutionism. In the preface to the novel *The British Barbarians* (1895) Allen wrote that he was writing that book "in my study on a heatherclad hill-top...when I raise my eyes from the sheet of foolscap it falls upon unsullied nature. Everything around is fresh, and pure, and wholesome."³ From here, with financial security and this beautiful view, Allen wrote that he could produce work that "raises a protest in favour of purity" which represented the world as it appeared to him "not as editors and formalists would like me to represent it."⁴ Here Allen could read the "gospels we preach with all our hearts", where his "gaze falls first on the golden bracken that waves joyously over the sandstone ridge without, and then, within, on the little white shelf where lies the greatest book of our greatest philosopher...Herbert Spencer".⁵

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What made this place so beautiful and pure to Grant Allen was that here he was immersed in the nature he loved and could express his evolutionism in the way he desired, understanding the truths of nature and making them as widely known as possible.

For Grant Allen nature and evolution meant everything and could account for anything. The universal progressive process he saw in evolution and the democracy he envisaged in science, he tried to extend to other fields and to society. Allen has not been historically recognised as a man of science and there is a need to re-evaluate his status and identity. There is a need to intimately identify Allen with the scientific naturalists. Allen's social networks included Huxley, Darwin and Spencer, he was dedicated to Spencer's work, he thoroughly absorbed the programme the naturalists developed, and expounded those values whenever and wherever possible. Allen's concern within this group was to develop the public awareness, image and knowledge of science and extend the authority of science to other fields.

There have been a number of common themes throughout the preceding chapters, the identification and integration of Grant Allen into a scientific naturalist context, the understanding of his apparently diverse project within a unifying evolutionist scheme, and the noting of the correspondence of interests between Allen developing certain aspects of his project in particular ways and the ambitions of the naturalist group. As the mass market for cultural goods expanded, (science, art, fiction), popular culture became the prime site for the dissemination of ideology, and access to this market needed to be mobilised to attract the support of the public for the scientific naturalists. Allen's work is an example of the way in which scientific naturalism and ideas about evolution developed beyond the sphere of science itself and of how less well-known figures of the naturalist movement progressed that agenda in a wider context in a significant way.

The predatory, expansionist, holistic, and public connotations of the idea of *The Evolutionist at Large* encapsulates Allen's development of an overarching evolutionary philosophy capable of embracing all aspects of nature and culture, the

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way he was taking evolutionism across territories and contesting the boundaries and authority of other factions of the Victorian cultural field, and his concern to enhance and broaden the public and popular image of evolutionism. Grant Allen saw a uniformity in nature and he extended this to culture and the entirety of his project. Moreover, Allen saw science as a democratising force, one that could open up intellectual territories from an elite and instil in the public the power to understand the world through evolution.

This was akin to the programme of the scientific naturalists, and I think the nature and diversity of Allen's project is to be accounted for by his dedication to science and evolutionism. Like the new naturalists Allen perceived all subjects as potentially evolutionary ones, even where for example in aesthetics and literature he was very aware that the entry of the man of science into those fields was contentious and flammable. In his desire to see a public versed in evolution, and place science where it was most likely to be noticed and read, Allen took up the agenda of the scientific naturalists and pursued it in various ways. The overall pattern of Grant Allen's work blurred the boundaries of science, art and literature, and his project took evolution to a wide ranging audience, collapsing what was privileged knowledge and monopolised fields, into one knowledge that could be interpreted and understood through reason and common-sense.

In aesthetics and art Allen identified the monopolism and elitism of Romantics such as Ruskin, and made that subject accessible to the men of science and the public, by framing art within an evolutionism that claimed to make the subject exclusively scientific yet open to all because of that. Aesthetics was explained in physiological and psychological terms, the product of gradual evolutionary change. In his science essays Allen took evolution out to the public by placing his essays in popular journals and writing those essays in a succinct and clear manner that made them accessible to the general reader. In fiction, Allen wrote his stories so that they could convey the truths of science and evolution, targeting fiction because he knew that if the naturalists wanted to reach a wide audience and raise awareness of science or social

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issues, that was the avenue through which that agenda would have to be pursued. Plots became devices to illustrate psychology or evolution, the stories vehicles for imparting knowledge about natural selection, uniformity of natural law, heredity, or even Spencer and Darwin. In his travel guides and studies of art, Allen again naturalised the once privileged spaces of the Grand Tour and museum, making them the embodiment of the processes of evolution. Moreover, over-arching all of these was a critique of religion that reduced ideas of faith, God and Christ to mere and passing moments in the history of the evolution of man, deriding knowledge based on anything other than reason and social progress structured around anything other than science.

Grant Allen was pursuing science and evolution on a variety of fronts, of literature and art, popular and elite, but the questions remain, why would Allen want to develop those ideas in the manner he did, and in what way was it in his interests to do so? There was certainly some deep personal and emotional satisfaction for Allen in pursuing science, and I think there was also some psychological investment on his part in his identity as a man of science developing evolutionary ideas and the scope and appeal of those ideas. There may also have been commercial logic to him trying to develop science in a mass market. But there is a more sociological explanation to Allen's project and his desire to be attached to scientific naturalism, a cultural group from which he could derive authority and credibility. Allen was making Spencer and evolutionism work for him by having it validate his work and enhance his own standing through association. The scientific naturalists were an increasingly powerful group and it would have been in Allen's interests to attach himself to them as he could make a name for himself within a faction that was itself in ascendancy. Allen could gain credibility within the scientific naturalist group and accrue wider status as the authority of that group increased over time. However, the difficulty for Allen became that the men of science did not assume a dominant position in the cultural field and romantic and religious ideas maintained a hold on the public imagination, while particular factions within fields of art and literature themselves grew and this

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thus necessitated the diversification of his project.

Grant Allen saw science as an agency for democracy and in his work he claimed the territories of the cultural world for the man of science, arguing that through the common sense of science, the common heritage of nature and the key of evolution, everyone had access to an understanding of the world. Allen's work was unified by its absolute and total commitment to evolutionism and to developing the public awareness and acceptance of evolutionism, making scientific knowledge widespread and establishing its currency and credibility by increasing public support for science. Grant Allen was the evolutionist at large, he was a dedicated naturalist, diversifying the agenda and scope of evolutionism across a variety of fields and developing a popular consciousness about science, evolution, and the new naturalists.

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