'Their Whiteness Is Not Like Ours': A Social and Cultural History of Albinism and Albino Identities, 1650-1914

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THOMAS WHITE

SCHOOL OF ARTS, HISTORIES & CULTURES

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ABSTRACT

This research charts the long cultural trajectory of albinism from early modern travel encounters and Enlightenment exhibitions to medical classification and biological experimentation. It argues the whiteness of albinism functioned as a visible provocation to thinkers involved in work crucial to major conceptual developments in western science and medicine. It stresses this rare complexion was a prism through which medical and scientific researchers studied human variation, disease and inheritance. It examines how albinism paralleled a broader historical production of modern racial and pathological identities. This research traces medico-scientific discourses in order to understand their affect on people diagnosed with albinism.

It commences with analysis of 'unusually white' people in travel narratives and Enlightenment ephemera between 1650-1799. It bridges plural representations of 'unusual whiteness' as sub-human or racially distinct with the crystallisation from the 1770s of a pathological definition for 'leucoethiopia'. It demonstrates circulation of medical case studies and the formal classification of albinism as congenital disease by medical men in 1822 reflected a far-reaching revolution in medical thought and practice across Europe. It links this medical paradigm shift with the rise of heredity theory from the 1850s. It argues widespread experimentation with albino animals supported fierce early twentieth-century debates among biologists about Mendel's laws of heredity.

It concludes with analysis of the dialectic between medical knowledge about albinism and 'albino' identities. It argues people with albinism both internalised and camouflaged medical associations with defect through the adoption of class privilege and individual social tactics. Overall, this research makes a significant claim to rethink the histories of race, disability and medicine. It spotlights albinism as a critical nexus to understand the making of the normal and the pathological body, and it pinpoints the unstable relationship between medical diagnosis and individual agency.

DECLARATION

No portion of the work referred to in this thesis has been submitted in support of an application for another degree of qualification of this or any other university or other institute of learning.

COPYRIGHT STATEMENT

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Lastly, a huge thanks to my family.

Introduction

> The danger…is to restrict an albino's activities on the basis of assumptions made by people who are not albinos themselves, and have no experience of how we cope with day-to-day events. It is all very well to say we cannot read letters on a chart, but if we can do proper jobs and lead normal lives, does that really matter?[1]
>
> Drummond Cameron, 'On Being an Albino: a personal account', *British Medical Journal* (1979).

At the age of 34, Drummond Cameron, an underwriter from Scotland, published an account of his experiences with being 'albino' (Fig. 1). Writing in 1979 at the height of the disability rights movement in Britain and the United States, Cameron invoked the language of self-emancipation to raise his concerns about the way medical and educational authorities disproportionately dictated what he could and could not do as an 'albino' in British society.[2] Cameron's main point of contention was that, 'people who are not albinos themselves' could be unnecessarily restricted in their activities.

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[1] Drummond Cameron, 'On Being an Albino: a personal account', *British Medical Journal*, vol. 1, January 6 (1979), pp. 28-29.

[2] For the disability rights movement in Britain see: Tom Shakespeare, 'Disabled Peoples' Self-organization: a new social movement? in Len Barton (ed.), *Overcoming Disabling Barriers: 18 years of disability and society*, London: Routledge (2006), pp. 53-69; Anne Borsay, *Disability and Social Policy in Britain since 1750*, Basingstoke: Palgrave Macmillan (2005); Tom Shakespeare, *Disability Rights and Wrongs*, London; New York: Routledge (2006); Susan Quinn and Bairbre Redmond (eds.), *Disability and Social Policy in Ireland*, Dublin: University College Dublin Press (2003). For disability rights in the United States see: Paul K. Longmore, *Why I Burned My Book and Other Essays on Disability*, Philadelphia: Temple University Press (2003); Duane F. Stroman, *The Disability Rights Movement: from deinstitutionalisation to self-determination*, Lanham, Md.: University Press of America (2003); Joseph P. Shapiro, *No Pity: people with disabilities forming a new civil rights movement*, New York: Times Books (1993); Jonathan M.

Fig. 1: Drummond Cameron with his two children in W.O.G. Taylor, 'Albino Fellowship: a new kind of welfare organization?' *Practitioner* (1980).

Young, *Same Struggle, Different Difference: the Americans' with Disabilities Act and the disability rights movement*, Thesis: Ph.D.: University of Carolina (2002).

For Cameron, medical diagnosis posed the possibility of 'albinos' being assigned misleading and exaggerated levels of disability. Cameron emphasized that though his 'vision could be quantified in medical terms', his incapacity to 'read letters on a wall' should not preclude him from leading a 'normal life at a normal job'.[3] Cameron highlighted a disjuncture between the medical diagnosis of his 'albinism', and his subjective experiences of appearing unusually white and visually impaired in comparison with the majority in society. In short, the ophthalmological measurement of Cameron's acuity through artificial tests revealed little about how he, as an 'albino', dealt with the vicissitudes of 'day-to-day events'.

Cameron's intervention raises many pertinent questions. What is the origin and constitution of this contested 'albino' identity? Has being 'albino' and having albinism always involved wrestling with the influence of medical power? Why are medicine and ophthalmology interested in diagnosing albinism at all? More generally, what does the presence of albinism and the albino in western medical science reveal about changing notions of difference embodied in skin colour, especially about the power of whiteness in governing social value? Finally, how did societies react to the presence of people with albinism before and after its formal classification in medicine?

To address these far-reaching questions, this thesis traces the history of albinism back to the first early modern interactions between medicine, science and people with an unusually white complexion. It investigates the

[3] Drummond Cameron, 'On Being an Albino: a personal account', *British Medical Journal*, vol. 1, January 6 (1979), p. 28.

relationship between medico-scientific definitions of albinism and the diagnosed individual. It tracks the formation of albinism as medical category in European and North American medicine and the life sciences. It weighs up how albinism and the 'albino' contributed to its inclusion in wider medical and social debates about ability, disability and what Catherine Hall calls the 'unspoken norm' of whiteness in nineteenth and early twentieth century western culture and society.[4] It locates albinism as an intermittently constructed biological condition, mediated by social conceptions of normal and abnormal whiteness. It ultimately seeks out the reasons why this unusually white bodily condition and its accompanying visual impairment ignited such sustained and universal interest among explorers, philosophers, scientists and medical practitioners from the seventeenth century to the start of the First World War.

It analyses the long history of albinism to shed new light on the troubling dichotomies of race and skin colour, normalcy and difference and medical power and agency. These oppositions proved central to the development of modern ideas about the body in medicine and the life

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[4] Catherine Hall and Keith McClelland (eds.), *Race, Nation and Empire: making histories, 1750 to the present*, Manchester: Manchester University Press (2010), p. 1. For the best recent introductions to the philosophy of disability see: Elizabeth DePoy and Stephen French Gilson, *Studying Disability: multiple theories and responses*, Thousand Oaks, Ca.; London: Sage (2011); Sharon Barnartt, *Disability as a Fluid State*, Bradford: Emerald Group Publishing (2010); Michael Oliver, *Understanding Disability: from theory to practice*, 2nd ed., Basingstoke: Palgrave MacMillan (2009); Tobin Siebers, *Disability Theory*, Michigan: University of Michigan Press (2008); Tom Shakespeare, *Disability Rights and Wrongs*, London: Routledge (2006); Marian Corker and Tom Shakespeare, *Disability/Postmodernity: embodying disability theory*, London: Continuum (2002).

sciences.[5] Here, it builds on Georges Canguilhem's and Michel Foucault's theoretical and historical insights into the concepts of the normal, the abnormal and the pathological.[6] It allies this critical perspective of medical knowledge production with disability, a vital concept for opening up new perspectives on albinism and 'the variability of the human body as a biological and historical entity'.[7]

In light of these twin theoretical stances, it argues sustained reflection on the history of albinism is necessary to broaden understanding of how bodily differences are mediated through medical and scientific cultures. By cultures it means the results of what Nicholas Rose called the 'technologies of medical truth', institutions and apparatuses that partially produced albinism as a classifiable disease.[8] As Stephen D. Edwards makes clear, the implications of a richer history of disability fosters a greater awareness of how societies designate 'what counts as a 'good human life'.[9]

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[5] For analysis of the dynamics dictating power, knowledge and the modern body see: Colin Jones and Roy Porter (eds.), *Reassessing Foucault: power, medicine and the body*, London: Routledge (1998); Catherine Gallagher and Thomas Laqueur (eds.), *The Making of the Modern Body: sexuality and society in the nineteenth century*, Berkeley; London: University of California Press (1987).

[6] Georges Canguilhem, *The Normal and the Pathological*, New York: Zone Books (1991), originally published as *Le normal et le pathologique*, Paris: Presse Universitaires de France (1966); Michel Foucault, *Abnormal: lectures at the Collège de France*, London: Verso (2003), originally published as *Les anormaux: cours au Collège de France*, Paris: Gallimard (1974-75); *The Birth of the Clinic*, London: Routledge (2007), p. xiv, originally published as *Naissance de la Clinic*, Paris: Presses Universitaires de France (1963).

[7] Mitchell makes this comment about Stiker's work in the introduction to the French historians research. See: Henri-Jacques Stiker, *A History of Disability*, Ann Arbor: University of Michigan Press (1999), originally published as *Corps Infirmes et Sociétés*, Paris: Éditions Dunod (1997), p.

[8] Nicholas Rose, 'Medicine, History and the Present', in Colin Jones and Roy Porter (eds.), *Reassessing Foucault: power, medicine and the body*, London: Routledge (1998), p. 53.

[9] Steven D. Edwards, 'Definitions of Disability: ethics and other values', in Kristjana Kristianson, Simo Vehmas, Tom Shakespeare (eds.), *Arguing about Disability: philosophical perspectives*, London: Routledge (2008), p. 30.

In the first three chapters it traces the emergence of three broad epistemological phases: albinism as monstrosity in the seventeenth and eighteenth century, albinism as pathology in the nineteenth century, and albinism as heritable anomaly at the turn of the twentieth century. The final chapter interprets the responses of people with albinism to these medico-scientific discourses. It therefore combines scrutiny of medical and scientific sources with autobiographical accounts written by people with albinism during the nineteenth and early twentieth century. It hopes to demonstrate how shifting ideas about albinism brought about the rise of an 'albino' identity over a two and half centuries of European and North American medical and scientific research.

Albinism and Definition

Albinism does not exist. It has no essential properties. Its shades of pigmentation and its level of visual impairment vary from one individual to the next. Thus, 'albinism' is a term used in western medicine and ophthalmology. It has a specific history and etymology. In 1775, the German anthropologist and craniologist Johann Friedrich Blumenbach used 'Leucoethiopia' as a collective pathological term.[10] The term Albinism originated in the work of the German physician, David Mansfeld. He deployed 'albinoismsus' and 'leukopathie' synonymously in his treatise of

[10] Johann Friedrich Blumenbach, *De generis varietate nativa* (1775), translated by Thomas Bendyshe, *On The Natural Varieties of Mankind*, London: Longman et. al. (1865), p. 130.

1822.[11] Geoffroy St. Hilaire adopted Mansfeld's term and translated 'albinoismsus' into the French 'albinisme' in 1832.[12] It is the dominant way of talking about people with this condition, and is reluctantly used for the sake of clarity.[13]

This research therefore adopts 'people with albinism' to group together individuals born with a complexion whiter than the majority coupled with a significant impairment of vision. Though convenient, the term albinism is misleading and vague. There is not one form of albinism. Indeed, albinism is medically and genetically complex. Contemporary medical practitioners define two broad groups for albinism: 'ocular' albinism and 'oculocutaneous' albinism.[14] Ocular effects just the pigmentation of the eyes, whereas 'oculocutaneous' albinism causes abnormalities in hair, eyes and skin.[15] Geneticists have so far discovered twelve different genes, which govern a range of albinisms in humans. Along with variations of ocular and oculocutaneous albinism they include the rare Hermansky-Pudlak, Griscelli, Waardenberg, Tietz and Chediak-Higashi Syndromes that can involve bleeding and other complications.[16] Oculocutaneous albinism is the type

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[11] David Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden*, Braunschweig: Ludwig Luscius (1822).
[12] Geoffroy St. Hilaire, *Histoire générale particuliére des anomalies de l'organization chez l'homme et les animaux…etc.*, vol. 1, Paris: Ballière (1832), p. 291.
[13] Both the *Albinism Fellowship* in Great Britain and the *National Organization of Albinism and Hypopigmentation* in the United States accept the definition and concepts of albinism produced in medical and genetic discourse. For the current definitions of the Albinism Fellowship visit: www.albinism.org.uk and for NOAH visit: www.albinism.org
[14] Suzanne B. Cassidy, Judith E. Allanson (eds), *Management of Genetic Sydromes*, 3rd ed., Oxford: Wiley-Blackwell (2010), p. 56.
[15] J.F. Okulicz, R.S. Shah, R.A. Schwartz, C.K. Janniger (eds.), 'Oculocutaneous Albinism', *Journal of the European Academy of Dermatology and Venereology*, vol. 17 (2003), pp. 251-256.
[16] William S. Oetting, 'Oculocutaneous Albinism Type 1: the last 100 years', *Pigment Cell Research*, vol. 16 (2003), pp. 307-311.

principally referred to in this history. These symptoms for albinism vary in intensity, giving rise to diverse subjective responses to how the condition is explained and experienced.[17]

It will be shown that definitions for albinism and its variant terms mirror changing linguistic and conceptual constructs. As Charles Rosenberg argues in *Framing Disease* (1992), 'disease is…a generation-specific repertoire of verbal constructs reflecting intellectual and institutional history'.[18] His general point about the malleability of disease as a 'generation-specific repertoire of verbal constructs' explains how the particular case of albinism is inescapably framed by burgeoning images and ideas about disease from the past. This historical framing of albinism as disease is significant in several ways. The designation of albinism as pathology alters its relation to aesthetic, ethical and behavioural values in societies.[19]

It is clearly necessary to align the definition of albinism with this wider history of disease and medico-scientific knowledge production. However, it does not answer a fundamental question: if albinism is taken up and variously framed in medicine, then what does 'albinism' constitute before this process began? That is, what is albinism when it is not described using the terms and concepts of medicine? For Rosenberg, albinism, like all disease, is a,

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[17] For a contemporary view on albinism in everyday life see: Archie William Newton Roy and Robin MacKenzie Spinks, *Real Lives: personal and photographic perspectives on albinism*, London: Albinism Fellowship (2005).
[18] Charles E. Rosenberg and Janet Golden (eds.), *Framing Disease: studies in cultural history*, New Brunswick, New Jersey: Rutgers University Press (1992), p. xiii.
[19] 'Steven D. Edwards, 'Definitions of Disability: Ethics and other values', in Kristjana Kristianson, Simo Vehma, Tom Shakespeare (eds.), *Arguing about Disability: philosophical perspectives*, London: Routledge (2008), p. 30.

'biological event', a physical change to the expected appearance and function of the human body. In a sense, therefore, albinism is visible in any given society as it is rare and visibly striking; its unusual appearance attracts attention, and gives rise to a variety of responses. Albinism is to a great extent a provocation, a 'biological event' that precedes biological research.

The definition of albinism is constrained or elucidated always by the language of comparison with 'non-albinism'. It is partly an idea, a fluid historical category, whose meaning is altered by changing socio-cultural concepts and language reflected in the making of the modern body.[20] The dissonance caused by albinism in the African body is different from the less conspicuous extreme blondness in Europeans. Charles D. Martin argues the African 'albino' embodies 'the binary of black and white, at the same time straddling yet defying racial categories'.[21] In a brief essay published only in French, Roger Little echoes Martin's sentiments of transgression. Little maps the rise of what he calls the 'troubling reversal' of the 'white negro' from classical references to representations in twentieth century comic strips.[22]

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[20] Catherine Gallagher and Thomas Laqueur (eds.), *The Making of the Modern Body: sexuality and society in the nineteenth century*, Berkeley; London: University of California Press (1997), p. 85.
[21] Charles D. Martin, *The White African American Body: a cultural and literary exploration*, New Brunswick, New Jersey: Rutgers University Press (2002), p. 87.
[22] Roger Little, *Nègre Blanc: representations de l'autre autre*, Paris; L'Harmattan (1995), p. 129.

Histories of Albinism

The first attempt to conduct a global history of albinism was Karl Pearson's *Monograph on Albinism in Man* (1911-1913).[23] Pearson's work drew on biometric techniques and eugenic ideas to document and assess the origins of albinism in humans and animals. He used hundreds of references from classical, medieval and modern sources to chart medical and ophthalmological studies of people with albinism.[24] He provides almost no wider social or cultural context, and offers little in the way critical analysis in which to situate his mass of collected data. Though Pearson's project relied heavily on direct contact with albinos, there are no voices of people with albinism in his published research. Pearson's scientific agenda persisted at the expense of any possible resistance from people with albinism. His narrative traces the deceptively inevitable emergence of albinism from ancient rarity to modern pathology. This research repudiates the primacy of pathology as a dominant organizing principle for the history of albinism. It argues for far greater nuance of approach to the interdependence of albinism as a medical category, and as social identity and lived bodily experience.

Thus, this thesis seeks to re-write the history of albinism. It offers a new and original perspective on the interrelationship between medicine, disability and identity in modern Europe and the United States. It magnifies the emergence of normal and pathological definitions of individuals and

[23] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, 3 vols., Cambridge: Cambridge University Press (1911-1913).
[24] Pearson's historical research was heavily indebted to Edouard Cornaz's nineteenth-century monograph on albinism. Cornaz collected a vast bibliography on albinism. See: Edouard Cornaz, 'De l'Albinisme', *Annales de la société de médecine de Gand*, vol. 33 (1855), pp. 269-395.

populations in increasingly professional and institutional medical and scientific spheres. It traces notions of social value that impact on the ability of categorised individuals to work and live in society. In addition, it stresses how the whiteness of people with albinism played an important role in re-enforcing 'normal' whiteness in the west.

Recent scholarship on the European 'discovery' of unusually white people in the eighteenth century established the centrality of albinism in the rise of racial and pathological categories. Andrew Curran (2009), Renato G. Mazzolini (2006), Michael Kutzer (1990) and Winthrop Jordan (1968) have all concentrated on the formation of racial and pathological ideas about albinism during the Enlightenment era.[25] They variously investigated the relation between albinism and the emergence of eighteenth-century racial theories in the publications of naturalists and philosophers. Nevertheless, their histories of ideas offer only a starting point for a broader analysis of how people with albinism negotiated encounters and examinations by scientists and medical men.

This understanding of the history of albinism will contribute to the historiographies of race, whiteness, disability and medicine. Albinism is at once an identity, a diagnosis and a marker of colour difference that permeates

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[25] Andrew Curran, 'Rethinking Race History: the role of the albino in the French Enlightenment life sciences', *History and Theory*, vol. 48, no. 3 (2009), pp. 151-79; Renato G. Mazzolini, 'Albinos, Leucoæthiopes, Dondos, Kakerlakken: sulla storia dell'albinismo dal 1609 al 1812' in G. Olmi and G. Papagno (eds.), *La natura e il* corpo, Florence: Leo S. Olschki (2006), pp. 161-204; Michael Kutzer, 'Kakerlaken – Rasse oder Kranke?: Die Diskussion des Albinismus in der Anthropologie der Zweiten Hälfte des 18. Jahrhunderts', in Gunter Mann and Franz Dumont, *Die Natur des Menschen*, Stuttgart: Fischer (1990); Winthrop Jordan, *White Over Black: American attitudes toward the Negro*, 1550-1812, Chapel Hill: University of North Carolina Press (1968).

all these areas of study. Race histories focus on western encounters with indigenous peoples and the multiple and complex cultural and social consequences of racial ideas in the contexts of colonialism, slavery, theology and science.[26] In many cases, such studies foreground the shaping of European perceptions and attitudes towards non-Europeans after their 'discovery', presenting evidence of a contemporary juxtaposition drawn between European whiteness and darker shades of pigmentation of indigenous peoples.[27] Indeed, growing out of these scholarly debates about skin colour as a fundamental marker of identity, there is now substantial research aimed at deconstructing and revising notions of whiteness, predominantly dealing with the political and economic ramifications of colonialism in postcolonial times.[28]

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[26] The historiography of race during the eighteenth century is vast. The following are a selection only. For the history of exploration and the formation of western perceptions of the indigenous body see: Bernard Magubane, *Race and the Construction of the Dispensable Other*, Pretoria: Unisa (2007); Colin Kidd, *The Forging of Races: race and scripture in the Protestant Atlantic world, 1600- 2000*, Cambridge: Cambridge University Press (2006); Richard Lansdown, *Strangers in the South Seas: the idea of the Pacific in Western thought*, Hawaii: University of Honolulu Press (2006); Martin Daunton and Rick Halpburn, *Empire and Others: British encounters with indigenous peoples*, University college London Press (1997); Ivan Hannaford, *Race: the history of an idea in the west*, Baltimore; London: Johns Hopkins University Press (1996); P.J. Marshall and Glyndwr Williams, *The Great Map of Mankind : perceptions of new worlds in the age of enlightenment*, Harvard: Harvard University Press (1982); Philip D. Curtin, *The Image of Africa: British ideas and action, 1780-1850*, Madison; London: University of Wisconsin Press (1964). For the history of slavery, race and beyond see: Frederick Cooper, *Beyond Slavery: explorations of race, labor and citizenship in postemancipation societies,* Chapel Hill; London: University of North Carolina (2000); Anthony J. Barker, *African Link: British Attitudes Towards the Negro during the Atlantic Slave Trade*, London: Frank Cass. (1978). For the history of race and science see: Nancy Stepan, *The idea of race in science: Great Britain 1800-1960*, London: Macmillan (1982); George L. Mosse, *Towards the Final Solution: a history of European racism*, London: J.M. Dent (1978); Stephen J. Gould, *The Mismeasure of Man*, Penguin (1981).

[27] Roxanne Wheeler, *Complexions of Race categories of difference in eighteenth century British culture*, Philadelphia: University of Pennsylvania Press (2000); Winthrop Jordan, *White Over Black: American attitudes toward the Negro*, 1550-1812, Chapel Hill: University of North Carolina Press (1968).

[28] There is some excellent pioneering work linking science, medicine and the desirability of an idealised white body. See: Warwick Anderson, *The Cultivation of Whiteness: science, health and*

Albinism and Wider Historiographies

Scholars have begun to address the history of albinism as identity and as lived experience. Ninou Chelala's short study *L'albinos en Afrique* (2007) examines the construction, representation and identity of people with albinism in Africa from the Enlightenment to the present.[29] This intersection between albinism and race in Africa is also well explored by Charles D. Martin's *White African American Body* (2002). Martin traces ideas attached to fragmented pigmentation in American popular culture and literature, but also emphasises the individual in his history.[30] Like Martin, Charlotte Baker (2008) and Roger Little examine the representation of black African people with albinism in French literature and popular culture.[31] Aside from race, albinism is present in histories of medicine. Medical histories focus on case studies of people with albinism. For example, Peter Frogatt (1962), Arnold Sorsby (1958) and Heinrich Muschmann (1925) studied evidence about Noah, John Milton,

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racial destiny in Australia, Carlton, South Vic.: Melbourne University Press (2005). For representational and aesthetic aspect of whiteness see: Richard Dyer, *White: essays on race and culture*, London: Routledge (1997); Gail Ching-Liang Low, *White Skins, Black Masks: representation and colonialism*, London: Routledge (1996). For whiteness as fuelling political and economic tensions see: Matt Wray, *Not Quite White: white trash and the boundaries of whiteness*, Durham, NC: Duke University Press (2007), David Roediger, *Working Towards Whiteness: how America's immigrants became white*, New York: Basic Books (2006); *The Wages of Whiteness: Race and the Making of the American Working Class*, London: Verso (1991); Robert Jensen, *The Heart of Whiteness: confronting race, racism and white privilege*, San Francisco: City Light Books (2005); Matthew Frye Jacobson, *Whiteness of a Different Colour: European immigrants and the alchemy of race*, Harvard: Harvard University Press (1998); Mike Hill, *Whiteness: a critical reader*, New York; London: New York University Press (1997).

[29] Ninou Chelala, *L'Albinos en Afrique: la blancheur noire énigmatique*, Paris: L'Harmattan (2007).

[30] Charles D. Martin, *The White African American Body: a cultural and literary exploration*, New Brunswick, New Jersey: Rutgers University Press (2002).

[31] Charlotte Anne Baker, *Enduring Negativity: representations of the black African albino in the novels of Didier Destremau, Patrick Grainville and Williams Sassine*, Ph.D.: thesis: University of Nottingham (2008); Roger Little, *Nègre Blanc: representations de l'autre autre*, Paris; L'Harmattan (1995).

Edward the Confessor and other prominent historical figures that may have had albinism.[32]

This research builds significantly on these historical perspectives. The first chapter, entitled 'A Condition of Empire: encounters, exhibitions, and examinations of unusually white people, 1650-1799' places representations of people now known to have had a form of albinism at the centre of a wider history of ideas about the phenomenon of unusual whiteness. It shifts the emphasis away from the rise of racial and pathological theories about albinism already explored by Andrew Curran (2008), Michael Kutzer (1990) and Winthrop Jordan (1968).[33] Instead it concentrates on the methods used in eighteenth-century science to produce knowledge about people with albinism. It argues that the imbalance of power between people with albinism when displayed and examined by scientists and their owners across Europe and North America resulted at times in violence and exploitation. The intention is to avoid a conventional history of ideas that replicates the eighteenth-century treatment of unusually white people as objects of scientific interest and popular curiosity. Albinism and its attendant impact on theories of race and disease are established but placed firmly within the context of encounters, public spectacles and private examinations.

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[32] Arnold Sorsby, 'Noah: an Albino', *British Medical Journal*, vol. 2, December 27 (1958), pp. 1587-1589; Peter Froggatt, 'The Albinism of Timur, Zāl, and Edward the Confessor', *Medical History*, vol. 6, October (1962), pp. 329-342; Heinrich Mutschmann, *The Secret of John Milton: an attempt to prove Milton was an albino*, Estonia: Dorpat (1925).

[33] Andrew Curran, 'Rethinking Race History: the role of the albino in the French Enlightenment life sciences', *History and Theory*, vol. 48, no. 3 (2009), pp. 151-179; Michael Kutzer, 'Kakerlaken – Rasse oder Kranke?: Die Diskussion des Albinismus in der Anthropologie der Zweiten Hälfte des 18. Jahrhunderts', in Gunter Mann and Franz Dumont, *Die Natur des Menschen*, Stuttgart: Fischer (1990); Winthrop Jordan, *White Over Black: American attitudes toward the Negro*, 1550-1812, Chapel Hill: University of North Carolina Press (1968).

The private examinations of people with albinism at the close of the eighteenth century sparked an increased level of interest in albinism in nineteenth-century medicine. The second chapter investigates the extent of this relationship between albinism and medicine. It analyzes the impact of medical knowledge about albinism on wider notions of normality and abnormality in nineteenth-century medical culture. It questions why so many medical and ophthalmological practitioners examined and speculated about this otherwise rare condition. It asks for what reasons did albinism appear in broader debates among medical practitioners about generation, congenital disease and consanguineous marriages? It also wonders why medical practitioners across Europe and North America conducted detailed examinations of the bodies and eyes of children with albinism?

Out of this overtly medical discourse, it highlights attention shifted in medicine in the 1850s towards a value-based notion of albinism. It examines this transition of albinism from medical category to biological and social condition. It argues this marked shift in the definition of albinism as a marker of biological value was tied to medical research into congenital disease and consanguinity. Family trees and population censuses including people with albinism broadened its association with other 'defects' that apparently limited an individual's capacity to work and live in society.

Debates among medical practitioners concerning albinism as congenital and possibly consanguineous disease led to its inclusion by biological thinkers in discussions about heredity. The third chapter examines

the connection between mid nineteenth-century heredity theories about albinism and early twentieth-century breeding experiments on albino animals. It investigates why albinism assumed a central role in biologists' pursuit of a viable theory to account for hereditary variations in humans and animals. It asks why albinism in both animals and humans proved so attractive to biologists and eugenicists? It investigates how heredity theories were put into practice through experimental breeding with animals with albinism in institutions and laboratories. Animals with albinism such as mice and guinea pigs became the archetypical experimental subject in a range of scientific disciplines. It also shows how biologists experimented on animals with albinism to obtain knowledge about the condition in humans. It concludes by citing the complex relationship between humans with albinism and British and North American eugenics research. The animal and human experimental subject with albinism presented an essential dialectic that was crucial to heredity theory and practice.

The final chapter engages with a change of perspective and adopts a totally different viewpoint. It challenges much of the apparent authority of the medical and intellectual history about albinism by analyzing the social identities, subjectivities and self-representations of people with albinism. It hopes to open up new perspectives on the complex trajectories of lives lived under highly unusual corporeal circumstances. It explores hitherto uncharted domains of personal experience, social identity and self-representation in relation to medical knowledge, and in terrains separate from scientific epistemologies. It is both a social and phenomenological history of people

with albinism. The crux of this research charts the interplay between individual agency, and the influence of nineteenth-century medical ideas defining albinism, which potentially altered the body's very meaning, value and ways of being in the world.

As evidence, this research draws on a range of primary sources. It uses archival material from the Karl Pearson Papers collection at University College, London. Pearson's meticulous preservation of his research papers and his correspondence is crucial to the third and final chapter of this thesis. This research also deploys the William Spooner archive at New College Oxford, which includes his autobiography, diaries, portraits and letters. Complementing these archival sources, there is extensive analysis of published eighteenth and nineteenth-century books, treatises, dissertations and medical journal articles in the English, French and German language. Of note is ephemera held at the John Ryland's library, Deansgate, and the Welcome Library including Robert Lowe's autobiography and rare medical and ophthalmological writings. It also benefits from the comprehensive collection of pan-European publications held by *Eighteenth Century Collections Online*.

Chapter One

A Condition Of Empire: Encounters, Exhibitions and Examinations of Unusually White People, 1650-1800

> There is one Complexion so singular, among a sort of People of this Country, that I never saw nor heard of any like them in any part of the World. [1]
>
> Lionel Wafer, *A New Voyage and Description of the Isthmus of America* (1699).

From May 1681, Welsh surgeon and privateer Lionel Wafer (c.1640-1705) lived for a few months with a 'People' with a 'Complexion so singular' on the Isthmus of Darien in Central America.[2] In his *A New Voyage and Description of the Isthmus of America* (1699), Wafer included detailed observations of these 'white *Indians*' for a pan European readership. Wafer's travel account was read across Europe. He published a second edition in 1704. It was also translated into French (1706), German (1759), and Swedish (1789). For the historian Oskar Spate, Wafer's detailed and credible observations have lasted as a 'precious document for ethno-history'.[3] Wafer judged their complexion to be, 'Milk-white, lighter than the colour of any *Europeans*,

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[1] Lionel Wafer, *A New Voyage and Description of the Isthmus of America, giving an account of the author's abode there, the form and make of the country, the coasts, hills, rivers, &c. woods, soil, weather, &c. trees, fruit, beasts, birds, fish, &c: the Indian inhabitants, their features, complexion, &c. their manners, customs, employments, marriages, feasts, hunting, computation, language, etc.: with remarkable occurrences in the South Sea and elsewhere,* London: James Knapton (1699), p. 134. Wafer was present in Panama, not just as a surgeon, but also as a 'spy' for potential resources for the British. He produced a 'secret report' for the British government reprinted in L.E. Elliott Joyce, *A New Voyage and Description of the Isthmus of America*, Oxford: Hakluyt Society (1933). This secret report seems to be the first estimate of England's options for planting a colonial expansion into the South Seas. Aside from detailing key harbors on the mainland coasts of Peru and Chile, Wafer suggested Juan Fernandez would be ideal for anchorage and a fit place for settlement having alighted there in 1680.

[2] Anthropological study of the Tule or Cuna indigenous groups in the 1980s revealed they consist of a complex division of people into many sub-groups. In the San Blas area of Panama there is still a high incidence of albinism. See: Pascale Jeambrun and Bernard Sergent, *Les enfants de la lune: l'albinisme chez les Amérindiens*, Paris: INSERM (1991), p. 61.

[3] Oskar Spate, *The Pacific since Magellan: monopolists and freeholders*, vol. 2, Minneapolis: University of Minnesota Press (1983), p. 157.

and much like that of a white Horse'.[4] His analogies with existing shades of whiteness stressed its novelty and intensity. The 'white *Indians*' Wafer encountered undoubtedly had a form of albinism.[5] Though visibly 'singular' in appearance, Wafer believed the 'white *Indians*' belonged to the wider '*Indian*' population. He observed they are, 'not a distinct Race by themselves (as) now and then one is bred of a Copper-colour'd Mother and Father…(though) how these came to be white…I leave others to judge of'.[6] In Wafer's view, then, the 'white *Indians*' embodied an entirely new human complexion, a whiteness intensified, and, according to him, never seen before amongst 'Europeans'.[7]

Wafer's narrative about the 'white *Indians*' reflects a wider cultural turn towards a more ordered, empirically driven approach to the collection of knowledge about the natural world among naturalists in the seventeenth century.[8] Eighteenth-century philosophers and naturalists across Europe read Wafer's account of the 'white *Indians*' and posed many questions in print about its possible origin, cause and ultimate meaning. This enigmatic shade of whiteness helped to concentrate intellectual endeavor in several fields of enquiry. This pursuit of knowledge,

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[4] Lionel Wafer, *A New Voyage and Description of the Isthmus of America...etc*, London: James Knapton (1699), p. 135.
[5] This reference to 'albinism' is not an anachronistic diagnosis. It is an attempt to render Wafer's description coherent within a modern frame of reference to albinism.
[6] Wafer, *A Voyage and Description of the Isthmus of America…etc* (1699), p. 138.
[7] Though Wafer compared the whiteness of the 'white *Indians*' with 'Europeans' he was not making a racial distinction. According to historian Roxanne Wheeler, 'colour was the primary signifier of difference…(by) the last quarter of the eighteenth century' in Britain. See: Roxanne Wheeler, *The Complexion of Race: categories of difference in eighteenth-century British culture*, Philadelphia: University of Pennsylvania Press (2000), p. 7. For the history of European identity see: Heikki Mikkeli, *Europe as an Idea and as Identity*, Basingstoke: Macmillan (1998); Barbara B. Diedendorf and Carla Hesse (eds.), *Culture and Identity in Early Modern Europe, 1500-1800*, Ann Arbor: Michigan University Press (1993).
[8] Wafer's account was sober and observant. Francis Bacon and Robert Boyle's instructions issued throughout the seventeenth-century to make travel accounts more systematic and detailed were clear influences on Wafer's careful style. See: P.J. Marshall and Glyndwr Williams, *The Great Map of Mankind: British perceptions of the World in the age of the Enlightenment*, London: J.M. Dent and Sons (1982), pp. 45-48.

however, necessarily involved the voluntary and involuntary participation of men, women and children with albinism in encounters, public exhibitions, and private examinations.

This chapter traces representations of unusually white people with albinism in encounters, exhibitions, and examinations undertaken by European explorers and thinkers. It investigates the extent to which these three epistemological, chronological and spatial groups contributed to the treatment of people deemed to be unusually white in appearance in both colonial and metropolitan contexts. It asks why did this unusually white complexion require elucidation? How did this difference in skin colour destabilize prevailing seventeenth and eighteenth century ideas about European whiteness, race and human value? To what extent did this rare deviation of hue signify a transition from the early modern age of monsters to the Enlightenment terrains of science and philosophy? A classificatory system for albinism did not exist until 1775 in Germany thus contemporaries grouped together all forms of unusually white pigmentation such as vitiligo and the many forms of albinism. This chapter deploys the term unusually white people to denote individuals with albinism, as its rarity was a distinguishing feature for western observers.

The first section maps out the initial encounters between explorers, privateers, and unusually white people from the sixteenth to the late seventeenth century. It analyzes how travel writers defined unusually white people throughout the

seventeenth century as colonial objects of wonder and curiosity.[9] The second section connects the rise of the slave trade to the burgeoning practice of transporting unusually white people from Africa and South America for exhibition. Mid-century exhibitions at scientific academies and salons epitomized an Enlightenment fascination with humans who seemed to transgress the order of nature. The final section investigates how these public and scientific exhibitions led to private examinations and autopsy from the 1770s. Private examinations by naturalists revealed the entire naked body of people with albinism. It concludes with the first autopsy of a man with albinism in Italy. This autopsy completes the process of gradually increasing proximity between Europeans and people with albinism.

Colonial Encounters

The first encounters between unusually white people and explorers took place in Africa, Indonesia, South America and Jamaica during the seventeenth and early eighteenth century. Seventeenth-century Portuguese and Dutch explorers encountered unusually white people in Africa. As explorers incorporated unusually white people into their ideas about 'European' whiteness they articulated new collective names for unusually white people, and detailed their place in African society. It suggests the treatment of unusually white people in Africa tended towards royal patronage, enslavement, or popular persecution.

Beyond Africa, a seventeenth-century encounter occurred between Swedish explorers and unusually white people on Tharnado, an island off Indonesia. The

[9] For the notion of 'wonders' in the early modern period see: Lorraine Daston and Katherine Park, *Wonders and the Order of Nature*, New York: Zone Books (1998).

sources claim island inhabitants exiled and murdered unusually white people in their society. However, this early modern account is unreliable, as many elements central to the story echo representations drawn from myth. Nevertheless it includes details of an encounter between an unusually white woman and a Swedish ship's captain that alludes to a growing desire among western explorers to acquire unusual people for examination and exhibition. The concluding section further develops the encounter between Lionel Wafer and the unusually white Cuna of Darien. Wafer's account rehashed the seventeenth-century stories of unusually white people living as nocturnal animal/human hybrids. Yet his observations about unusually white people being smaller than average and physically weaker than the majority became widely accepted among eighteenth-century naturalists. All these colonial encounters contributed to the eventual exhibition and display of unusually white people in Europe.

Expansion into hitherto unexplored lands by Spain, Portugal and Britain from the fourteenth century inaugurated what historian David Abulafia calls 'the discovery of mankind'.[10] Colonial endeavors made by explorers and privateers initiated the first encounters with unusually white people.[11] Europeans pursued this 'discovery' in the name of science, religion and commerce. The 'discovery' of unusually white people is therefore inextricably tied to this early modern European

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[10] David Abulafia, *The Discovery of Mankind: Atlantic encounters in the age of Columbus*, New Haven; London: Yale University Press (2008). For this Europe-wide expansion into unexplored regions of the world see: J.H. Elliot, *Spain, Europe, and the Wider World, 1500-1800*, New Haven; London: Yale University Press (2009); P.C. Emmer, *A Deus Ex Machina Revisited: Atlantic colonial trade and European economic development*, Leiden: Brill (2006); Michael J. Seymour, *The Transformation of the North Atlantic World, 1492-1763*, Westport, Conn.; London: Praeger (2004).

[11] For histories of colonial encounters between Europeans and indigenous peoples see: Colin G. Calloway, *White People, Indians, and Highlanders: tribal peoples and colonial encounters in Scotland and America*, Oxford; New York: Oxford University Press (2008).

culture of mapping unknown lands and peoples.[12] After the first explorations along the coast of West Africa by explorers and Jesuit missionaries during the fifteenth century, Europeans began to assemble an image of 'Ethiopians' as well as 'albinos' and dondos'.[13] Jesuit travelers seeking to spread the Catholic faith complemented privateers in search of fame, gold and souls.[14]

These initial forays made by early modern travelers blossomed in the eighteenth century into a fully realized imperialist impetus across Europe. European monarchies sought new lands for increasing territorial influence and the full exploitation of natural resources.[15] Historian Elizabeth Bohls characterizes this era of travel and colonialism as 'mercantile capitalism…with national interests in imperial expansion'.[16] This enterprising spirit is borne out by early eighteenth-century travel narratives such as Lionel Wafer's on 'America', which featured extensive lists of available commodities or natural resources.[17] Acquisition of natural resources required fastidious documentation of plants, animals and humans. Thus profit went hand in hand with the rise of colonial science.[18] The first encounters with

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[12] For example see: Norman J.W. Thrower, *Maps and Civilization: cartography in culture and society*, Chicago: Chicago University Press (1996).
[13] Roxanne Wheeler, 'Geographies of Savagery and Civility in Early Eighteenth Century Narratives' in James Duncan and Derek Gregory (eds.), *Writes of Passage: reading travel writing*, London; New York: Routledge (1999), p. 14; Philip D. Curtin, The *Image of Africa: British Ideas and Action*, 1780-1850, London: Macmillan (1965), p. v.
[14] For Jesuit missionaries traveling in the early modern period see: Liam Mathew Brockey, *Journey to the East: the Jesuit mission to China, 1579-1724*, Cambridge, Mass.; London: Belknap Press (2007); Norman Etherington (ed.), *Missions and Empire*, Oxford: Oxford University Press (2005); Allan Greer (ed.), *The Jesuit Relations: natives and missionaries in seventeenth-century North America*, Boston: St. Martin's (2000).
[15] Elizabeth A. Bohls and Ian Duncan (eds.), *Travel Writing: an anthology*, Oxford: Oxford World Classics (2005), p. xv.
[16] Bohls and Duncan (eds.), *Travel Writing: an anthology* (2005), p. xv.
[17] Wheeler, 'Geographies of Savagery and Civility in Early Eighteenth Century Narratives' in James Duncan and Derek Gregory (eds.), *Writes of Passage: reading travel writing* (1999), p. 18.
[18] For the connection between the rise of science and mercantile expansion see: James Delbourgo and Nicholas Dew (eds.), *Science and Empire in the Atlantic World*, New York: Routledge (2008); Londa Schiebinger and Claudia Swan (eds.), *Colonial Botany: science, commerce, and politics in the early modern*

unusually white people are inescapably defined by economic, scientific and religious expansion by Europeans in the sixteenth century in Africa, the sixteenth and seventeenth century in America, and in the eighteenth century in the Pacific.

Encounters with unusually white people chimed with explorers' expectations drawn from medieval and early modern records of finding wonders that 'tended to cluster at the margins rather than at the centre of the known world'.[19] Nevertheless, unusually white people appeared in travel literature as 'remarkable' or 'singular' humans, and not primarily as monsters.[20] Late seventeenth and early eighteenth-century travel authors wrote increasingly in 'sacralised frames of reference' as they brought forth complex taxonomies of cultural difference and natural histories filled with rich detail and empirical description.[21] From the 1690s, the motivation for explorers to publish accounts of their travels was primarily a question of commercial profit.[22] Indeed, as Marshall and Williams argue, the seventeenth century period reveals a 'marked growth in the output of travel books and in the amount of critical

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world, Philadelphia: University of Pennsylvania Press (2005); Richard Harry Drayton, *Nature's Government: science, imperial Britain, and the 'improvement' of the world*, New Haven, Conn.: Yale University Press (2000); John Gascoigne, *Science in the Service of Empire: Joseph Banks, the British state, and the uses of science in the age of revolution*, Cambridge; New York: Cambridge University Press (1998).

[19] Lorraine Daston and Katherine Park, *Wonders and the Order of Nature*, Zone Books: New York (1998), p. 14.

[20] Monsters and other fantastical elements so prevalent in medical travel literature did not appear in Wafer's writing. For example see: Jeffrey Jerome Cohen, *Hybridity, Identity and Monstrosity in Medieval Britain: on difficult middles*, New York: Palgrave Macmillan (2006); David Williams, *Deformed Discourse: the function of the monster in mediaeval thought and literature*, Exeter: University of Exeter Press (1996).

[21] James Duncan and Derek Gregory (eds.), *Writes of Passage: reading travel writing*, London; New York: Routledge (1999), p. 5. See also: Glenn Hooper and Tim Youngs (eds.), *Perspectives on Travel Writing*, Aldershot: Ashgate (2004).

[22] P.J. Marshall and Glyndwr Williams, *The Great Map of Mankind: British perceptions of the world in the age of Enlightenment*, London: J.M. Dent and Sons (1982), p. 48. See also: Marcus Rediker, *Between the Devil and the Deep Blue See: merchant seamen, pirates and the Anglo-American maritime world*, Cambridge: Cambridge University Press (1987).

attention devoted to them'.[23] Thus the accounts of unusually white people in travel literature coincided with its increased and marked popularity as a genre by the start of the eighteenth century.

Travel narratives were central in early eighteenth-century European culture. Historian Roxanne Wheeler argues that in eighteenth-century England travel literature was 'second only to theological texts in popularity'.[24] The point here is descriptions of unusually white people spread across Europe to a scientific and lay readership. This travel literature provides, 'an important historical source for the study on how identities are constructed through cultural practice and discursive networks of perception and interpretation'.[25] The construction of the 'albino' identity is no exception.

Before Lionel Wafer's account of the 'white *Indians*' of Darien, several seventeenth-century authors referred explicitly to unusually white people. In 1699, Wafer claimed not to know about this 'singular Complexion' in Europe. However, many early modern explorers and travelers recorded the presence of unusually white people in indigenous groups in Africa and the Pacific. Their published observations offer not only descriptions of this newly 'discovered' whiteness, but also an indication of the value and place of unusually white people in several indigenous societies. The first significant encounters between unusually white people and western travelers occurred in Africa. Between 1590-1610, the English

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[23] P.J. Marshall and Glyndwr Williams, *The Great Map of Mankind: British perceptions of the world in the age of Enlightenment*, London: J.M. Dent and Sons (1982), p. 7.
[24] Roxanne Wheeler, 'Geographies of Savagery and Civility in Early Eighteenth Century Narratives' in James Duncan and Derek Gregory (eds.), *Writes of Passage: reading travel writing*, London; New York: Routledge (1999), p. 14.
[25] Hagen Schulz-Forberg (ed.), *Unravelling Civilisation: European travel and travel writing*, Brussels: P.I.E. (2005), p. 13.

explorer Andrew Battell met with 'white children' born from 'black parents' in Loango (Congo).[26] According to Battell's account of his travels through Africa, the 'dondos' are, 'white children…as white as any white man', and reside with the king of Loango.[27] The term 'dondos' was an indigenous name, not an invention by the English explorer. Unfortunately, Battell provides no further detail of the exact status of the 'white children' in the court of the African monarch.

Half a decade later – in concordance with Battell's account – Balthazar Tellez (1595-1675), a Portuguese Jesuit missionary journeying along the coast of West Africa, similarly encountered white Ethiopians among black Africans. Tellez named the white people he saw 'Albinos', literally meaning 'white people'. Tellez published the first reference to 'albinos' in *Historia General de Ethiopia* (1660).[28] Several translations in French, Dutch and English of Tellez's account of the 'albinos' of West Africa subsequently appeared during the second half of the seventeenth and early eighteenth century.[29]

Following Tellez's sighting and naming of 'Albinos', Olfert Dapper, a Dutch compiler, offered a more substantial account of 'dondos' also placed in Loango. As with Tellez's writing, John Ogilby translated Dapper's work into English in 1670,

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[26] Andrew Battell, *The Strange Adventures of Andrew Battell of Leigh in Angola and Adjoining Regions* (1590-1610), ed. George Ravenstein, London: Hakluyt Society (1901), p. 48.
[27] Battell, *The Strange Adventure of Andrew Battell of Leigh in Angola and Adjoining Regions* (1590-1610), p. 81.
[28] Balthazar Tellez, *Historia general de Ethiopia Alta ov Preste Joã e do que nella obraram os Padres da Companhia de JESUS composta na mesma Ethiopia pelo Padre Manoel d'Almeyda, Abreviada com nova releçam e methodo pelo Padre Balthezar Tellez*, Coimbra (1660).
[29] Charles de Ferrar du Tot (trans.), *Extract de l'histoire d'Ethiopie*, Rouen (1671); *Naauw-keurige aanteekeningen van den eerwaarden vader Manuel d'Almeida, wegens Opper-Ethiopien, geduurende sijn verblijf aldaar gehouden*, Leyden: Pieter van der Aa. (1707), John Stevens (trans.), Balthazar Tellez, *The Travels of The Jesuits in Ethiopia: containing the geographical description of all the kingdoms*, and provinces of that empire, London: James Knapton, A. Bell (1707).

and it was also published by Dapper in French in 1688.[30] Dapper corroborated Battell's account of unusually white people living in Loango. Dapper offered a highly descriptive passage about 'certain White men …with Skins on their heads…at a distance seem like our Europeans, having not only gray eyes, but red or yellow hair'.[31] Comparison between the whiteness of the 'dondos' and 'Europeans' was a recurring trope of early modern travel narratives. Dapper, however, adds an unprecedented attempt to describe and place this whiteness through direct comparison with existing objects. He reported that when approached, the 'white men':

> Have not a lively colour, but white, like the Skin of a dead Corps (sic), and their Eyes as it were fixed in their heads, like people that lie a dying: the sight they have is but weak and dim, turning the eye like such as look asquint, but at night they see strongly, especially by Moon-shine.[32]

Dapper's observation that this whiteness is like that of a 'dead corps' resurfaces in many preceding publications on unusually white people in the eighteenth century. In addition, the parallel with Wafer's comparison of the whiteness of the 'white *Indians*' with 'Europeans' made in 1699 is striking. It may be coincidence; Wafer

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[30] John Ogilby, *Africa being an Accurate Description of the Regions of Aegypt, Barbary, Aethiopia, and the Billedulgerid, etc.*, London: Thomas Johnson (1670). Dappers's account was also translated into French. See: Olfert Dapper, *Description de l'Afrique contenant les noms, la situation et les confines de toutes ses parties*, Amsterdam: Wolfgang, Waesberge, Boom and van Someren (1686).
[31] Ogilby, *Africa being an Accurate Description of the Regions of Aegypt, Barbary, Aethiopia, and the Billedulgerid, etc.* (1670), pp. 508-509, cited in Andrew Curran, 'Rethinking Race History: the role of the Albino in the French Enlightenment Life Sciences', *History and Theory*, vol. 48, October (2009), p. 154.
[32] Ogilby, *Africa being an Accurate Description of the Regions of Aegypt, Barbary, Aethiopia, and the Billedulgerid, etc.* (1670), pp. 508-509, cited in Curran, 'Rethinking Race History: the role of the Albino in the French Enlightenment Life Sciences' (2009), p. 154.

compares the whiteness to 'milk' and a 'white horse' as opposed to Dapper's 'dead corps'.

The questionable originality of Wafer's narrative aside, Dapper shifts his focus on to the place of the unusually white 'dondos' in Loangan society. His evidence is contradictory. Dapper concurred with Battell's account that certain 'dondos' received patronage or became enslaved by the king of Loango. However, Dapper also reports the wider African population treated the Dondos' as 'monsters' and 'did not allow them to procreate'.[33] Thus it seems 'dondos' in Lonangan society are locatable on opposite ends of a social hierarchy that constituted royal protection or public vilification.

These seventieth-century encounters with 'dondos' and 'Albinos' in Africa offer certain insights into the place of unusually white people in early modern African society. The two dominant modes of behavior towards unusually white people in Africa seem to be persecution and reverence. Yet, it is difficult to form a detailed picture of the treatment and status of unusually white people beyond these two extremes. Encounters with unusually white people in Indonesia may help to shed light on the patchy African sources.

In 1667, during an expedition to Japan, the Swedish explorer Nils Matssson Kjöping (1630-1667) detailed an encounter with 'a peculiar kind of people…called

[33] Olfert Dapper, *Description de l'Afrique contenant les noms, la situation et les confines de toutes ses parties*, Amsterdam: Wolfgang, Waesberge, Boom and van Someren (1686), in *Objets Interdits,* Paris: editions Dapper (1989), p. 25.

Kakurlacko' on Tharnado, one of the Moluccas islands off Indonesia.[34] Kjöping described the 'Kakurlacko' as 'snow-white, both skin and hair' and contrasts them with the 'inhabitants (who) are black'.[35] According to Kjöping, the 'Kakurlacko' were 'regarded as vermin and killed whenever they are found by the inhabitants'.[36] The notion that they are 'vermin' is reflected in the indigenous name; 'Kakurlacko' refers to an insect common to the region, probably a species of cockroach. To avoid persecution, Kjöping claims the 'Kakurlacko' of Tharnado, 'hide themselves in secret caves during the day (as) during the day they are altogether blind as if their eyes had been put out'.[37] Karl Pearson analyzed this mention of nocturnal cave dwellers as being analogous with Pliny's 'Troglodytae', drawn from this tradition rather than from actual events.[38]

Perhaps the 'Kakurlacko' did not actually reside in caves, and they may have been permanent outcasts in Tarantanian society. It is not possible to take Kjöping's narrative literally, however. It is highly probable his account of a persecuted 'white' minority by the 'black' majority is greatly exaggerated. Kjöping claims a war was daily waged between the inhabitants of Tharnado and the 'Kakurlacko'. At night, in response to being killed on sight, the 'Kakurlacko' apparently 'occupy themselves with pilfering and theft, stealing by night all that the inhabitants have sown and

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[34] Nils Matssson Kjöping, *Een kort Beskrifining uppä Trenne Reesor och Peregrinationer sampt Konungarijket Japan*, Wisingborgh (1667), p. 146, in Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, vol. 1, Cambridge: Cambridge University Press (1911), p. 24.
[35] Nils Matssson Kjöping, *Een kort Beskrifining uppä Trenne Reesor och Peregrinationer sampt Konungarijket Japan*, Wisingborgh (1667), p. 146.
[36] Kjöping, *Een kort Beskrifining uppä Trenne Reesor och Peregrinationer sampt Konungarijket Japan*, Wisingborgh (1667), p. 146.
[37] Kjöping (1667), p. 146.
[38] Pliny, *Naturalis Historia*, Vol. 5, Chapter 8, in Karl Pearson, Edward Nettleship, Charles Usheer, *A Monograph on Albinism in Man*, vol. 1, Cambridge: Cambridge University Press (1911), p. 24.

planted'.[39] The seizure of food from this openly violent Tarantanian society – who deemed its unusually white members to be 'vermin' – is plausible. Kjöping's claim that the 'Kakurlacko' are nocturnal, however, this claim is similar to Wafer's statement that the 'white *Indians*' are, 'Restive in the Day-time, yet when Moon-shiny nights come, they are all Life and Activity, running abroad, and skipping into the Woods like Wild-Bucks'.[40] As with the 'Kakurlacko' in Kjöping's account, Wafer uses comparisons with animal-like behavior to describe the 'white *Indians*' at night. It seems indeed Wafer's account may have contained elements of myth drawn from either classical sources, or perhaps from Kjöping's own story. Nevertheless, albinism does involve heightened sensitivity to bright light, and a strong tendency for skin to burn easily through exposure to the sun.

Kjöping positions the 'Kakurlacko' in the oppositions of night and day, black and white and speaking and whistling. He claimed the 'Kakurlacko' invented 'their own language, which they utter with a whistling sound; it in no way corresponds with the proper speech of the county'.[41] Yet, is it plausible the Swedish explorer could distinguish between the indigenous languages of Tharnado? The evidence to support Kjöping's claims that the 'Kakurlacko' formed a community of resistance, geographically and linguistically separate from the 'black' is highly suspect.

Though Kjöping's account of the Tarantanians and the 'Kakurlacko' is based on a blend of myth and invention, he does include a detailed and credible story of an encounter with a Kakurlacko' woman. According to Kjöping, the captain of the ship

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[39] Kjöping, p. 146.
[40] Lionel Wafer, *A New Voyage and Discription of the Isthmus of America*, London: James Knapton (1699), p. 109.
[41] Nils Matssson Kjöping, *Een kort Beskrifining uppä Trenne Reesor och Peregrinationer sampt Konungarijket Japan* (1667), p. 146.

Kjöping sailed with tried to examine one of the 'Kakurlacko' individually. Her captivity and display is a precursor of an evolving eighteenth-century trade in human bodies in the South Pacific.[42] According to Kjöping, the sea captain, 'asked the Tarantanians to give one of these Kakurlacko to him'. Kjöping records that:

> A woman was given to him who at first could eat no cooked food, nor did she know in the least how to conduct herself for she could see nothing; but the more she got used to or was driven into the sun or daylight the better she could see.

It seems being able to eat 'cooked food' was an indicator for the Swedish captain of correct or civilized behavior. The woman was likely accustomed to a nocturnal existence.

The captain's principle motive was probably to discover if the 'Kakurlacko' woman was anything like 'Europeans', let alone other humans. He tried to acclimatize her to his own world of cooked food and daylight apparently with some 'success'. However, this transition was forced; the woman was treated as an exotic object, 'forced' to endure the pain of bright daylight to assuage the Captain's curiosity. Kjöping's story about the unusually white woman is probably not an invention tied to myth or legend. Certainly the physical proximity of this encounter between the 'Kakurlacko' woman and the Swedish explorers is an episode that

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[42] Barbara Creed and Jeanette Hoorn (eds.), *Body Trade: captivity, cannibalism and colonialism in the Pacific*, New York: Routledge (2001), p. xiv.

epitomizes a wider need by explorers and naturalists to collect greater knowledge about unusual whiteness in humans through sustained observation.[43]

Kjöping's narrative resonates strongly with Wafer's later account of the 'white *Indians*' in Darien. Aside from the 'singular complexion', Wafer observed the 'white *Indians*' looked shorter in physical stature, and seemed to lack strength. Wafer wrote:

> They are not so big as the other Indians…they are but a weak People in Comparison with the other, and not fit for hunting or laborious exercise, nor do they delight in any such'.[44]

Wafer probably referred to a tendency for the 'white *Indians*' to avoid the 'daylight' due to heightened sensitivity to the brightness of the sun caused by albinism. The 'Kakurlacko' and 'white *Indians*' may have led a nocturnal way of life out of necessity due to their bodily condition, and not chosen to hide themselves away solely due to persecution in society. In terms of social status, the 'white *Indians*' are interpreted by Wafer as inferior to the rest of the Cuna population. In a similar vain to the 'dondos' and 'Kakurlacko' in Africa and Indonesia, Wafer observed that the 'Copper-coloured Indians seem not to respect these so much as those of their own complexion, looking on them as somewhat monstrous'.[45] Yet, crucially, there is no evidence in Wafer's account of violent persecution or enslavement of the 'white *Indians*' by the indigenous population.

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[43] Londa L. Schiebinger, *Nature's Body: gender in the making of modern science*, 2nd ed., New Brunswick, New Jersey: Rutgers Unviersity Press (2004), p. 76.
[44] Lionel Wafer, *A New Voyage and Description of the Isthmus of America*, London: James Knapton (1699), p. 108.
[45] Wafer, *A New Voyage and Description of the Isthmus of America* (1699), p. 109.

The Cuna themselves believed the 'white *Indians*' arose from an accidental impression being made on pregnant mothers by the moon. According to Wafer, the Cuna people believed the origin of this whiteness was, 'through the force of the Mothers Imagination, looking on the Moon at the time of the Conception'.[46] Ultimately, Wafer provides no evidence of violence perpetrated by the Cuna against the 'white *Indians*'.

Wafer's account formed a pivotal point of reference for almost every author who wrote on the subject of unusually white people during the eighteenth-century rise of the life sciences.[47] In light of its original content, naturalists, philosophers and medical practitioners accepted Wafer's description of the 'white *Indians*' as a trustworthy source. Wafer achieved this widespread credibility by partly eschewing myths and traditions present in medieval and early modern travel narratives of human animal hybrids and monsters residing in distant regions of the World.[48] His account belonged to a new order of 'modern' travel writing that rejected reconstruction of people and places through the eyes of classical and medieval texts.[49]

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[46] Lionel Wafer, *A New Voyage and Description of the Isthmus of America*, London: James Knapton (1699), p. 110.
[47] As Richard Yeo points out the classification of 'science' and 'scientists' must be approached with caution in order to avoid 'importation of later disciplinary categories'. 'Naturalists' and other thinkers produced many 'new maps of knowledge' that stretched the old 'classificatory boundaries'. See: Richard Yeo, 'Classifying the Sciences', in Roy Porter (ed.), *The Cambridge History of Science: eighteenth century science*, vol. 4, Cambridge; New York: Cambridge University Press (2008), p. 242.
[48] For histories of early modern travel narratives see: Ivo Kamps and Jyotsna G. Singh (eds.), *Travel Knowledge: European 'discoveries' in the early modern period*, New York; Basingstoke: Palgrave (2001). For monsters in early modern European tradition see: Timothy S. Jones and David A. Sprunger (ed.), *Marvels, Monsters and Miracles: studies in the medieval and early modern imaginations*, Kalamazoo, Mich.: Medieval Institute Publications (2002); Peter G. Platt (ed.), *Wonders, Monsters and Marvels in Early Modern Culture*, Newark: University of Delaware Press (1999); Lorraine Daston and Katherine Park, *Wonders and the Order of Nature*, New York: Zone Books (1998).
[49] Harry Liebersohn, 'Anthropology Before Anthropology', in Henrika Kucklick, *A New History of Anthropology*, London: Routledge (2008), p. 19.

The final encounter under examination here occurred north of Panama in Jamaica during the first decade of the eighteenth century. Jamaica was a British colony after its conquest in 1655.[50] The Scottish physician and collector Hans Sloane (1660-1753) recorded his encounter and examination in 1707 of 'a young Woman white all over, born of a black Mother'.[51] This episode marks the transition from colonial encounters to scientific exhibition and examination in Europe. Sloane wrote that he was driven by 'Curiosity to go and see her', as he had already seen in *England* 'a Black, a Servant of Mr. *Birds* (sic), which was mottl'd or spott'd with white spots in several parts of his Body and *Penis*'.[52] Sloane here references the physician William Byrd's account of a boy 'about Eleven Years Old' exhibited by his owner Charles Wager at the *Royal Society* in London in 1695.[53] Byrd writes the boy comes from 'the upper parts of the Rappahanock River, in *Virginia*'.[54] Sloane's familiarity with the gradually whitening body of the young boy in England shaped his encounter with the unusually white woman in Jamaica. Sloane drew no particular distinction between the 'mottl'd' and 'spott'd' boy and the 'young woman, white all over'. Both offered examples of a curious reversal of complexion.

Verifying her status as a slave, Sloane reports the mother of the young woman had been 'bought by Captain Hudson, on her landing in *Jamaica*, about

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[50] P.J. Marshall, *The Oxford History of the British Empire: the eighteenth century*, vol. 2, Oxford: Oxford University Press (1998), p. 2.
[51] Hans Sloane, *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and Jamaica with the Natural History ... of the Last of Those Islands…&c.*, 2 vols., London: B.M. (1707), p. Liii.
[52] Sloane, *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and Jamaica with the Natural History ... of the Last of Those Islands…&c.* (1707) ,p. Liii.
[53] William Byrd, 'An Account of a Negro-Boy that is Dappled in Several Places of his Body with White Spots', *Philosophical Transactions*, vol. 19 (1695-97), p. 781.
[54] Byrd, 'An Account of a Negro-Boy that is Dappled in Several Places of his Body with White Spots', *Philosophical Transactions* (1695-97), p. 781.

eleven weeks before the delivery of this Daughter'.[55] Sloane described this unexpectedly white woman in detail. He wrote:

> She was twelve years old, and perfectly white all over, middle siz'd, broad fac'd, flat nos'd, ill favour'd, and countenanc'd like a Black. Her hair was fair and white, but not lank like ours, or half lank, half woolly like those of Mulattoes, but short, wooly, and curled like those of the Blacks in *Guinea*.

Sloane treated her purely as an object of curiosity.[56] He gazed at her naked body that he found to be 'white all over', and he may have touched her 'short, wooly, and curled' hair. His intimate encounter echoes the examination of the unusually white women on Tharnado by the Swedish sea captain. However, Sloane's encounter reveals a partial shift in discourse from Dapper, Wafer and Kjöping's narratives. Whereas they compared this whiteness with the whiteness of Europeans, Sloane saw the complexion and physical stature as having more affinity with 'other Blacks'. Indeed, even though Sloane describes her as 'perfectly white all over', he defines her as being 'like a Black' in all other somatic respects. Thus her status as a slave is not altered by her unusually white appearance.

From these early physical examinations there is evidence for a discursive shift in both the representation and practical treatment of unusually white people. Initially observed at a certain distance in their own indigenous locations by Battell, Tellez and Wafer, at the turn of the eighteenth century unusually white people

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[55] Hans Sloane, *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and Jamaica with the Natural History ... of the Last of Those Islands…&c.*, 2 vols., London: B.M. (1707), p. Liii.
[56] Hans Sloane's collection of animals and objects ended up forming the foundations of the British Museum. See: Eric St. Brooks, *Hans Sloane: the great collector and his circle*, London: Batchworth Press (1954); G.R. de Beer, *Sir Hans Sloane and the British Museum*, London: Cumberlege (1953).

became increasingly sought after as objects of curiosity, profitable commodities to be shipped back to Europe for further examination and judgment.

These early modern encounters between Europeans and unusually white people focused on the marginal place of people with albinism in African and Tarantanian society. Evidence for sixteenth and seventeenth-century Africa does allude to a form of royal protection, although this collection of 'dondos' around the king of Loango may have acted as his slaves. Before the arrival of western explorers, 'dondos' in Africa and the 'kakurlacko' on Tharnado may have engaged in regular and bloody conflict with the pigmented population. The prominence of mythical in these narratives, however, makes it probable that they owe more to the imagination of their authors than the actual social and cultural circumstances. The case of Wafer's encounter with the 'white *Indians*' is less clear. Though violence between the 'white *Indians*' and the 'copper colour'd' is not recorded, Wafer emphasizes their separate nocturnal way of life and their treatment as being somewhat 'monstrous'. The place of the 'white *Indians*' in their society is clearly differentiated by their colour, but their overall treatment is not prominently examined in Wafer's account.

The emerging 'modern' image of unusually white people from all of these sources is not entirely removed from the medieval and early modern stories and traditions related to monsters and the blend of the animal with the human in both body and behavior. Such encounters led Europeans to see whiteness never before seen in other peoples. These collisions reset the boundaries delineating the meaning of a 'white' complexion in western thought. This new whiteness acted as an imperfect mirror into which Europeans discovered a strange, unsettling likeness to

their own skin colour. As Schulz-Forberg argues, this search 'for the foreign' is a process that constantly reaffirms the self.[57] Unusually white people thus contributed to the definition of 'European whiteness'.

If This Is A Human: scientific exhibitions in France and Britain

Early modern colonial encounters between explorers and unusually white people in the seventeenth century shifted at the turn of the eighteenth century to public and scientific exhibitions in Europe. Traveler's tales fed the imaginations of their vast and voracious readership; unusual whiteness in the eighteenth century became synonymous with the strangeness and wonder of distant and recently explored lands and peoples. For eighteenth-century naturalists and philosophers, these travel accounts – especially Lionel Wafer's observations of the 'white *Indians*' in Darien – formed the foundation for a broader emergence of ideas and practices concerned with the Enlightenment science of 'Man'.[58] As historian Robert Wokler argues, 'No age of European intellectual history was more fascinated by ideas of human nature, by its biological and moral dimension, and its physical and spiritual attributes than the Enlightenment'.[59]

This discordant whiteness raised the curiosity of philosophers and naturalists to a marked mid-century intensity. European thinkers wanted to see and touch these

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[57] Hagen Schulz-Forberg (ed.), *Unravelling Civilisation: European travel and travel writing*, Brussels: P.I.E. (2005), p. 15.
[58] For the science of 'Man' during the Enlightenment see: William Clark, Jan Golinski, and Simon Schaffer, *The Sciences in Enlightened Europe*, Chicago: University of Chicago Press (1999); Christopher Fox, Roy Porter, and Robert Wokler, *Inventing Human Science: eighteenth-century domains*, California: University of California Press (1995); Sergio Moravia, 'The Enlightenment and the Sciences of Man', *History of Science*, vol. 8, No. 4, December (1980), pp. 247-268.
[59] Robert Wokler, 'Anthropology and Conjectural History in the Enlightenment', in Christopher Fox, Roy Porter, and Robert Wokler, *Inventing Human Science: eighteenth-century domains*, California: University of California Press (1995), p. 32.

unusually white people in the flesh, and they did. By exhibiting unusually white people, naturalists and philosophers remapped the boundaries of human nature through close scrutiny of its apparently original and primitive form.[60] Just like Man in general, unusually white people served as both object and subject of natural knowledge during the Enlightenment era.[61]

The ramifications for unusually white people during this wide-ranging interest in the eighteenth century varied. Brought by owners to scientific exhibitions, unusually white people were part of an Enlightenment project to categorize and classify humanity, race, and disease. There is a connection between the rise of these scientific exhibitions and the emergence of private examination of unusually white people during the second half of the eighteenth century.

Whereas travel accounts variously established 'albinos', 'dondos', 'Kakurlackos' and 'white *Indians*' within collective colonial contexts, scientific exhibitions concentrated on the study and description of individual cases of people with an unusually white complexion. This move to the public exhibition of the individual commenced at the turn of the eighteenth century when privateers and plantation owners purchased unusually white people as slaves. Ownership of unusually white people occurred at the height of the transatlantic slave trade in the eighteenth century.[62] For slave traders a 'white Negro' slave had the same status as a

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[60] Harry Liebersohn, 'Anthropology Before Anthropology', in Henrika Kucklick, *A New History of Anthropology*, London: Blackwell (2009), p 19.
[61] William Clark, Jan Golinski and Simon Schaffer (eds.), *The Sciences in Enlightened Europe*, Chicago: University of Chicago Press (1999), p. 169.
[62] For the rise of the transatlantic slave trade see: Jeremy Black (ed.), *The Atlantic Slave Trade*, 4 vols., Aldershot: Ashgate (2006); Kenneth Morgan (ed.), *The British Transatlantic Slave Trade*, 4 vols., London; Brookfield, VT.: Pickering and Chatto (2003); Johannes Postma, *The Dutch in the Atlantic Slave Trade, 1600-1815*, Cambridge; New York: Cambridge University Press (1990).

'black' slave' in terms of work, but was far more valuable as an object of curiosity for naturalists and philosophers. To a great degree, the unusually 'white negro' and 'white moor' became the new archetypes for the 'other' in Enlightenment culture.[63] Possession of unusually white people as slaves by Europeans ushered in the first scientific exhibitions of unusually white people with albinism in Paris and London from 1744 onward.

The adoption of slave labour coincided with the rise of public freak shows in seventeenth and eighteenth-century London, such as at Charing Cross and Bartholomew Fair.[64] Historian Rosemary Garland Thompson rightly sees this era as being characterized by the transformation of the 'foreboding monster into the whimsical freak'.[65] The transition from the early-modern nocturnal human/animal trope attached to unusually white people to the eighteenth-century 'freak' clearly supports Thompson's thesis. Charles D. Martin also concords with Thompson, and argues the public display of the 'white African American' 'freaks' for profit peaked in late eighteenth and nineteenth-century Britain and the United States.[66]

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[63] The constitution of this 'otherness' has several layers: primitive, monstrous and uncivlised. For similar examples of this other in eighteenth century Europe see Julia V. Douthwaite, *The Wild Girl, Natural Man, and the Monster: dangerous experiments in the age of Enlightenment*, Chicago; London: University of Chicago Press (2002); Martin Daunton and Richard Halpern (eds.), *Empire and Others: British encounters with indigenous peoples*, London: UCL Press (1999); Daniel Droixhe and Pol-P. Gossiaux (eds.), *L'homme des lumières et la découverte de l'autre*, Bruxelles: Éditions de l'Université de Bruxelles (1983).

[64] Richard Altick, *The Shows of London*, Cambridge, Mass.; London: Belknap Press (1978), p. 252; Robert Bogdan, *Freak Show*, Chicago: University of Chicago Press (1988), p. 6. For a history of 'white African Americans' and freak shows in the United States and Britain see: Charles D. Martin, *The White African American Body: a cultural and literary exploration*, New Brunswick, NJ; London: Rutgers University Press (2002).

[65] Rosemary Garland Thomson (ed.), *Freakery: cultural spectacles of the extraordinary body*, New York; London: New York University Press (1996), p. 6.

[66] Charles. D. Martin, *The White African American Body: a cultural and literary exploration*, New Brunswick, NJ; London: Rutgers University Press (2003), p. 69.

In this context, the place of the unusually white person in eighteenth-century European society decisively moved to being framed in many cases as 'freak' or 'monster'. There are exceptions to this freak discourse. Joanne Pope Melish proposes in *Disowning Slavery* (1998) the presence of white Africans at freak shows in the United States in the 1790s provoked an overtly political response during the turbulent period of emancipation and revolution.[67] Henry Moss – a black man who gradually turned white as he aged – along with a dozen other cases between 1788-1810, raised questions for a range of thinkers about the boundaries defining slavery, citizenship and even what it meant to be human.[68] These public freak shows and other ad hoc exhibitions of 'albinos' and 'white Negros' for profit share marked similarities with scientific exhibitions.

Though authors did not properly distinguish categories for these varied forms of fragmented pigmentation, the exhibition of unusually white people with albinism for scientific scrutiny began in the 1740s in Paris. The exhibition of unusually white people took place at a particularly propitious moment during the rise of the eighteenth-century life sciences.[69] Scientific examinations of unusually white people coincided with the development of academies as centers for scientific research and national patronage. Sanctioned by regal approval or state charters, societies and academies did not interact with universities, and pursued research

[67] Joanne Pope Melish, *Disowning Slavery: gradual emancipation and 'race' in New England, 1780-1860*, Ithaca; London: Cornell University Press (1998), p. 142.
[68] Melish, *Disowning Slavery: gradual emancipation and 'race' in New England, 1780-1860* (1998), p. 142.
[69] Thomas L. Hankins, *Science and Enlightened Europe*, Cambridge: Cambridge University Press (1985).

both for specific state projects and on an individual basis as with the exhibition of unusually white people.[70]

Exhibitions were 'scientific' because they took place within the confines of buildings designated for a select group of members definable as naturalists and philosophers. James E. McClellan suggests these academies contributed to a dramatic reorganization of eighteenth-century science.[71] McClellan argues academies and societies 'dominated organized and institutional science', which consequently places the exhibition of unusually white people right at the heart of Enlightenment scientific thought and practice.[72] Journals such as the *Philosophical Transactions* of the Royal Society recorded these scientific exhibitions, and communicated the results of new findings to an increasingly connected scientific community.[73] For example, reports of human anomalies such as Byrd's 'spotted boy' in 1695 referred to above filled the pages of *The Philosophical Transactions*. Other examples include The Norfolk pigmy, John Coan, scrupulously weighed and measured by William Arderon on April 3, 1750.[74] Apparently, at twenty-two years of age, Coan stood thirty-six inches tall, and weighted twenty-seven and a half pounds.[75]

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[70] James E. McLellan, *Science Reorganized: scientific societies in the eighteenth century*, New York: Columbia University Press (1985), p. 72.
[71] McLellan, *Science Reorganized: scientific societies in the eighteenth century* (1985), p. xix.
[72] McLellan (1985), p. xix.
[73] Dwight Atkinson, *Scientific Discourse in Socio-Historical Context: the Philosophical Transactions of the Royal Society of London, 1675-1975*, Mahwah; London: Lawrence Erlbaum (1999), xxiii. See also: Richard Yeo, *Encyclopedic Visions: scientific dictionaries and Enlightenment culture*, Cambridge; New York: Cambridge University Press (2001).
[74] David Erskine Baker, 'Extract of Letter from Mr. William Arderon, F.R.S. to Mr. Henry Baker, R.R.S. containing an Account of a Dwarf ; together with a Comparison of his Dimensions with those of a child under four years old', *Philosophical Transactions*, vol. 46, London (1749-1750), pp. 467-470.
[75] Christopher Fox, Roy Porter, and Robert Wokler (eds.), *Inventing Human Science: eighteenth-century domains*, Berkeley: University of California Press (1995), p. 6.

Such cases in scientific journals actually obtained publication faster than books, and therefore allowed a greater spread of information about unusually white people around this emerging European and transatlantic network of scientific thinkers.[76] This rapid method of disseminating information allowed debates to take place in print within the same year of an exhibition. In addition to the publication of articles, essays and short books, these eighteenth-century naturalists also held formal meetings to thoroughly scrutinize and validate the published empirical results as well as to examine cases in person.[77]

The two major organized scientific bodies – the *Royal Society* of London, founded in 1662, and the *Paris Academy of Science*, established four years later in 1666 – set the blueprint for almost all societies and academies to follow throughout Europe.[78] Both the Royal Society and the Paris Academy hosted exhibitions of unusually white people. Since 1720, the Paris Academy in particular was the stage for heated debate between anatomists Louis Lémery (1677-1743) and Jacques-Bénigne Winslow (1669-1760) about the origin of 'defective structures' in human 'monsters' such as presented by unusually white people. Winslow backed divine intervention whilst Lémery argued for the accidental rearrangement of parts in the

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[76] David A. Kronick, *A History of Scientific and Technical Periodicals: the origins and devopment of the scientific and technological press, 1665-1790*, Metuchen, New Jersey: Scarecrow Press (1976), pp. 88-89.
[77] James E. McLellan, 'Scientific Institutions and the Organization of Science', in Roy Porter (ed.), *The Cambridge History of Science: the eighteenth century*, vol. 4, Cambridge: Cambridge University Press (2003), p. 90.
[78] McLellan, 'Scientific Institutions and the Organization of Science', in Roy Porter (ed.), *The Cambridge History of Science: the eighteenth century* (2003), p. 87. For the history of the Paris Academy of Science see: Roger Hahn, *The Anatomy of a Scientific Institution: the Paris Academy of Sciences, 1666-1803*, Berkeley; London: University of California Press (1973).

germ due to chance causes after conception.[79] Thus, unusually 'white Negros' brought from Africa and South America arrived within the context of these debates about the deviant function and form of Man. The key difference was that these theories of monstrosity evolved into the physical display and examination of unusually white people.[80]

Scientific display of the body had its roots in medieval and Renaissance dissections where it was treated as, 'a form of performance or entertainment'.[81] The first exhibition of a 'white negro' took place in France, and involved both these elements. Throughout January 1744, an unknown owner profited from exhibiting 'white Negro' boy slave with albinism to the *Académie Royale des Sciences* and in the salons of Paris.[82] The owner arrived with the boy from an unnamed part of Africa. This exhibition of the 'white Negro' boy was the first ever of a person now known to have had a form of albinism in Europe in the name of science. Indeed, such a white child born to 'black African parents' had never been seen in Europe, and had only been read about by naturalists and philosophers in the plethora of available late seventeenth and eighteenth-century travel accounts.

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[79] Mary Terrall, *The Man Who Flattened The Earth: Maupertuis and the sciences in the Enlightenment*, Chicago; London: University of Chicago Press (2002), p. 209; William Clark, Jan Golinski, Simon Schaffer (eds.), *The Sciences in Enlightened Europe*, Chicago: University of Chicago Press (1999), p. 187.
[80] For the culture of display during the Enlightenment see: Ludmilla Jordanova, *Nature Displayed: gender, science, and medicine*, London: Longman (1999).
[81] Christopher Fox, Roy Porter, and Robert Wokler (eds.), *Inventing Human Science: eighteenth-century domains*, Berkeley: University of California Press (1995), p. 9.
[82] Pierre Louis Moreau de Maupertuis, *Vénus Physique*, La Haye: Jean Martin Husson (1746), p. 175. The unnamed boy was exhibited shortly after intense debate about the classification and generation of 'monsters' and 'wild children' between 1720-1740. See: Michael Hagner, 'Enlightened Monsters' in William Clark, Jan Golinski, and Simon Schaffer (eds.), *The Sciences in Enlightened Europe*, Chicago: University of Chicago Press (1999), pp. 187-190; Julia V. Douthwaite, *The Wild Girl, Natural Man, and The Monster: dangerous experiments in the age of Enlightenment*, Chicago; London: University of Chicago Press (2002), p. 2.

Before the exhibition of the 'white Negro' boy in 1744, the philosopher Claude Adrien Helvétius (c.1715-1771) informed the Paris Academy of his correspondence with the governor of Dutch Surinam who described the birth of a young '*nègre blanc*'.[83] Bernard de Fontenelle (1657-1757) recorded the case of the 'white Negro' in the annals of the Academy. [84] French naturalists and philosophers had therefore an unprecedented chance to corroborate second-hand accounts of the 'white Negro' with a living novel colonial curiosity.[85] To assuage this heightened curiosity, the philosophers and naturalists present subjected the boy's ambiguous and unusually white body to close and invasive scrutiny.

The mathematician Pierre Louis Moreau de Maupertuis (1698-1759), philosopher François-Marie Arouet de Voltaire (1694-1778) and the naturalist George Buffon (1707-1788) all saw the 'white Negro' boy in 1744. Maupertuis and Voltaire wrote the two main descriptions of the exhibition of the 'white negro'. Maupertuis initially penned a slim anonymous book on generation called *Dissertation physique à l'occasion du nègre blanc* (1746).[86] As historian Mary Terrall makes clear, Maupertuis's dissertation only mentioned the 'white Negro' as an enticing hook to attract potential readers to his criticisms of current theories of generation.[87] It worked;

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[83] Bernard de Fontanelle, 'Observations de physique générale', *Histoire de l'Académie Royale des Sciences* (1734), pp. 16-17.
[84] Fontanelle, 'Observations de physique générale', *Histoire de l'Académie Royale des Sciences* (1734), pp. 16-17.
[85] For the centrality of the culture of curiosities in early modern Europe see: Arthur MacGregor, *Curiosity and Enlightenment: collectors and collections from the sixteenth to the nineteenth century*, New Haven, Conn.; London: Yale University Press (2007); R.J.W. Evans and Alexander Marr (eds.), *Curiosity and Wonder from the Renaissance to the Enlightenment*, Aldershot: Ashgate (2006); Barbara M. Bendedict, *Curiosity: a cultural history of early modern inquiry*, Chicago: Chicago University Press (2001).
[86] Pierre-Louis Moreau de Maupertuis, *Dissertation physique à l'occasion du nègre blanc*, Leyde: s.n. (1744).
[87] Mary Terrall, *The Man Who Flattened the Earth: Maupertuis and the sciences in the Enlightenment*, Chicago; London: University of Chicago Press (2002), p. 208. For the debates about generation in the

Maupertuis's book was a bestseller.[88] His short popular effort circulated among the people who saw the 'white Negro' boy, and provoked speculation about the identity of its author.[89] It was only in *Vénus Physique* (1746), however, that Maupertuis directly described and speculated about the 'white Negro' boy.[90]

Voltaire's essay 'Relation touchant un maure blanc, amené d'Afrique à Paris en 1744' similarly emerged shortly after the exhibition of the 'white moor' in 1745.[91] Voltaire's account caused controversy, not for its written style, but for his claim that the 'white moor' belongs to a separate 'race of Men living at the centre of Africa'.[92] Maupertuis understood such 'prodigies' to occur only in the 'Negro' and not in Europeans. He argued that:

> America and Africa are not the only parts of the world where such freaks are found…Asia has also produced them… (and although) it has been said that this prodigy has been known to occur in France…there is so little sufficient proof that it cannot reasonably be accepted.[93]

In spite of the numerous geographical locations listed by Maupertuis, he was insistent that 'Negroes' were the only race that could produce a white child from

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eighteenth century see: Staffan Muller-Wille and Hans-Jorg Rheinberger, *Heredity Produced: at the crossroads of biology, politics, and culture*, Cambridge; Mass.: MIT Press (2007).

[88] Mary Terrall, *The Man Who Flattened the Earth: Maupertuis and the sciences in the Enlightenment* (2002), p. 208.

[89] Terrall, *The Man Who Flattened the Earth: Maupertuis and the sciences in the Enlightenment* (2002), p. 208.

[90] Pierre-Louis Moreau de Maupertuis, *Vénus physique, contenent deux dissertations, l'une, sur l'origine des Hommes et des animaux: et l'autre, sur l'origine des noirs*, La Haye: s.n. (1746). Maupertuis's *Vénus physique* reached its sixth edition in 1751, possibly published in Paris. A revised 'new edition' came out as late as 1777.

[91] Voltaire, 'Relation touchant un maure blanc, amené d'Afrique à Paris en 1744', *Oeuvres de monsieur Voltaire*, vol. 33, Genève: Kramer et Bardin (1775), pp. 309-312.

[92] Voltaire, 'Relation touchant un maure blanc, amené d'Afrique à Paris en 1744' (1775), p. 310.

[93] Maupertuis, *Vénus physique* (1746), p. 176.

black parents. Indeed the French man of letters argued a specific inherited origin of the 'White Negro'. He postulated that:

> Whether the whiteness is taken for a sickness or for whatever accident one chooses, it can only be of a hereditary variety, which becomes established or disappears with successive generations.[94]

Since Maupertuis considered physical traits were passed from one generation to the next, he was able to highlight the 'defective strains' in humanity that required the 'establishment of the destruction of these breeds… (since) this is what faces us'.[95] The naturalist George Buffon suggested the, 'white Negroes are Negroes who have degenerated from their race…they are not a particular or constant human species'.[96]

Maupertuis's account commences with an assessment of the boy's age along with a measurement of his aesthetic appeal. He wrote that the boy was a 'child, four or five years old…a white Negro…(who had) all the traits of a Negro…with very white and pale skin (that) only enhances his ugliness'.[97] Historian Adriana S. Benzaquén argues the status of the 'child' at this time in France in the 1740s was under scrutiny by the naturalist George Buffon.[98] Buffon developed a 'science of childhood', analyzable in three areas: 'anatomical', 'physiological' and

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[94] Pierre Louis Moreau de Maupertuis, *Vénus physique*, La Haye (1746), p. 176.
[95] Maupertuis, *Vénus physique* (1746), p. 176.
[96] Georges Buffon, *Histoire Naturelle, Générale et Particulière…etc.*, vol. 3, L'Imprimerie Royale: Paris (1749), p. 503.
[97] Maupertuis, (1746), p. 175. Michael Hagner argues, 'the turn of the eighteenth-century saw an increasing demand for the systematic classification of monsters, along with an aesthetic contrast between beauty and ugliness, proportion and deformation'. See: Michael Hagner, 'Enlightened Monsters' in William Clark, Jan Golinski, and Simon Schaffer (eds.), *The Sciences in Enlightened Europe*, Chicago: University of Chicago Press (1999), p. 175.
[98] Adriana S. Benzaquén, 'Childhood, Identity and Human Science in the Enlightenment', *History Workshop Journal*, issue 57 (Spring, 2004), pp. 37-38.

'psychological'. [99] Perhaps Maupertuis examined the boy with these expectations of what a child should typically look like, and how it should act. As for Maupertuis's description of the boy's enhanced 'ugliness', it is an intentional exaggeration, a rhetorical conceit to both shock and attract readers. Maupertuis claims he would 'Willingly…forget the phenomenon that I shall attempt to explain and attend to Iris's awakening' but he 'must relate the history of a little freak'.[100] Terrall notes this salacious, speculative and eclectic timbre of Maupertuis's writing runs throughout the whole of *Vénus Physique*.[101] In fact, Voltaire disagreed with Maupertuis's assessment, and thought the skin of the 'white negro' boy was 'even, pretty, without blemishes or spots'. [102]

After judging the 'white Negro' boy's age and external appearance, Maupertuis inspected the child's 'large and misshapen' hands that according to him 'resemble more an animals paws than the hands of a man'.[103] Voltaire also described the boy as 'a little white animal'.[104] This reference to the child's apparent human/animal hybridity was a common subject for thinkers in this mid-century period.[105] It seems Maupertuis and Voltaire could not decide if the 'white Negro' boy was animal, human or a blend of the two. Certainly both men would have been heavily involved in contemporary discussions among naturalists about the place of

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[99] Adriana S. Benzaquén, 'Childhood, Identity and Human Science in the Enlightenment', *History Workshop Journal*, issue 57 (Spring, 2004), pp. 37-38.
[100] Pierre Louis Moreau de Maupertuis, *Vénus physique*, La Haye: s.n. (1746), p. 175.
[101] Mary Terrall, 'Salon, Academy, and Boudoir: generation and desire in Maupertuis's science of life', *Isis*, vol. 87, no. 2, June (1996), p. 217.
[102] Voltaire, 'Relation touchant un maure blanc, amené d'Afrique à Paris en 1744', *Oeuvres de monsieur Voltaire*, vol. 33, Genève: Kramer et Bardin (1775), p. 310.
[103] Maupertuis, *Vénus physique* (1746), pp. 175-176.
[104] Voltaire (1775), p. 309.
[105] Frank Palmeri, *Humans and Other Animals in Eighteenth-Century British Culture*, Aldershot: Ashgate (2006), p. 5.

humans and animals in nature on the Great Chain of Being.[106] Maupertuis and Voltaire both referred to many earlier travel accounts that describe nocturnal beings that at times apparently behaved in animal-like ways.

After examining the boy's human and apparently animal qualities, Maupertuis exposed the 'white Negro' boy's eyes to painful exertion in 'bright daylight'.[107] The boy's experiences of being made to go out into the 'bright daylight' resonate with the 'Kakurlacko' woman's 'forced' exposure to the sun by the Swedish sea captain off Tharnado Island. Voltaire's examination of the boy at the Hôtel de Bretagne involved a similar level of physical contact to Maupertuis. The French philosopher ran his fingers through the boy's 'fine hair', held his eyelids open to look at his 'reddish pink iris', and tested his 'speech' and 'memory' to verify whether this 'animal' possessed sufficient 'reason' to be deemed at least partly 'human'. [108] The boy had no possibility to resist such obviously unpleasant and invasive tests conducted by the French philosopher. Yet, any pain and trauma this child may have suffered did not register in either Maupertuis's or Voltaire's account. He was an object, a barely human curiosity, manipulated to perform for those in attendance. The naturalists and philosophers used his unusually white body simply as a springboard for their own reflections on human origins and generation.

This style of exhibition of the 'white negro' in Paris was not limited to the academies and salons of mid-century France. In January 1765, an examination of a 'white negro' boy took place just over two decades later in London at the Royal

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[106] Arthur O. Lovejoy, *The Great Chain of Being: the study of a history of an idea*, Cambridge; Massachusetts: Harvard University Press (1936).
[107] Pierre Louis Moreau de Maupertuis, *Vénus physique*, La Haye: s.n. (1746), pp. 175-176.
[108] Voltaire, 'Relation Touchant Un Maure Blanc, Amené d'Afrique à Paris en 1744', *Oeuvres Complètes de Voltaire*, vol. 31, Kehl: De l'Imprimerie de la Société Littéraire-typographique (1784), pp. 389-393.

Society.[109] According to James Parson's letter published in the *Philosophical Transactions*, a Pennsylvanian slave owner, James Hill-Clark, brought the nine-year-old 'white negro' boy before the 'learned society'.[110] Before his arrival in England, the boy had already been 'shewed in Pennsylvania as a great rarity'.[111] Hill-Clark purchased the boy from Benjamin Chambers, a North American plantation owner based in Cumberland County, Pennsylvania.[112] The parents of the boy both worked on an estate owned by Chambers in Virginia. Hill-Clark first heard about the boy from his 'lady', who sent him a letter with a sample of 'wool' taken from the 'white negro child's head'.[113] There is no detail given by Parsons about the nature of the examination of the boy at the Royal Society.

Nevertheless, Parsons does describe how Hill-Clark brought the boy to his own house for examination. All the information offered in Parson's letter is intended for the 'great entertainment' of the Society.[114] He quotes directly from Lionel Wafer's 1699 account of the 'white Indian's in order to provide a broader context of the 'white boy' to his scientific readership.[115] Parsons is primarily interested in the lineage of the 'white negro' boy's family. Parsons wrote that he, 'made the necessary inquiry into the several circumstances relative to his being born of black parents'.[116] Parsons describes the father and mother of the 'white boy' as 'perfectly black', and

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[109] James Parsons, 'An Account of the White Negro Shewn before the Royal Society: In a Letter to the Right Honourable the Earl of Morton, President of the Royal Society', *Philosophical Transactions*, vol. 55, London (1765), p. 46.
[110] Parsons, 'An Account of the White Negro Shewn before the Royal Society: In a Letter to the Right Honourable the Earl of Morton, President of the Royal Society', *Philosophical Transactions* (1765), p. 46.
[111] Parsons (1765), p. 46.
[112] Parsons, p. 46.
[113] Parsons, p. 46.
[114] Parsons, p. 50.
[115] Parsons, pp. 50-51.
[116] Parsons, p. 45.

reports they have had 'two children since…both as black as the parents'.[117] In terms of physical appearance, Parson's describes the boy's 'deviation of colour, from the contrary hue of both parents, is both singular and preternatural'.[118] Unlike the intimate examination in Paris, however, Parson's conveys no evidence to suggest the boy was forced to perform tests such as stand in bright light.

Parsons argues this 'deviation of colour…from the contrary hue of the parents' had several precedents. Most notably, he recounts that:

> We had one here about four years ago in London, which was a white girl, something younger than this boy, but exactly similar in colour, wool &c., and was said, by the person who made a shew of her, to have been the offspring of a black father and mother. [119]

Parsons reveals she was described 'several times in the public papers' as a 'white negro girl'.[120] In addition, he records she was 'shewn in town for some months every day'.[121] For the young girl, daily examinations of her hair and body must have been humiliating and exhausting. Just as with the boy in Paris, the 'white negro' boy and the younger girl exhibited in London Parson's appeared as remarkable objects. They were slaves with owners who profited from the display of his unusually white body. Parson's reports he saw the boy's 'bill of sale', proving Hill-Clark's purchase from

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[117] James Parsons, 'An Account of the White Negro Shewn before the Royal Society: In a Letter to the Right Honourable the Earl of Morton, President of the Royal Society', *Philosophical Transactions*, vol. 55, London (1765), p. 46.
[118] Parsons, 'An Account of the White Negro Shewn before the Royal Society: In a Letter to the Right Honourable the Earl of Morton, President of the Royal Society', *Philosophical Transactions* (1765), p. 47.
[119] Parsons (1765) p. 47.
[120] Parsons, p. 46.
[121] Parsons, p. 47.

Chambers in 1764.[122] As with the 'white negro' in Paris, the boy and girl detailed in Parson's account are left unnamed and anonymous.

Enlightenment thinkers of many persuasions thus attended the exhibition of the 'white negro' boy in Paris and in London. The experience of those exhibited and examined are remote, and can only be inferred against the grain from those authors' texts whose main purpose was to enthrall its curious readership. The central unifying principal connecting these exhibitions is that they were public. Crowds of onlookers – or at least the owners of the exhibited – shaped the limits of knowledge obtainable in such circumstances. However, Parson's encounter with the exhibited 'white negro' boy signals a wider shift towards the more private, intimate, and at times violent examinations of unusually white people with albinism from the 1770s.

The Naked and the Dead: examination and autopsy of 'white negroes' and 'albinos'

These examinations occurred within the now well-documented attempts by a range of naturalists, philosophers and 'scientists' to classify race through increasingly close scrutiny of the shape and colour of the human body.[123] As historian Ivan Hannaford revealed, during the 1780s 'the idea of race was fully conceptualized and became

[122] James Parsons, 'An Account of the White Negro Shewn before the Royal Society: In a Letter to the Right Honourable the Earl of Morton, President of the Royal Society', *Philosophical Transactions*, vol. 55, London (1765), p. 46.

[123] The literature on the eighteenth-century classification is vast. For the best recent treatments see: Colin Kidd, *The Forging of Races: race and scripture in the Protestant Atlantic world, 1600- 2000*, Cambridge: Cambridge University Press (2006); Robert Bernasconi and Tommy L. Lott (eds.), *The Idea of Race*, Indianapolis, Cambridge: Hackett Publishing (2000); Roxanne Wheeler, *The Complexion of Race: categories of difference in eighteenth-century British culture*, Philadelphia: University of Pennsylvania Press (2000); Ivan Hannaford, *Race: the history of an idea in the west*, Baltimore; London: John Hopkins University Press (1996); George L. Mosse, *Towards the Final Solution: a history of European racism*, London: Dent (1978).

deeply embedded in our understandings and explanations of the world'.[124] In this period, new fields of inquiry such as anthropology, anatomy, physiognomy and craniometry offered novel methods of chromatic classification and somatic measurement for racial categorization.[125] Practitioners involved in the ordering of race tried to ascertain the cause lying behind the whiteness of people with albinism. People with albinism appeared in debates about racial difference, but crucially were rarely considered by authors to belong to a separate race.[126] Voltaire and his few supporters' racial theory could not withstand overwhelming evidence that by the 1770s 'albinos' could be seen and described in Europe.[127] Almost all thinkers in this period who wrote on the subject of people with albinism therefore quickly united around the idea first proposed by Maupertuis in 1745 that this whiteness is a congenital disease.[128]

Examinations of people with albinism led to surface descriptions of their naked bodies. This transition is apparent from the mid-century public exhibitions to

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[124] Ivan Hannaford, *Race: the history of an idea in the west*, Baltimore; London: John Hopkins University Press (1996), p. 6.
[125] For the rise of race and anthropology see: Henrika Kuklick (ed.), *A New History of Anthropology:* Oxford: Blackwell (2008); George W. Stocking, *Race, Culture and Evolution*, New York: Free Press (1968); Nancy D. Fortney, 'The Anthropological Concept of Race', *Journal of Black Studies*, Vol. 8, no. 1., September (1977), pp. 35-54. For craniometry see: Stephen J. Gould, *The Mismeasure of Man*, New York: Norton (1981). For physiognomy see: Melissa Percival and Graeme Tytler (eds.), *Physiognomy in Profile: Lavater's impact on European culture*, Newark: University of Delaware (2005).
[126] For albinism and race theory in the eighteenth century see: Andrew Curran, 'Rethinking Race History: the role of the albino in the French Enlightenment life sciences', *History and Theory*, vol. 48, no. 3 (2009), pp. 151-179; Michael Kutzer, 'Kakerlaken – Rasse oder Kranke?: Die Diskussion des Albinismus in der Anthropologie der Zweiten Hälfte des 18. Jahrhunderts', in Gunter Mann and Franz Dumont, *Die Natur des Menschen*, Stuttgart: Fischer (1990).
[127] The French author Jean de Sales agreed with Voltiare that 'albinos' belonged to a separate 'race'. In his philosophical dialogue of 1770, he wrote: 'I think it much better to think that albinos form a distinct race, a constant variety in within the human species'. See: Jean de Sales, *De la philosophie de la nature*, vol. 3, Paris: Arkstée and Merkus (1770), p. 201.
[128] A fully-fledged science of race matured during the nineteenth century in Britain and the United States. See: Waltraud Ernst and Bernard Harris (eds.), *Race, Science and Medicine, 1700-1960*, London: Routledge (1999); Nancy Stepan, *The Idea of Race in Science: Great Britain, 1800-1860*, Hamden, Conn.: Archon Books (1982).

the more intimate and revealing private examinations at the close the eighteenth century. Examinations conducted behind closed doors were complemented by the first ever autopsy of a person with albinism. This gradual probing, deeper and deeper into the bodies of people with albinism, is allied to the broader ideas and practices of late eighteenth century medicine, anatomy and ophthalmology.

In his treatise *On the Natural Variety of Mankind* (1775), the German physician and anthropologist Johann Friedrich Blumenbach (1752-1840) firmly established this new pathological way of defining people with albinism. Blumenbach's research held the same level of influence among his contemporaries as Wafer's travel narrative achieved throughout the eighteenth century among naturalists and philosophers. Blumenbach interpreted what he called 'leucoethiopia' after classical tradition as a form of 'diseased whiteness'.[129] Blumenbach argued that, 'the whiteness of organized bodies was due to cold, so now we have to consider another kind of diseased whiteness which does not depend upon cold'.[130] Earlier in his treatise, Blumenbach argued, 'the whole bodily constitution, the stature, and the colour, are owing almost entirely to climate alone'.[131] The 'diseased whiteness' of 'leucoethiopia' suggested Blumenbach's theory of variation according to climate required revision.

Blumenbach did not rely only on theory. He conducted his own examinations of people with albinism, the details of which are unfortunately not recorded. Blumenbach saw 'leucoethiopia' as a purely physical disease. He frequently met

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[129] Johann Friedrich Blumenbach, *On the Natural Variety of Mankind*, 1st edition (1775) in Thomas Bendyshe, *The Anthropological Treatises of Blumenbach and Hunter*, London: Longman, Green et al. (1865), p. 130.
[130] Blumenbach, *On the Natural Variety of Mankind*, 1st edition (1775) in Thomas Bendyshe, *The Anthropological Treatises of Blumenbach and Hunter* (1865), p. 130.
[131] Blumenbach, *On the Natural Variety of Mankind* (1775), p. 101.

with 'a Saxon youth' in Germany, and, presumably after a series of conversations, concluded that 'the mind and the intellectual faculties are in no respect affected by this disorder'.[132] Though the mind was not deemed by Blumenbach to be effected by 'leucoethiopia', the body was often weakened. He proposed that some who have 'leucoethiopia' appear to be of a 'weak and feeble constitution'.[133] Blumenbach's notion that people with 'leucoethiopia' lacked strength is based on explorers' accounts of the French Champniers Albinos who he reports, 'can scarcely stand being in the open air…the Malabars certainly cannot endure long journeys…and are speedily fatigued with the wind and the heat'.[134] People with 'leucoethiopia' thus served as an unsolved anomaly in Blumenbach's attempt to classify the 'variety' in mankind. He contended 'leucoethiopia' belonged in the study of pathology, but its cause troubled his general theories of variation to the point that its discussion was relegated to his exposition on human variety.

Two years after the publication of Blumenbach's treatise the naturalist George Buffon conducted his own examination of a person with albinism. In April 1777, the French naturalist examined a white negresse'.[135] She was Geneviève, a 'young girl' aged about eighteenth years old, born to two 'negro' parents on the island of Dominica.[136] Unnamed owners shipped Geneviève's parents as slaves to the African gold coast before her birth around 1770. Buffon's private examination constituted a highly detailed description of the size, shape and colour of Geneviève's naked body.

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[132] Johann Friedrich Blumenbach, *On the Natural Variety of Mankind*, 1st edition (1775) in Thomas Bendyshe, *The Anthropological Treatises of Blumenbach and Hunter*, London: Longman, Green et al. (1865), p. 138.
[133] Blumenbach, *On the Natural Variety of Mankind*, 1st edition (1775) in Thomas Bendyshe, *The Anthropological Treatises of Blumenbach and Hunter* (1865), p. 137.
[134] Blumenbach (1775), p. 138.
[135] Georges Buffon, *Histoire naturelle, générale et particulière, supplement*, vol. 4, Paris (1777), p. 559.
[136] Buffon, *Histoire naturelle, générale et particulière, supplement* (1777), p. 559.

His scrutiny of Geneviève went far beyond encounters with 'albinos' and public exhibitions of 'white negroes' in the salons and academies of Enlightenment Europe.

Buffon measured Geneviève's height and the length of her head, arms, legs, chin, shoulders, ears. Buffon used feet and inches to make his measurements. He found Geneviève's body was 'fairly well-proportioned', but her head was 'overall too long'.[137] Buffon explained that Geneviève's head was one sixth of the size of her body. The size of her head apparently did not match Buffon's idea of a 'well-proportioned man or woman'; the head should be seven and a half times the length of the human body.[138] Furthermore, Buffon stresses Geneviève's 'chin is too short and too fat…and overall the arms are too long'.[139] Perhaps Buffon's 'well proportioned' ideal arises from Ancient Greek measurements of the human form so resonant during the second half of the eighteenth-century.[140] Nevertheless, Geneviève's experience of being examined so intrusively and precisely was probably highly unpleasant.

After judging Geneviève's bodily proportions, Buffon examined the colour of her skin. He wrote that, 'In general the skin colour of the face and body of this white negresse is the whiteness of suet that has not yet been purified, or, if one prefers, a pale, inanimate, mat-white'.[141] According to Buffon, this all-pervasive whiteness of Geneviève's body is 'lightly tinted' in her cheeks when 'stirred by the shame of

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[137] Georges Buffon, *Histoire naturelle, générale et particulière, supplement*, vol. 4, (1777), p. 560.
[138] Buffon, *Histoire naturelle, générale et particulière, supplement* (1777), p. 560.
[139] Buffon, (1777) p. 560.
[140] Carol Reeves, Linda Kalof, W.F. Bynum (eds.), *A Cultural History of the Human Body: in the age of Enlightenment*, Oxford: Berg (2010).
[141] Buffon, p. 561.

being seen naked'.[142] Here, Geneviève's experience of 'shame' under examination by Buffon reveals the extent to which the French naturalist examined this girl both as an object of curiosity and not as a human being. Buffon records her 'shame' in writing as a way of highlighting her relation to other human beings. Geneviève's feelings about being physically interrogated were of great relevance to Buffon, but only within the context of his scientific examination.

Buffon ventured into even more intimate regions of Geneviève's body. Buffon records that her 'breasts are large, round, very firm and well placed' while her 'nipples are sufficiently red'. After taking further measurements of the breasts, Buffon then observes that Geneviève has 'a very small amount of wool in the area of the natural parts'.[143] Buffon's almost untrammeled interrogation of Geneviève may reveal not simply his commitment to recording detailed empirical facts, but his infatuation with Geneviève. He records that 'this young girl has never had a child…and she is a maid'. He accompanied the report of his examination with an engraving. Geneviève mirrors engraved images of naked women in works of eighteenth-century 'erotic' French fiction (Fig. 2).[144] Whereas Buffon conducted his examination in French, other naturalists traveled across the continent to see the 'albinos' of Europe. Stories of 'cretins' living in Switzerland had circulated since the 1768, especially in the writings of the Dutch philosopher Cornelius de Pauw.[145]

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[142] Georges Buffon, *Histoire naturelle, générale et particulière, supplement*, vol. 4, Paris (1777), p. 561.
[143] Buffon, *Histoire naturelle, générale et particulière, supplement* (1777), p. 561.
[144] Philip Stewart, *Engraven Desire: Eros, image and text in the French eighteenth century*, Durham, NC: Duke University Press (1992), p. x.
[145] Cornelius de Pauw, *Recherches philosophiques sur les Américains, ou mémoires intéressants pour servir à l'histoire de l'espece humaine, Par Mr. De P****, vol. 1, Londres: Georges Jacques Decker (1768), p. 148.

Fig.2: 'Geneviève', George Buffon, *Histoire naturelle, générale et particulière supplement* (1777), p. 562.

In 1786, the Alpine explorer and botanist Horace-Bénédict de Saussure (1740-1799) discussed cretins in his travelogue, but also included an account of his examination of what he called two 'Albinos of Europe' in Chamouni, Switzerland.[146] Saussure ventured into the alpine regions at a time of heightened interest in the relatively inaccessible geological and natural landscape.[147]According to Saussure, 'thousands of travelers' had already examined the boys before his arrival. [148] In the fourth volume of his *Voyages dans les Alpes* (1786), Saussure provides a detailed record of the two boys whom he met at the end of 1785, and who he had also seen as very young children several years before.

Saussure thought the eldest of the boys was 20 or 21 years of age, while the younger was around eighteenth or nineteen in 1785.[149] Again, as with the majority of exhibitions and examinations of unusually white people during the eighteenth century, the names of the children are not published. In contrast to the daily attention paid to them in their adult life, Saussure reports the two boys did not have many visitors in their childhood. Saussure writes that:

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[146] Horace-Bénédict de Saussure, *Voyage dans les Alpes*, 2 vols., Genève: Barde and Manget (1786). De Saussure's widely read travelogue was subsequently translated into English. His account of the 'Albinos of Europe' was selectively reprinted in the *Encyclopaedia Britannica* in 1790. See: Anon., 'A Description of the Two Albinos of Europe', *Encyclopaedia Britannica*, Manchester: Thomas Harper (1790) pp. 4-15.
[147] For the late eighteenth-century fascination with the Alps see: Trevor Braham, *When the Alps Cast their Spell: mountaineers of the Alpine Golden Age*, Glasgow: In Pinn (2004); Fergus Fleming, *Killing Dragons: the conquest of the Alps*, London: Granta (2001).
[148] Saussure, *Voyage dans les Alpes* (1786), p. 311.
[149] Saussure (1786), p. 311.

> At that time they were so little desirous of exciting the curiosity of strangers that they hid themselves to avoid such; and it was necessary to do a sort of violence to them before they could be prevailed on to allow themselves to be inspected.[150]

The 'albino' boys thus experienced infrequent physical abuse during their childhood in order to allow the curious to see and maybe touch their bodies.

Saussure also claims their appearance altered over time. He writes that, 'Their hair, their eye-brows, and eye-lashes, the down upon their skin, were all, in their infancy, of the most perfect milk white colour'.[151] Yet, at their present age, the boys' 'hair is now of a reddish cast, and has grown pretty strong'.[152] As they grew older, the boys understand this curiosity could be manipulated in their favour. They made 'this affectation (more) profitable to them' by playing up their 'albino' traits. Saussure claims they 'exaggerate to strangers their aversion for the light, and half shut their eye-lids to give themselves a more extraordinary appearance'. By overstating their bodily condition, the boys mocked the curiosity of the examining public. Saussure's narrative here alludes to the first concrete example of resistance and agency expressed by people with albinism on record.

In their community, the two brothers clearly struggled to fit in with social and working practices. According to Saussure, 'they were unable to tend the cattle like the other children'.[153] It is unclear why they could not work, but de Saussure claims

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[150] Horace Bénédict de Saussure, *Voyage dans les Alpes*, vol. 2, Genève: Barde and Manget (1786), p. 312.
[151] Saussure, *Voyage dans les Alpes* (1786), pp. 311-312.
[152] Saussure (1786), p. 311.
[153] Saussure, p. 311.

the boys had to be 'supported by one of their uncles at a time when the other children began making a life for themselves through work'.[154]

At the same time as this examination and exhibition of the two living cases of 'albinos' in the Alps, in Italy the Milanese anatomist and ophthalmologist Francesco Buzzi (1751–1805) conducted an autopsy on a person with albinism in 1784. This dissection of an 'Albino' man was the first on record, and would remain so until the first decade of the twentieth century.[155] Buzzi was based at the hospital in Milan; he was the tutee of the then celebrated professor of anatomy Pietro Moscati (1762-1819).[156] Unlike eighteenth-century legal restrictions on medical practitioners to dissect human corpses in England, Scotland and Australia, Buzzi's autopsy was neither clandestine nor uncommon for the period or his location.[157] Indeed, according to Foucault, 'there were no shortage of corpses for dissection in Austria, France and Italy from at least 1754 onwards'.[158]

The man dissected by Buzzi was an Italian peasant of about thirty years of age who died of a pulmonary disorder while hospitalized in Milan.[159] Apparently Buzzi had, 'long desired an opportunity to dissect such a subject', which suggests the

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[154] Horace Bénédict de Saussure, *Voyage dans les Alpes*, vol. 2, Genève: Barde and Manget (1786), p. 313.
[155] It is clear Buzzi carried out the only post-mortem on an Albino until 1910. See: Karl Pearson, 'Note on Internal Albinism', *Biometrika*, vol. 7, No. 3 (1910), p. 244, J. E. Adler and J. McIntosh, 'Histological Examination of a Case of Albinism', *Biometrika*, vol. 7, No. 3 (1910), p. 237.
[156] Moscati has not, as far as I can ascertain, been subject to a biographical history
[157] Helen MacDonald, *Possessing the Dead: the artful science of anatomy*, Carlton, Victoria: Melbourne University Press (2010), p. 12. For the history of autopsy and idssection in sixteenth and seventeenth-century Europe see: Andrew Cuningham, *The Anatomical Renaissance: the resurrection of the anatomical projects of the ancients*, Aldershot: Scolar (1996); Jonathan Sawday, *The Body Emblazoned: dissection and the human body in Renaissance culture*, London: Routledge (1995).
[158] Michel Foucault, *The Birth of the Clinic*, London: Routledge (2007), p. xiv, originally published as *Naissance de la Clinic*, Paris: Presses Universitaires de France (1963), p. 154.
[159] Anon., 'A Description of the Two Albinos of Europe', *Encyclopaedia Britannica*, Manchester: Thomas Harper (1790), p. 11.

Italian surgeon had previously encountered people with unusually white skin at the hospital in Milan.[160] The unusually white complexion of this 'Albino' man, being of European origin, was evidently a novelty. The reason for Buzzi's curiosity was owing to both the rarity of seeing such an individual, and to the unusual physical appearance of the deceased. Buzzi described the 'Albino' man as, '...exceedingly remarkable because of the uncommon whiteness of his skin, the hair, the beard and all of the other covered parts of the body'.[161]

Buzzi conducted a careful post-mortem of the 'Albino' peasant, examining the skin and eyes of this unnamed individual and publishing the results in the same year.[162] The absence of pigmentation in the eyes, with the iris appearing 'perfectly white' and the pupil seeming to be a 'rose colour' – explained by the absence of the 'black membrane...that anatomists call the *uvea*' – were somatic characteristics sufficiently 'uncommon' and deviant from the normal, warranting Buzzi's close attention. After placing the skin in boiling water for an extensive period to encourage softening and separation, Buzzi found that the 'Albino' seemed to lack the *rete mucosum*: a black juicy net-like substance originally named by the Italian renaissance doctor Marcello Malpighi (1628-1694). The *rete mucosum* was thought to reside in varying quantities between two distinct dermal layers, both of which were first identified by Andreas Vesalius in *De humani corporis fabrica libri septem* (1543).[163] The absence of this pigmenting substance in 'Albinos' was for Buzzi, and, at the

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[160] Anon., 'A Description of the Two Albinos of Europe', *Encyclopaedia Britannica*, Manchester: Thomas Harper (1790), p. 11.
[161] Anon., 'A Description of the Two Albinos of Europe', *Encyclopaedia Britannica* (1790), p. 11.
[162] Francesco Buzzi, 'Dissertazione storico-anatomica sopra una varieta particolare d'uomini bianchi eliofobi', in Pietro Moscati, *Opuscoli Scelti*, Milan (1784).
[163] Andreas Vesalius, *De Humani Corporis Fabrica Libri* Septem (1543), trans. William Frank Richardson and John Burd Carmen, *On the Fabric of the Human Body*, 2 vols., San Francisco: Norman Publishing (1998), p. 141

same time, for the pioneer of physical anthropology Johann Friedrich Blumenbach (1752-1840), put forward as the root cause behind such unusually white skin and pink coloured eyes.[164]

The proximate reason to explain the absence of the *rete mucosum*, however, was not clearly understood. Buzzi speculated on a direct environmental cause and noted a story he had heard about an Italian mother named Calcagni who had had seven children, three of which were 'Albino', apparently produced when she possessed, 'a continual and immoderate appetite for milk, which she took in great quantities'.[165] Nevertheless, neither Saussure nor Buzzi were entirely convinced. In spite of any firm notions about the origins of this whiteness, the idea that this was some form of disease, a disorder passed on for some reason by parents from birth, was an idea roundly accepted by the last two decades of the eighteenth century. The body of this Italian man is effectively subjected to what Foucault characterized as the 'slowness of the gaze that passes over them, around them, and gradually into them'.[166] Buzzi's case thus signposts an important empirical and theoretical shift in the study of albinism, both on and under the surface of the body.

Conclusion

The encounters, exhibitions, and examinations of people with albinism from the seventeenth century to the close of the eighteenth century followed an epistemological arc that began with the general and finished with the particular.

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[164] Johann Friedrich Blumenbach, *De generis humani varietate* native, 2nd edition (1781)
[165] Anon., 'A Description of the Two Albinos of Europe', *Encyclopedia Britannica*, Manchester: Thomas Harper (1790), p. 11.
[166] Michel Foucault, *The Birth of the Clinic*, London: Routledge (2007), p. xiv, originally published as *Naissance de la Clinic*, Paris: Presses Universitaires de France (1963).

Such early modern encounters written by explorers defined the first unusually white people within groups such as 'albinos' and 'Kakurlackos'. These fleeting encounters turned into brief examinations as evidenced by the example of the Swedish sea captain and the 'Kakurlacko' women. Explorers wrote about 'albinos' as singular objects of curiosity because their whiteness both mirrored and exceeded the whiteness of Europeans. Yet, people with albinism living in colonial settings clearly experienced far greater persecution and violence form their own indigenous people than from European travelers of the seventeenth century.

The dawn of the enslavement of 'white negroes' from the 1690s onwards brought these distant colonial objects under the voracious gaze of the metropolitan thinkers of Europe. The 1740s exhibitions in Paris, and the exhibition two decades later at the Royal Society, saw people with albinism undergo typically Enlightenment tests to ascertain their place among humanity. The proximity of people with albinism to the audience allowed their hair and skin to be touched and revealed.

The private examinations of people with albinism from the 1770s were the logical step for Enlightenment sciences to obtain further knowledge about this whiteness after the initial examinations in public. Buffon's examination of Geneviève left no part of her body unmeasured and untouched. As for the two boys, the first 'albinos' to be 'discovered in Europe, their experience of violence in childhood gradually gave way to an element of resistance and control over their lives in the face of the huge number of visitors who came to see them out of curiosity.

To a great extent, each phase explored in this chapter mirrors the broader dominant cultural modes of expression. Encounters appeared so prominently in travel writing as the genre was a major way for thinkers to obtain knowledge about the world beyond the borders of Europe. The exhibitions of people with albinism clearly epitomized the rational and empirical Enlightenment project as a whole. Finally, private examinations reflected the rise of racial theory, anthropology and other sciences of measurement appearing from the last three decades of the eighteenth century. As will be demonstrated in the following chapter, knowledge about people in the life sciences gave way to an explosion of medical and ophthalmological interest in people with albinism. From the turn of the nineteenth century, people with albinism were examined by medical men against the backdrop of a fundamental re-conceptualization and reorganization of medicine across the continent. The condition of 'albinism' was thus born, and the extent of physical and mental examination rose considerably throughout the nineteenth century period.

Chapter Two

Pathological Whiteness: Albinism in European and North America Medical Thought and Practice, 1800-1870

> It is through the great eye of medicine, which on countless occasions explored, analyzed and dissected Man, that the wellhead of Man's existence can be located.[1]
>
> David Armstrong, *A New History of Identity* (2002)

In July 1822, David Mansfeld, a German physician, surgeon and specialist in midwifery published a short medical treatise on 'Leukopathie oder Albinoismus'.[2] Mansfeld was Johann Friedrich Blumenbach's pupil at the University of Göttingen; he dedicated 'years of almost uninterrupted research' into 'albinoismus' to his professor, and built upon Blumenbach's concepts and terminology for

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[1] David Armstrong, *A New History of Identity: a sociology of medical knowledge*, Basingstoke; New York: Palgrave (2002), p. x.

[2] Mansfeld's last name in French and English publications is spelt Mansfeldt whereas in German works it appears as Mansfeld. Mansfeld's treatise was never translated from the original German: David Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden* Braunschweig: Ludwig Luscius (1822). In addition to his study of 'leukopathie', Mansfeld was a prolific author. He published treatises on the history of midwifery, the history of the Braunschweig Deaf Institute, and an introduction to medical encyclopaedias. He also co-authored a short work criticising the damage caused to 'medical science by religious mysticism'. See: David Mansfeld, *Über das Alter des Bauch- und Gebärmutter-Schnitts an Lebenden: ein Beitrag zur Geschichte der Geburtshülfe*, Braunschweig: Meyer (1825); *Aerztliche Andeutungen zu einer näheren Bestimmung des bürgerlichen Standpunctes des Taubstummen*, Braunschweig: Fleckeisen (1828); *Das Taubstummen-Institut zu Braunschweig von seiner Errichtung bis zu Ende des Jahres 1829*, Braunschweig: Fr. Vieweg und Sohn (1830); *Einleitung zur medicinischen Encyklopädie, zum Behufe seiner Vorlesungen*, Braunschweig (1829); Claus Harms and David Mansfeld, *Beurtheilung des "Geistlichen Raths für Hebammen vom Archidiakonus Harms": Störung der Arzneiwissenschaft durch geistlichen Mysticismus*, Braunschweig: Meyer (1825). Mansfeld's combination of general medicine, surgery and midwifery exemplified changes to the structure and content of a doctor's training as a medical surgeon (*Medico*-Chirurgen) in many parts of Germany during the first half of the nineteenth century. For example, Prussian examination reforms in 1825 allowed students to cultivate theoretical and practical medicine and surgery. By the 1830s, 'the overwhelming majority of medical students chose certification as medical surgeons because the number of physicians in cities had increased sharply and young doctors thought they could better compete by offering all branches of medical services'. See: Claudia Huerkamp, *Der Aufstieg der Ärtzte im 19. Jahrhundert vom gelehrten Stand zum professionellen Experten: das Beispiel Preussens*, Göttingen: Vandenhoeck and Ruprecht (1985), p. 4.

'leucoethiopia' detailed in his dissertation *On the Natural Variety of Mankind* (1775).[3] However, in Mansfeld's 'little work' he proposed a more sophisticated system than Blumenbach's for the pathological classification of 'albinoismus'.[4] Edouard Cornaz – Swiss ophthalmologist, and author of the most thorough research into albinism undertaken throughout the nineteenth century – acknowledged Mansfeld's classification of 'albinoismus' as a 'great service to science'.[5]

Mansfeld outlined three degrees of whiteness caused by varying intensities of 'albinoismsus': 'total and perfect', 'partial', and 'imperfect'.[6] The logic of Mansfeld's classification of 'albinoismus' necessarily isolated 'normal' whiteness from its 'leukopathic' opposite. Mansfeld's separation of 'albinoismus' onto a spectrum of intensity significantly contributed towards the making of the 'albino' as a versatile pathological identity in nineteenth-century European culture and society.[7] David Armstrong's argument for the centrality of medicine in penetrating the 'wellhead of

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[3] David Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden*, Braunschweig: Ludwig Luscius (1822), p. v. See Chapter one for Blumenbach's research on 'leucoethiopia'. Before Blumenbach, the first modern use of the term 'leucoethipops' was by Claude Nicolas Le Cat. See: Claude Nicolas Le Cat, *Traité de la couleur de la peau humaine en générale, de celle des nègres en particulière, et de la métamorphose d'une de ces couleurs en l'autre, soit de naissance, soit accidentellement,* Amsterdam: s.n. (1765), p. 100. For the methodological practices of German and specifically Prussian doctors in the eighteenth and nineteenth century see: Claudia Huerkamp, 'The making of the modern medical profession, 1800-1914: Prussian Doctors in the nineteenth century' in Geoffrey Cocks and Konrad H. Jarausch (eds.), *German Professions, 1800-1950,* New York; Oxford: Oxford University Press (1990), p. 67.

[4] Mansfeld gave each of the three classes specific qualities for 'leukopathic' eyes, skin and hair. Mansfeld identified 'Total and perfect leukopathie' by a complete absence of pigment in the hair and skin accompanied by red coloured eyes. 'Partial leukopahtie' involved very light blond hair, unpigmented skin, and light grey or blue eyes. Both classes, closely allied, exhibited a strong sensitivity to bright sunlight. 'Imperfect leukopathie' had two sub classes: 'imperfect universal leukopathie' and 'imperfect partial leukopahtie'. 'Imperfect universal leukopathie' was delineated by absence of pigment in one of skin, hair or eyes. Finally, 'Imperfect partial leukopathie' involved isolated patches of white on the skin or hair.

[5] Edouard Cornaz, 'De l'Albinisme', *Annales de la société de médecine de Gand*, vol. 33 (1855), p. 290. Cornaz was secretary at the *Société médicale de Neuchâtel*, and a corresponding member of the *Société de medicine de Gand*.

[6] Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden* (1822), p. 20. Mansfeld used 'leukopathie' and albinoismus' interchangeably, which is reflected in the title of his short work.

[7] For Albinism and identity see chapter four.

Man's existence' thus proves highly apposite in relation to this effective invention of albinism.

Across nineteenth-century Europe and North America, Mansfeld and a range of medical and ophthalmological practitioners produced linguistic and conceptual frameworks to diagnose albinism as a congenital disease. This medical research involved a fundamental change from earlier eighteenth-century ways of knowing people with albinism. [8] Medical men observed, classified and quantified people with albinism on an unprecedented scale when compared with the early modern and Enlightenment era. Nevertheless this medically motivated alteration in thought and practice was a transitional period, not an epistemological break from the encounters, exhibitions, and examinations of unusually white people by explorers, naturalists and philosophers.

Individual medical case studies of people with albinism defined the period between 1800-1840. The accumulation of cases of albinism in medical journals and monographs connected with broader developments in the culture, organization and professionalization of European medicine and ophthalmology. From the late 1840s, medical practitioners in both Europe and North America concentrated on researching families with albinism. Thinkers and practitioners hoped to understand the laws of inheritance through genealogical reconstructions. These studies of albinism and inheritance engaged with the appearance of consanguinity research from the 1850s in Europe and North America.

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[8] John V. Pickstone proposes a three-fold epistemological structure for the sciences: natural history, analysis and experimentation. See: John V. Pickstone, *Ways of Knowing: a new history of science, technology and medicine*, Manchester: Manchester University Press (2000), p. 2.

The chapter is divided into four parts. The first section establishes a broad historical and theoretical framework to chart the implications of the effective invention of albinism in western medicine at the turn of the nineteenth century. The relationship between people with albinism and medical research is viewed through the prism of widespread transformations in the practice, organization and specialization of medicine and ophthalmology across Europe. The specialization in ophthalmology brought the study of the eyes of people with albinism increasingly under scrutiny and led to the dual diagnosis of albinism as an absence of pigmentation coupled with reduced visual acuity. This medical and ophthalmological familiarity with the eyes and bodies of people with albinism was vital for establishing notions of normality and abnormality fashioned by clinical evidence.

The second section analyzes the practical absorption of albinism into this emerging medical discourse of pathological whiteness. It investigates the accumulation and sequencing of medical knowledge about albinism in medical ephemera. Following this focus on medical and ophthalmological publications, the third section concentrates on individual medical examinations of people with albinism by European and North American physicians and ophthalmologists. These case studies accumulated to such an extent that a new way of identifying and valuing people gradually and unevenly developed throughout the first half of the nineteenth century. The concluding section *c*onnects the medical and ophthalmological scrutiny of the bodies of people with albinism with emerging ideas about health and social value. Medical men debated the possible external and internal causes of albinism that was taken up by authors interested in the congenital

aspects of disease by looking at family histories with albinism. It concludes by emphasizing how ideas of heredity and the family brought about the publication of studies into consanguinity and albinism from the late 1840s to the close of the 1860s in Europe and the North America.

Medicine Transformed

The development of nineteenth-century medical knowledge about people with albinism was bound to deeper structural changes in the theory and practice of medicine. Just as private examinations of unusually white people took place as part of late eighteenth-century interests in race and anthropology, the rise of medicine and biological science dominated the study of albinism in nineteenth-century Europe. Blumenbach had emphasized the relationship between albinism and pathology in the 1775, but this association only matured in medical and ophthalmological knowledge at the start of the nineteenth century.

William Bynum argues this fecund late eighteenth and early nineteenth century period for medicine involved, 'rapid changes in medical education and medical thought…which may constitute a medical revolution'.[9] Revolution in medicine and science consisted of sweeping changes to medical doctrines, practices, and institutions.[10] The increased practice of clinical examinations and pathological anatomy in Paris after the French Revolution – reflected also in the swift rise in case studies of people with albinism – ensured significant alterations to professional and educational structures, in the control of hospitals and in the work routines of

[9] William F. Bynum, *Science and the Practice of Medicine in the Nineteenth Century*, Cambridge: Cambridge University Press (1994), p. 1.
[10] William F. Bynum, Anne Hardy, Stephen Jacyna, Christopher Lawrence, E.M. Tansey (eds.) *The Western Medical Tradition: 1800-2000*, Cambridge: Cambridge University Press (2006), p. 11.

doctors.[11] According to Roy Porter, it was the era of state-sponsored science, which brought increased manpower, institutions, teaching, training and expectations.[12]

In the United States, however, such vast reorganization did not occur at a similar pace. John S. Haller cites the period between 1840-1910 as being a crucial time of transition for the study and practice of medicine in North America.[13] Before 1840, medicine in America owed more to the past as, 'generations of medical practices clung tenaciously as physicians sought extensions to the boundaries of ancient knowledge'.[14] Medical historian Ira Rutkow argues this early nineteenth-century period was greatly influenced by Benjamin Rush's idea of 'heroic therapy', which involved 'the elimination of blood and other bodily fluids'.[15] Thus therapy and research largely remained connected to eighteenth-century medical tradition. In comparison with Europe, the slow development of innovations in therapeutic practices is attributed by Judith Walzer Leavitt and Ronald L. Numbers to the fact that 'no jobs existed for research' until the late nineteenth century.[16]

In addition to these broad changes across Europe, new technologies facilitated observation of the body with greater precision, such as the ophthalmoscope for the eyes.[17] Deploying this fresh empirical evidence, medicine made greater claims

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[11] John V. Pickstone, *Ways of Knowing: a new history of science, technology and medicine*, Manchester: Manchester University Press (2000), p. 18.
[12] Roy Porter, *The Greatest Benefit to Mankind: a medical history of humanity from antiquity to the present*, London: Harper Collins (1995), p. 305.
[13] John S. Haller, *American Medicine in Transition, 1840-1910*, Urbana; London: University of Illinois Press (1981), p. vii.
[14] Haller, *American Medicine in Transition, 1840-1910* (1981), p. vii.
[15] Ira Rutkow, *Seeking a Cure: a history of medicine in America*, New York: Scribner (2010), p. 32.
[16] Judith Walzer Leavitt and Ronald L. Numbers (eds.), *Sickness and Health in America: readings in the history of medicine and public health*, Maddison, Wiss.; London: University of Wisconsin Press (1997), p. 113.
[17] George E. Arrington, *A History of Ophthalmology*, New York: MD Publications (1959), p. 97.

towards being more scientific.[18] Its self-conception as a culture and as a politics augmented the spread of scientific medicine in the nineteenth century.[19] This dramatic expansion of medical authority aimed to improve human beings, and to uncover the hitherto hidden secrets of the sick body. It also meant the medical knowledge produced about albinism existed in a highly connected and increasingly hegemonic culture that defined sickness and health.

Such nineteenth-century visions of a rational approach to augmenting national health became a reality with the medical quantification of urban and national populations by both individuals and the state.[20] This social medicine was visible across north-western Europe, in part through the rise of a 'medical police' during the eighteenth century and nineteenth century; it was a movement, however, which galvanized support in theory more than in practice.[21] In the context of wider social and state care, people with albinism became increasingly visible under this great eye of medicine. For example, historian Claudia Huerkamp makes clear in the case of Germany the population as a whole experienced increasing reliance on physicians through state action, especially by the expansion of health care for the poor, the construction of hospitals, the introduction of smallpox vaccination, and

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[18] Roy Porter, *The Greatest Benefit to Mankind: a medical history of humanity from antiquity to the present*, New York; London: W.W. Norton (1995), p. 305.
[19] David Cahan (ed.), *From Natural Philosophy to the Sciences: writing the history of nineteenth-century science*, Chicago, Ill.: Chicago University Press (2003), p. 50.
[20] M.L. Taper and S.R. Lele (eds.), *The Nature of Scientific Evidence: statistical, philosophical, and empirical considerations*, Chicago: University of Chicago Press (2004); David Armstrong, 'The Rise of Surveillance Medicine', *Sociology of Health and Illness*, vol. 17 (1995), pp. 393-404; Ian Hacking, *The Taming of Chance*, Cambridge: Cambridge University Press (1990); Theodore M. Porter, *Trust in Numbers: the pursuit of objectivity in science and public life*, Princeton, New Jersey: Princeton University Press (1995); George Rosen, *From Medical Police to Social Medicine: essays on the history of health care*, New York: Science History Publications (1974), p. 142.
[21]Rosen, *From Medical Police to Social Medicine: essays on the history of health care* (1974), p. 142.

health insurance requirements for workers.[22] As demonstrated below, the prominent place of physicians in Germany resulted in several influential publications on the history and symptoms of albinism.

Substantial growth of medical knowledge encouraged subdivision into increasingly narrow fields of specialization.[23] The few specialties that enjoyed any recognition at all in the early nineteenth century concentrated on diseases of the eyes and birthing.[24] Between 1800 and 1850, ophthalmology gradually emerged as a distinct specialty within medicine though it developed across Europe unevenly.[25] Led by pioneering work at the University of Vienna, ophthalmology became an independent unit in the university curriculum, and the university structure of most European institutions by the middle of the nineteenth century.[26] These developments in ophthalmology are mirrored by an increase in the number of nineteenth-century case studies of people with albinism, which featured prominently in discussion of the various abnormalities of the eye.

The ophthalmologists who studied people with albinism obtained an education in university eye clinics and other eye hospitals. In addition, periodic publications aimed at furthering the study of the eye and its diseases supported ophthalmological specialization. In Germany, Karl Himly (1772-1832) founded the

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[22] Claudia Huerkamp, 'The making of the modern medical profession, 1800-1914: Prussian Doctors in the nineteenth century' in Geoffrey Cocks and Konrad H. Jarausch (eds.), *German Professions, 1800-1950,* New York; Oxford: Oxford University Press (1990), p. 74.
[23] Peter J. Bowler and John V. Pickstone (eds.), *The Cambridge History of Science: the modern biological and earth sciences*, vol. 6, Cambridge: Cambridge University Press (2009), p. 15.
[24] Ann La Berge and Mordechai Feingold (eds.), *French Medical Culture in the Nineteenth Century*, Amsterdam; Atlanta: Rodopi (1994), p. 152.
[25] George Gorin, *History of Ophthalmology*, Wilmington, Delaware: Publish or Perish (1982), p. 65; George E. Arrington, *A History of Ophthalmology*, New York: MD Publications (1959), p. 97.
[26] Julius Hirschberg, *The History of Ophthalmology*, vol. 5, Bonn: J.P. Wayenborgh Verlag (1985), p. 51.

first ophthalmological journal in 1803.[27] Himly worked with Viennese practitioner Johann Adam Schmidt on the *Ophthalmologische Bibliothek*, which lasted from 1803-1807. Himly later released the *Bibliothek für Ophthalmologie*. It lasted from 1816-1819.[28] In 1830, Friedrich August von Ammon (1799-1861) established the periodical *Zeitschrift für Ophthalmologie.* This was the first real professional periodical after the defunct *Ophthalmologische Bibliothek* and *Bibliothek für Ophthalmologie*. In 1843, Himly himself included albinism in his two volume work entitled *Die Krankheiten und Missbildungen des Menschlichen Auges*.[29] Several other ophthalmologists published on the subject of albinism and its eye conditions during the first half of the nineteenth century across Europe.[30] Yet, the most significant and detailed analysis of albinism and its associated eye conditions appeared in more widely read mainstream medical journals, books, congresses, and monographs.

Out of this effective birth of modern medicine and ophthalmology it is possible to map out how albinism became increasingly associated away from the normal and firmly into a pathological physical state. The bifurcation of the normal and the abnormal is a useful division to approach the conceptualization of albinism in medical thought and practice during the nineteenth century. Awareness of albinism, disease and 'primitive man' irrevocably challenged established

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[27] George Gorin, *History of Ophthalmology*, Delaware: Publish or Perish (1982), p. 68.
[28] Gorin, *History of Ophthalmology* (1982), p. 68.
[29] Karl von Himly, *Die Krankheiten und Missbildungen des Menschlichen Auges, etc*, vol. 2, Berlin: August Hirschwald (1843), pp. 380-5.
[30] Carron Du Villards, 'Quelques mots pour servir à l'histoire anatomique et physiologique des yeux albinos', *Encyclographie de sciences méd*icales, vol. 27, March (1838); W. Cumming, 'On a luminous appearance of the Human Eye…etc.', *Medico-Chirurgical Transactions*, vol. 29 (1846), pp. 283-96; Edouard Cornaz, 'Quelques observations d'abnormalités congéniales des yeux et de leurs annexes', *Annales oculistiques*, vol. 23, Lausanne (1848).

measurements of ability and value in relation to what it meant to be a successful and sophisticated human being.[31]

Waltraud Ernst's edited collection of essays entitled *Histories of the Abnormal and the Normal* (2006) argues this conceptual dichotomy born in medical knowledge has an irrefutable moral dimension. Ernst, and his contributors, explore whether 'norms and differentiation between what is to be considered normal and abnormal are a 'good thing' or problematic, constructive and vital or oppressive'.[32] In light of this association of pathology with values inherent to prevailing morality, Ernst contends debates about normalcy and abnormality in humans and objects spans much wider into many disciplines in the humanities: social history of medicine, art history, sociology, anthropology and philosophy.[33] Health, disease and albinism are thus here inextricably bound up with shifting and contested moral and social values.

In *Le normal et le pathologique* (1966), Georges Canguilhem sees the division of normal and pathological entities as being driven by a need for medicine to find a cure. This quest for health is 'the impetus behind every ontological theory of disease', which 'undoubtedly derives from therapeutic need'.[34] Canguilhem observed that there does not seem to be a clear a priori ontological distinction between what separates a successful living form from a supposedly unsuccessful

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[31] For the relationship between universal history, progress and 'primitive man' see: William Coleman, *Biology in the Nineteenth Century: problems of form, function and transformation*, Cambridge: Cambridge University Press (1971).
[32] Waltraud Ernst (ed.), *Histories of the Normal and the Abnormal: social and cultural histories of norms and normativity*, London; New York: Routledge (2006), p. 6.
[33] Ernst (ed.), *Histories of the Normal and the Abnormal: social and cultural histories of norms and normativity* (2006), p.1.
[34] Georges Canguilhem, *The Normal and the Patholgoical*, New York: Zone Books (1991), originally published as *Le normal et le pathologique*, Paris: Presse Universitaires de France (1966), p. 31.

living form. However, the division of the normal from the pathological is necessarily inherent to the development of medical and biological science.[35]

Michel Foucault situates Canguilhem's argument within a specific chronological framework. In his 1974 lectures entitled *Abnormal*, Foucault proposes that the turn of the nineteenth century can be characterized as the 'domain of abnormality'.[36] In this domain resides the abnormal individual, an 'everyday monster…a monster that has become commonplace'.[37] Foucault may even have people with albinism in mind when he stated that, 'for a long time the 'abnormal individual will be something like a pale monster'.[38]

Yet, how does this framing of the normal and the pathological in the case of albinism come about in practice? The geneticist and philosopher François Jacob argues in *The Logic of Living Systems* (1974) that objects (or diseases), once identified, are 'incorporated within prevailing theories or beliefs of that particular period, and their meaning, as objects, is shaped by their very nature, and the equipment available for studying them'.[39] What Jacob describes are the changing contours of epistemic cultures in medicine and science, which define the way albinism is described, defined and diagnosed.[40] Albinism in medical science was therefore welded to innovations in medical techniques, the spread and availability of new

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[35] Georges Canguilhem, *The Normal and the Patholgoical*, New York: Zone Books (1991), originally published as *Le normal et le pathologique*, Paris: Presse Universitaires de France (1966), p. 31.
[36] Michel Foucault, *Abnormal: lectures at the Collège de France*, London: Verso (2003), p. 56, originally published as *Les anormaux: cours au Collège de France*, Paris: Gallimard (1974-75).
[37] Foucault, *Abnormal: lectures at the Collège de France* (2003), p. 57.
[38] Foucault, p. 57.
[39] François Jacob, *The Logic of Living Systems*, Allen Lane: London (1974), originally published as *La logique du vivant*: *une histoire de l'hérédité*, Paris: Gallimard (1970), p. 2.
[40] Karin Knorr Cetina, *Epistemic Cultures: how the sciences make knowledge*, Cambridge, Mass; London: Harvard University Press (1999).

knowledge, and the appearance of novel instruments such as the ophthalmoscope to study the eye.

The historical study of syphilis offers an interesting analogy to that of albinism. Ludwik Fleck, a Polish biologist, discussed this effective invention of disease in his *Genesis of the Scientific Fact* (1935). Fleck gives the example of syphilis, which he argues must be investigated 'like any other case in the history of ideas, as being a result of the development and confluence of several lines of collective thought'.[41] Thus, in Fleck's view, it is not feasible to legitimize the 'existence' of syphilis in any other than a historical way.[42] Just as with syphilis, therefore, albinism is also the result of such a confluence of several lines of thought, a manifestation of the particular nineteenth-century efflorescence of medical research.

Sequencing Albinism

The mapping of albinism onto the bodies of people with an unusually white complexion in the nineteenth century came about through an enormous increase in the number of books and other ephemera published in all branches of medical study across Europe.[43] Between 1800-20, short medical journal articles on single cases of albinism dominated the medical publications landscape.[44] According to William F. Bynum, the general rise of 'medico-scientific journals…effected a qualitative

[41] Ludwik Fleck, *Genesis and Development of a Scientific Fact*, Basel: Benno Schwabe (1935), p. 23.
[42] Fleck, *Genesis and Development of a Scientific Fact* (1935), p. 23.
[43] Alain Besson (ed.), *Thornton's Medical Books, Libraries and Collectors*, Aldershot: Gower (1990), p. 160.
[44] John Redman Coxe, 'Account of an Albino', *Philadelphia Medical Museum*, vol. 1 (1805), pp. 151-156; F. Chardet, 'Observation d'un albinos, improprement appelé nègre-blanc', *Journal de Médecine, Chirurgie, Pharmacie etc.,* vol. 11 (1806), pp. 18-20; John Bostock, 'Female Albino', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 23 (1808), p. 203; Thomas Stewart Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 19, London (1808), pp. 81-84; Charles Haldat, 'Recherches sur les Albinos d'Europe', *Journal de physique, de chimie, de l'histoire naturelle et des arts*, vol. 70 (1810), pp. 144-156; Billard, 'Notice sur trois enfants albinos', *Journal de Médecine, Chirurgie, Pharmacie, etc.*, vol. 24, Paris (1812), pp. 36-41.

transformation in knowledge'.[45] In Germany between 1822-1824, David Mansfeld and Julius Heinrich Gottlieb Schlegel produced more detailed standalone treatises on albinism.[46] Isidore Geoffroy St. Hilaire wrote an even lengthier treatment of the subject, published in France in 1832.[47] St. Hilaire reprised debates about the classification and causes of albinism, and added to existing material on animals with albinism first explored by Blumenbach in 1775. Just over two decades after St. Hilaire's research, Edouard Cornaz produced a huge monograph on albinism, which brought together two centuries of material. He added his own cases studies and genealogies of people with albinism.[48]

Besides case studies and natural histories in medical journals and monographs, general surveys of the cause or etiology of albinism appeared in dictionaries, encyclopedias, and academic addresses.[49] Such reference articles, housed in libraries and private collections, provided a critical source of knowledge

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[45] William F. Bynum, Stephen Lock, Roy Porter (eds.), *Medical Journals and Medical Knowledge: historical essays*, London; New York: Routledge (1992), p. 2. See also: Jan P. Vandenbroucke, 'Medical Journals and the Shaping of Medical Knowledge', *Lancet*, vol. 353, no. 9155, March 6 (1999), p. 848.

[46] Julius Heinrich Gottlieb Schlegel, *Ein Beitrag zur nähren Kenntniss der Albinos*, Meiningen, Keyssnerichen Hofbuchhandlung (1824); David Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden*, Braunschweig: Ludwig Luscius (1822). Schlegel's work included his own material, but it mainly consited of a direct translation of Georg Tobias Ludwig Sachs's Latin dissertation on albinism. See: Georg Tobias Ludwig Sachs, *Historiae naturalis duorum leucaetiopum: Auctoris ipsius et sororis eius*, Solisbaci: Sumptibus Bibliopolii Seideliani (1812).

[47] Isidore Geoffroy Saint-Hilaire, *Histoire générale et particulière des anomalies de l'organisation chez l'homme et les animaux, ou, traité de tératologié*…etc., vol. 1, Paris; London: J.B. Baillière (1832-37).

[48] Edouard Cornaz, 'De l'Albinisme', *Annales de la société de médecine de Gand*, vol. 33 (1855), pp. 269-395.

[49] Jourdan, 'Leucéthiopie', *Dictionnaire des sciences médicales*, vol. 28 (1818); Rudolphi, *Encyklopädisches Wörterbuch der medicinischen Wissenschaften*, vol. 2 (1828), pp. 17-21.
F. Blandin, 'Albinisme', *Dictionnaire de médecine et chirurgie pratique*, vol. 1, Paris (1829), pp. 452-5; Renauldin, *Dictionaire des sciences médicales*, vol. 1, Paris: C.L.F. Panckoucke (1812), pp. 290-292; David Mansfeldt, 'Réflexions sur la leucopathie considérée comme le resultant d'un retardement de développoment…etc.', *Journal complémentaire du dictionaire des sciences médicales*, vol. 15, Paris: C.F.L. Panckoucke (1823); Breschet, 'Albinos', *Dictionnaire de médecine*, vol. 2 (1833), pp. 120-132; John Bostock, 'Albino', *Cyclopedia of Anatomy and Physiology*, vol. 1, London (1836); Trêlat, 'Albinisme', *Dictionnaire Encyclopédique des sciences médicales*, vol. 2, Paris (1865), pp. 401-15.

about people with albinism for medical and ophthalmological practitioners.[50] Only a few pages in length, dictionary pieces were vital for providing a general survey of the latest findings and theories related to albinism.

Nineteenth-century medical culture clearly set in motion an entirely novel way of describing, defining, and knowing people with albinism. This range of medical and ophthalmological material allowed the spread of knowledge about albinism. The circulation of printed material on the subject of albinism helped in the production of a pathological way of seeing and classifying people with albinism. David Armstrong succinctly articulates this process of pathologisation as, 'the turning prism of medical perception that…maps our mutating identity'.[51] This sequencing of isolated cases of albinism was akin to the construction of a virtual visual clinic. Medical practitioners compared their own observations with the findings of fellow physicians in trusted medical journal articles.

Diagnosing Albinism: medical case studies

Several case studies of people with albinism appeared in the first decade of the nineteenth century. The earliest case in this period is from North America. On Thursday February 6, 1800, Joseph Kearsley, a 25 year old man born near the Northampton iron-works in Maryland, knocked at the door of John Redman Coxe's

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[50] For societies and academies see: Roy Porter (ed.), *The Cambridge History of Science: the eighteenth century,* vol. 4 (2003), p. 90. For medical journals see: W.F. Bynum, Stephen Lock, Roy Porter (eds.), *Medical Journals and Medical Knowledge: historical essays*, London: Routledge (1992). For a general overview of medicine and the spread of knowledge see: Sachiko Kusukawa and Ian Maclean (eds.), *Transmitting Knowledge: words, images and instruments in early modern Europe*, Oxford: Oxford University Press (2006). For medical libraries see: Jennifer Connor, *Guardians of Medical Knowledge: the genesis of the Medical Library Association*, Lanham, Md: Scarecrow Press (2000).
[51] David Armstrong, *A New History of Identity: a sociology of medical knowledge*, Basingstoke; New York: Palgrave (2002), p. x.

(1773-1864) house in Philadelphia to 'solicit charity'.[52] Coxe – a recently qualified physician – noticed Kearsley, 'appeared to distinguish objects with much difficulty'.[53] Coxe was busy preparing a speech for the *Philadelphia Medical Society* for the following day, but he was 'desirous to ascertain the cause' of Kearsley's efforts to see.[54] Coxe quickly realized Kearsley, 'exhibited the marks of an Albino'.[55] The physician had never gazed at a living case, having only ever read about the 'Albino' phenomenon.[56]

Kearsley was not familiar with Coxe's 'Albino' diagnosis. But he willingly allowed himself to be examined by Coxe probably for food or a small fee. Anxious not to waste this 'opportunity', Coxes's examination of Kearsley was extensive. Parting Kearsley's hair, Coxe observed, 'the skin of his head beneath his hair…seemed to approach a light pink colour'.[57] He also noted Kearsley had 'an excess' of hair on his 'legs and thighs'.[58] Coxe's idea of 'excess' here highlights his search for signs of pathology in every part of Kearsley's body. Indeed, Coxe then took Kearsley's pulse, studied his eyes, took a sample of his urine, and checked his

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[52] John Redman Coxe, 'Account of an Albino', *Philadelphia Medical Museum*, vol. 1 (1805), pp. 151-152.
[53] Coxe, 'Account of an Albino' (1805), p. 151. Coxe was a pioneer of small pox vaccination, and began practicing in Philadelphia in 1797. At the time Coxe met Kearsley, he was physician to the Port of Philadelphia. For a detailed biography of Coxe's education and career see: T.S.W., 'American Physicians: John Redman Coxe', *The American Journal of Surgery*, vol. 18, no. 2 (1932), p. 348.
[54] Coxe (1805), p. 151. On Friday February 7, 1800, Coxe delivered a speech to the Philadelphia Medical Society, which was then published in the same year. See: John Redman Coxe, *A short view of the importance and respectability of the science of medicine read before the Philadelphia Medical Society on 7 February, 1800*, Philadelphia: M. Carey (1800).
[55] Coxe (1805), p. 151.
[56] In his 'paper', Coxe cites Johann Friedrich Blumenbach, Francesco Buzzi and Thomas Jefferson.
[57] Coxe, p. 151.
[58] Coxe, p. 151.

breathing.[59] After this physical examination, Coxe recorded a detailed history of Kearsley's life and his family.

Coxe may have been looking for the cause of albinism by trying to reconstruct Kearsley's family. Apparently, Kearsley had a 'twin brother' named William who was, 'affected in a similar way in every respect as Joseph'.[60] Kearsley also had three younger sisters, 'the eldest of whom', Coxe states', 'saw perfectly distinct'.[61] This sister had, 'sandy hair' and 'died young after a weeks (sic) illness'.[62] Coxe notes that the 'two other sisters saw rather better than either him or his brother…they both had brown hair, and died, one at 4 years of age, the other at two'.[63] The American physician was possibly reconstructing Kearsley's genealogy to assign a cause to the transmission of albinism.

Coxe's medical 'paper' reveals significant details about Joseph's life. Besides looking at heredity – though never described in such explicit terms – Coxe was also interested in the possible impact of the environment on Kearsley's health. For example, Coxe sets down that Kearsley's 'place of birth…(was on) very low ground, surrounded by hills, marshy, foggy, and very sickly'.[64] Coxe also notes Kearsley's various jobs from childhood. He recorded that:

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[59] John Redman Coxe, 'Account of an Albino', *Philadelphia Medical Museum*, vol. 1 (1805), pp. 151-152.
[60] Coxe, 'Account of an Albino' (1805), p. 152.
[61] Coxe (1805), p. 152.
[62] Coxe, p. 152.
[63] Coxe, p. 152.
[64] Coxe, p. 152.

> When the boys (Joseph and William) employed themselves in digging ore and shoveling dirt…they continued the above mode of life until they were about nineteen or twenty years of age.[65]

By this time, according to Coxe, Joseph and William traveled to New York where they found work 'turning the wheels of tobacconists and cutlers…they both enjoyed good health'.

After this physical examination and questions about his life history, Coxe concludes his 'account of this interesting case' by trying to judge Kearsley's character. Coxe thought that Kearsley 'appeared of a mild disposition'. However, Kearsley told Coxe he is 'much affected with vexation and low spirits, owing to his unfortunate situation'. Kearsley could be referring to his recent troubles with 'intermitting fever', though the fact that his twin brother died 'in his arms' of yellow fever on the way home from New York in 1798 is the more likely source of his 'vexation'.[66]

Coxe's account of Kearsley provides a rich historical example of the way medical practices describe and prescribe pathological symptoms on the bodies of people with albinism. Coxe's quest for abnormalities had few boundaries, as he searched for and wrote down as many empirical observations as possible. Coxe's examination of Kearsley was likely undertaken with some haste as he laments, 'the shortness of (Kearsley's) visit'.[67] Kearsley's experience of being examined is difficult to ascertain, though Coxe does record that, 'the man (Kearsley) appeared anxious to

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[65] John Redman Coxe, 'Account of an Albino', *Philadelphia Medical Museum*, vol. 1 (1805), p. 152.
[66] Coxe, 'Account of an Albino' (1805), p. 152.
[67] Coxe (1805), p. 152.

go'.[68] Perhaps Kearsley felt Coxe's payment or reward for being examined had reached a threshold that did not match Coxe's ambition to address as many questions as possible. According to Coxe, even after Kearsley had gone, 'many questions occurred to me'.[69]

Three years after the medical account of Joseph Kearsley, an Orcadian family doctor and intellectual Thomas Stewart Traill (1781–1862) submitted a short article to the *Journal of Natural Philosophy, Chemistry and the Arts* about a poor family with two 'albino' children living in Liverpool.[70] The 1808 article included Traill's observations and 'history' of the Edmund family, 'from the words of the mother', Ann Edmund.[71] Along with an extensive medical examination, Traill highlighted ongoing debate amongst European thinkers on the subject of the physiology and etiology of 'albinos'.[72]

Traill's knowledge of late eighteenth–century accounts of the 'discovery' of 'albinos' in Switzerland by Saussure and Blumenbach is evident from his citations,

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[68] John Redman Coxe, 'Account of an Albino', *Philadelphia Medical Museum*, vol. 1 (1805), p. 152.
[69] Coxe, 'Account of an Albino' (1805), p. 152.
[70] Traill ran his own practice in Liverpool for thirty years. He was a prominent citizen, described at his death as, 'the friend as well as the doctor of the best of families'. See: *Daily Post*, July 31, 1862. Traill's widespread interests in the arts and sciences are demonstrated by his revision and publication of the *Encyclopaedia Britannica* from 1853 to 1860, and the fact that he was professor of medical jurisprudence at the University of Edinburgh from 1833 until his death in 1862. See: Thomas Stewart Traill (ed.), *The Encyclopaedia Britannica: or dictionary of arts, sciences and literature*, 8th edition, Edinburgh: Adam and Charles Black (1861). For the best treatment of the new hospital-based medical practices in Europe see: Roy Porter, *The Greatest Benefit to Mankind: a medical history of humanity from antiquity to the present*, New York; London: W.W. Norton (1997), esp. Chps. 9 and 10. Popularly known as *Nicholson's Journal*, the *Journal of Natural Philosophy, Chemistry and the Arts* was the first independent scientific journal in Great Britain. It was founded in 1797, and run by prominent chemist and inventor William Nicholson (1753-1815) until its demise in 1814. For Traill's article, published a year after his encounter with the Edmund family see: Thomas Stewart Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 19, London (1808), pp. 81-84.
[71] According to Traill, 'Robert Edmond and his wife Anne are both natives of Anglesey in North Wales'. This is the Isle of Anglesey, a Welsh island of the northwest coast of the mainland.
[72] Thomas Stewart Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 19, London (1808), p. 81.

and clearly serves as a blueprint for his encounter with the two 'albino' children brought to his house by Ann Edmond sometime in 1807.[73] Traill reported that the, 'wholly remarkable appearance' of these two 'albino' children did, 'in all respects resemble the Albinoes of Chamouni, so well described by Saussure in his *Voyage dans les Alpes* (1786).[74] In his description of the eldest 'albino' child, Traill reveals his attempt to record any deviation from the usual or expected:

> The oldest of these 'albinos' is now nine years of age, of a delicate constitution, slender, but well formed both in person and in features; his appetite has always been bad. He frequently complains of a dull pain in his forehead; his skin is exceedingly fair; his hair flaxen and soft; his cheeks have very little of the rose in them...he cannot endure the strong light of the sun.[75]

Though Traill here does not refer directly to the idea of normal or pathological deviation, his method of examination reveals explicit expectations for what should be a healthy and unhealthy body. For instance, the 'delicate constitution' of the child insinuates it does not conform to what Traill would consider to be a strong or normal constitution. Furthermore, the child's diet is 'bad', but he is, 'well formed both in person and in features'.

Traill expected a deformed physical appearance, or, that he has from his bank of empirical knowledge as a family doctor built up a firm idea about how a healthy

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[73] Horace-Bénédict de Saussure, *Voyage dans les Alpes*:, 4 vols., Neuchatel (1786-1803).
[74] Thomas Stewart Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 19, London (1808), p. 81.
[75] Traill, 'On Albinos' (1808), p. 81.

or sick body should look and eat. Finally, this point is further emphasized by Traill's reference to the child's skin, described by the physician as being, 'exceedingly fair' with cheeks that have, 'very little of the rose in them'. This illustrates how Traill makes a comparison with what is usually seen in the complexion of normal healthy individuals. As for the mind of the child, Traill similarly adopts a set of values for making the decisive judgment that 'his disposition is very gentle, he is not deficient in intellect'.[76] Traill searched for physical and intellectual weakness in the 'albino' children because such ideas were prevalent throughout the eighteenth century.[77]

Traill – as interested in the Edmond's family history as Coxe was with Kearsley's – complemented his analysis of the 'albino' child with details of Anne and Robert Edmunds' physical condition. He recorded that, '(Robert) has blue eyes and hair almost black; her eyes are blue, and her hair of a light brown. Neither of them have remarkably fair skin'.[78] Traill then shifts is attention to the six children of the Edmund family:

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[76] Thomas Stewart Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 19, London (1808), p. 82.
[77] See chapter 1. Fluent in several languages and graduate in medicine from the University of Edinburgh – a progressive institution teaching the latest Parisian medical practices on diagnosing diseases by observing damaged body tissues and organs via autopsy – Traill was immersed in the latest international publications on a wide range of scientific subjects. He references the following works: Horace-Bénédict de Saussure, *Voyage dans les alpes*, 4 vols., Neuchatel (1786-1803); Johann Friedrich Blumenbach, *De oculis leucaethiopum et iridis motu commentatio*, Göttingen (1786), Claude Adrien Helvétius, *De l'esprit*, Paris (1758); Francesco Buzzi, 'Dissertazione storico-anatomica sopra una varieta particolare d'uomini bianchi eliofobi', in Pietro Moscati, *Opuscoli Scelti*, Milan (1784).
[78] Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts* (1808), p. 81.

> Their first child, a girl, has blue eyes and brown hair. The second, a boy, has the characteristics of an *albino*: viz. Very fair skin, flaxen hair, and rose coloured eyes. The third and fourth children were twins, and both boys; one of them has blue eyes and dark brown hair; the other was an *albino*. The former is still alive; the *albino* lived nine months, though a very puny child. The fifth child had blue eyes and brown hair. The sixth, and last now here, is a perfect albino.[79]

Traill recorded the physical details of the parents and the children, not simply to share his observations with the readers of Nicholson's journal, but to further his understanding of the way albinism was transmitted. He focused on the physical attributes of the unaffected members of the family even though he aimed not to, 'waste time on hypotheses'.[80] For Traill this:

> Variety of the human species...seems to be hereditary...the causes which produce it are like those which produce defects of limbs, or of various viscera, wholly concealed from our curiosity.[81]

Thus, Traill's acceptance that 'albinos' appear due to a 'hereditary' pathological condition explains why he sought 'albinos' in earlier generations of the Edmund family. For instance, he records that Ann Edmund claimed that, 'one of her cousins has a very fair skin, flaxen, and very weak light blue eyes'.[82]

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[79] Thomas Stewart Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 19, London (1808), pp. 81-82.
[80] Traill, 'On Albinos' (1808), p. 82.
[81] Traill (1808), p. 82.
[82] Traill, p. 82.

Two years after the publication of Traill's article, Charles Nicholas Alexandre Haldat du Lys (1770-1852), a French physicist and ophthalmologist, submitted his own case study of an 'albino' child from Nancy to the *Journal de physique, de chimie, de l'histoire naturelle et des arts*.[83] There is no evidence Haldat read Traill's work, but the French physicist was similarly immersed in the European literature on the subject, and was convinced this 'accidental variety' should be analyzed within the field of pathology.[84] Haldat's stated purpose for publishing this case study was to establish once and for all that, 'just as in other parts of the world, this human variety is subject to this variation in Europe'.[85] The most distinctive aspect of Haldat's research for the history of the invention of albinism is his focus on the eyes of the young French boy; the Italian anatomist Francesco Buzzi had only discussed albinism and ophthalmology at any length in 1784.[86]

Haldat's case study is a child of eleven years of age. He begins by describing the boy's hair. According to Haldat, it is of a 'whiteness so striking that one can only compare it with the wool of the goats of Angora…(it is) smooth, soft and abundant in quantity'.[87] As shown in the previous chapter, Haldat's analogy of the child's whiteness with that of goat's wool and other attributes of animals is consistent with

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[83] Charles Haldat, 'Recherches sur les Albinos d'Europe', *Journal de physique, de chimie, de l'histoire naturelle et des arts*, vol. 70 (1810), pp. 144-156. Haldat is principally remembered for his research into magnetism: Charles Nicholas Alexandre du Lys, *Recherches sur la cause du magnétisme par rotation*, Nancy: Raybois et Cie (1841); *Deux mémoires sur le magnétisme*, Nancy: Grimblot et veuve Raybois (1846).

[84]Haldat, 'Recherches sur les Albinos d'Europe' (1810), p. 145.

[85]Haldat (1810), p. 146.

[86] Francesco Buzzi, 'Dissertazione storico-anatomica sopra una varieta particolare d'uomini bianchi eliofobi', in Pietro Moscati, *Opuscoli Scelti*, Milan (1784). For Haldat's publications on ophthalmology see: Charles Nicholas Alexandre Haldat du Lys, *Recherches expérimentales sur le mécanisme de la vision*, Nancy (1830); *Recherches nouvelles sur l'adaption ou accommodation de l'oeil aux distances*, Nancy: imprimerie de veuve Raybois (n.d.). For Haldat's collected works see: Sébastien Antoine Turck (ed.), *Éloge de M. de Haldat*, Nancy (1856).

[87] Haldat, p. 146.

observations made by a range of travel authors, philosophers and naturalists in the early modern and Enlightenment period. However, Haldat is not suggesting the boy shares any overt animal like qualities. He is a human boy. However, Haldat's usage of analogy to describe the whiteness of the boys' complexion emphasizes the shift towards a solely pathological understanding of albinism.

Haldat then shifts to using more neutral and detailed description of the colour and texture of the child's body, consonant with recent accounts he had read from German and French authors such as Albrecht von Haller, Johann Friedrich Blumenbach, Francesco Buzzi and Horace-Benedict de Saussure. For example, Haldat writes that the boys skin is a:

> Type of mat white, except for a faint pink colouring of his cheeks...it is of a fine texture, soft to the touch and highly transparent...aside from a few very small red spots the whiteness is uniform.[88]

Haldat describes the child as, 'fairly large, well-made, nimble and active...not noticeably different from the majority of infants his age'.[89] Again, as with Traill's attempt to situate this condition in relation to an implicit norm, Haldat possesses an intuition for what is healthy and expected.

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[88] Charles Haldat, 'Recherches sur les Albinos d'Europe', *Journal de physique, de chimie, de l'histoire naturelle et des arts*, vol. 70 (1810), p. 146.
[89] Haldat, 'Recherches sur les Albinos d'Europe' (1810), p. 147.

The physiological detail is even more intense when Haldat moves his analysis to the eyes of the boy, which are for Haldat the 'unique distinguishing characteristic of this human variety'.[90] He writes that,

> When the pupil is exposed to the full light of day, it has a highly pronounced pink tint...in moderate light the eyes are a light blue, the outer circumference of which are pinkish...the iris does not present the same appearance in low light, where the pink colour is replaced by a light blue on the edges and gets gradually lighter towards the centre.[91]

Haldat goes on to establish the, 'violent movement of the eyes, often unnoticed by other observers', and the tendency of the child to keep his, 'eye lids almost closed whilst lowering his head to avoid the brightness of the light'.[92] The purpose of citing this detailed description of the 'albino' boys' eye is to make clear that there is through the research of Haldat a new area of investigation being opened up that is accompanied by the language of ophthalmology.

Traill and Haldat's studies were based on strict empirical observation. In Germany, however, David Mansfeld and Georg Tobias Ludwig Sachs hoped to uncover an all-encompassing classificatory framework for people with varying degrees of albinism. Mansfeld examined a young boy with what he called 'complete leukopathie' called Edward Rettberg, born on July 25, 1820.[93] The physician's 'almost daily observations' of Edward from his birth were markedly more rigorous than

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[90] Charles Haldat, 'Recherches sur les Albinos d'Europe', *Journal de physique, de chimie, de l'histoire naturelle et des arts*, vol. 70 (1810), p. 146.
[91] Haldat, 'Recherches sur les Albinos d'Europe' (1810), p. 147.
[92] Haldat (1810), p. 147.
[93] David Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden*, Braunschweig: Ludwig Luscius (1822), p. vi.

Coxe's, Traill's and Haldat's relatively brief attempts to record the physical and psychological changes in people with albinism.[94] For example, Mansfeld noted down the weight of Edward as a newborn baby, detailed the range of illnesses he suffered, and paid close attention to any alterations in his somatic and mental condition.[95]

Against the Laws of Nature: albinism and consanguinity

From these case studies, medical practitioners increasingly associated albinism with being a congenital disease. During the second half of the nineteenth century, albinism – like tuberculosis and syphilis – was caught up in discussions about the collective health and destiny of rapidly industrializing nation-states across Europe. Medical men debated the chief cause of albinism intensely between 1800-1840. They agreed that albinism occurred at birth, but its actual cause was based on speculation. From the 1840s, medical practitioners implemented this idea of albinism being a congenital disease in their practical quest to unearth patterns of inheritance of albinism in family genealogies. Throughout the 1850s, after the emergence of this discourse of congenital disease, many thinkers in medicine believed the cause of albinism may ultimately lie in consanguineous unions.

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[94] As chapter one shows, Georges Buffon, Johann Friedrich Blumenbach and Horace Bénédict de Saussure presented a variety of case studies of people with albinism. While Mansfeld does acknowledge these three authors he also admits that he owed a great debt to the Latin dissertation of Georg Tobias Ludwig Sachs, which involved an unprecedented study of Sach's own physiological and chemical investigations as an 'albino'. See Chapter 3 and Georg Tobias Ludwig Sachs: *Historiae naturalis duorum leucaetiopum: Auctoris ipsius et sororis eius*, Erlangen (1812). The Latin dissertation was translated and expanded in 1824 by Julius Heinrich Gottlieb Schlegel. See: Julius Heinrich Gottlieb Schlegel, *Ein Beitrag zur Nähern Kenntniß der Albinos*, Meiningen: Keyssner (1824). For Buffon's and Saussure's case studies see Chapter one and Georges Buffon, *Histoire naturelle, générale et particulière: supplement*, Tome Quatrième (1777), Horace Bénédict de Saussure, *Voyage dans les Alpes*, vol 2, Neuchatel (1786).

[95] David Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden*, Ludwig Luscius (1822), p. 29.

During the first three decades of the nineteenth century medical practitioners sided with one of two explanations for what caused albinism. The first suggested an external influence, while the second claimed there was not sufficient evidence to explain the ultimate cause of albinism. The notion that albinism was caused externally grew out of the idea that it was a disease. Following Johann Friedrich Blumenbach's alignment of albinism with pathology, Charles Haldat stated in an article published by the Parisian *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* (1810) that the cause should be considered, 'simply to be an accidental variety that adheres to pathology as opposed to natural history'.[96] For some medical men such an accident could occur if a mother encountered shocking or frightening experiences during pregnancy. This idea was shown by anatomist Francesco Buzzi to be prevalent among lay and medical practitioners during the second half of the eighteenth century in Italy.[97]

In the nineteenth century, French and German authors Georg Tobias Ludwig Sachs, David Mansfeld and Isidore Geoffroy Saint-Hilaire further explored the idea of an external cause bringing about the birth of babies with albinism. Sachs, a physician and chemist with albinism, recounts the story of his mother's pregnancy in his dissertation on 'Leucaethiopia'.[98] Sachs wrote:

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[96] Charles Haldat, 'Recherches sur les albinos d'Europe', *Journal de Physique…etc.*, vol. 70, Paris (1810), pp. 145.
[97] See Chapter one.
[98] Georg Tobias Ludwig Sachs, *Historiae naturalis duorum leucaetiopum: Auctoris ipsius et sororis eius*, Solisbaci: Sumptibus Bibliopolii Seideliani (1812). The life and work of Georg Tobias Ludwig Sachs is analyzed in chapter three.

> It was approximately during the twenty ninth week of her pregnancy…the mother was in a dark room on a clear winters day where only a small amount of light could get in through the covered window. One of these rays of light landed on a hare sat in the corner of the room; he was brightly lit right in the eyes of the housewife.[99]

Sachs is not confident about the veracity of this explanation; he states that it is, 'up to the reader to decide what they think of it'.[100]

The mother's story exemplifies a collapse of the boundary separating the antagonistic and threatening state of nature from that of the domesticated human domain.[101] The animal she encounters is a wild hare, which heightens the sense of danger and fright caused by this unexpected encounter. Furthermore in *Man and the Natural World* (1983), Keith Thomas argues savage beasts and wild animals were often defined in theological terms in eighteenth century England as 'necessary instruments of God's wrath'.[102] The mother's story is thus both literal and symbolic. It is undoubtedly linked to the idea of mothers giving birth to monstrous or 'disorderly' progeny stretching back into medieval and early modern popular religious and folk traditions across Europe.[103]

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[99] Julius Heinrich Gottlieb Schlegel, *Ein Beitrag zur nähren Kenntniss der Albinos*, Meiningen: Keyssnerichen Hofbuchhandlung (1824), p. 6.
[100] Schlegel, *Ein Beitrag zur nähren Kenntniss der Albinos* (1824), p. 10.
[101] Harriet Ritvo, *The Animal Estate: the English and other creatures in the Victorian age*, Harvard: Harvard University Press (1989), p. 3.
[102] Keith Thomas, *Man and the Natural World: changing attitudes in England, 1500-1800*, London: Allen Lane (1983), p. 19.
[103] Frank Palmeri, *Humans and Other Animals in Eighteenth-century British Culture: representation, hybridity, ethics*, Aldershot: Ashgate (2006**)**; Alan W. Bates, *Emblematic Monsters: unnatural conceptions and deformed births in early modern Europe*, Amsterdam; New York: Rodopi (2005); Julie Crawford, *Marvellous Protestantism: monstrous births in post-Reformation England*, Baltimore: Johns Hopkins University Press (2005); Erica Fudge, Susan Wiseman and Ruth Gilbert (eds.), *At the Borders of the Human: beasts, bodies and natural philosophy in the early modern period*, Basingstoke: Macmillan (1999); Lorraine Daston and Katherine Park, *Wonders and the Order of Nature, 1150-1750*, New York: Zone

A decade later, David Mansfeld argued that such external 'psychological influences' (psychise Einflüsse) were – when one considers the cases of Europeans with albinism – the only possible explanation'.[104] As evidence, Mansfeld cites the above case of Sach's mother, without reference to Sach's doubts about whether the event actually took place. Mansfeld also relates an account by Siebald – published in the third volume of Blumenbach's *Medicinisches Bibliotek* (1788) – of a mother who in her third month of pregnancy, 'entered a house where a white rabbit with red eyes suddenly jumped at her, causing her to scream and run away'.[105]

For Mansfeld, a sudden fright could trigger the retardation of the development of the fetus. This concept of embryological development was no doubt shaped by the idea of the 'developing force' (Bildungstrieb) proposed at the end of the eighteenth century by Immanuel Kant and Johan Friedrich Blumenbach.[106] Kant and Blumenbach adopted and slightly altered Casper Wolff's theory for an invisible force, the *vis essentialis*, which guided the creation of embryos in the womb.[107] They argued that development proceeded through a predetermined force inherent in the

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Books (1998); Dennis Todd, *Imagining Monsters: miscreations of the self in eighteenth-century England*, Chicago; London: University of Chicago Press (1995).

[104] David Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden*, Braunschweig: Ludwig Luscius (1822), p. 17.

[105] Mansfeld, *Ueber das Wesen der Leukopathie oder des Albinoismus nebst Beschreibung eines in Braunschweig lebenden* (1822), p. 18. See: Johann Friedrich Blumenbach, *Medicinische Bibliotek*, vol. 3, J.C. Dieterich (1788).

[106] Clara Pinto-Correia, *The Ovary of Eve: egg and sperm and preformation*, Chicago; London: University of Chicago Press (1997), p. 4.

[107] Shirley A. Roe, *Matter, Life and Generation*, Cambridge: Cambridge University Press (1981), p. 49. See also: Justin E.H. Smith, *The Problem of Animal Generation in Early Modern Philosophy*, Cambridge: Cambridge University Press (2006); Shirley A. Roe, *The Haller-Wolff Debate Over Embryological Development*: Harvard: Harvard University Press (1976); Joseph Needham, *A History of Embryology*, Cambridge: Cambridge University Press (1959).

embryo, but that the embryo was not itself, as Albrecht Haller contended, preformed in its physical and psychological properties.[108]

Mansfeld undoubtedly drew from this rich tradition of German embryological research when he proposed that the process of development of the fetus could be disturbed and result in a mother giving birth to a baby with varying degrees of 'leukopathie'. He argued that the earlier this event occurs during pregnancy, the more intense are the symptoms of albinism, since the existing pigment from growth would remain unharmed.[109] Mansfeld's theory was convincing for zoologist and teratologist Isidore Geoffroy Saint-Hilaire. Saint-Hilaire, citing Mansfeld, argued that albinism was caused by an, 'individual and accidental modification', or a 'retardation of development'.[110]

The second position taken on the cause of albinism claimed that there was insufficient evidence to argue for any cause at all, but that it is highly likely to be a congenital condition. For example, Thomas S. Traill's 1808 article in *Nicholson's Journal* argued that, 'this variety of the human species...seems to be hereditary...the causes which produce it are like those which produce defects of limbs, or of various viscera, wholly concealed from our curiosity'.[111] Traill dismisses Buffon's argument for an environmental cause.[112] Traill concurs with Saussure who, 'very properly

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[108] Clara Pinto-Correia, *The Ovary of Eve: egg and sperm and preformation*, University of Chicago Press (1997), p. 4.
[109] David Mansfeldt, 'Réflexions sur la leucopathie considérée comme le resultant d'un retardement de développoment…etc.', *Journal complémentaire du dictionaire des sciences médicales*, vol. 15, Paris: C.F.L. Panckoucke (1823), p. 251.
[110] Isidore Geoffroy Saint-Hilaire, *Histoire générale et particulière des anomalies de l'organisation chez l'Homme et les Animaux, ou, Traité de Tératologié*…etc., vol. 1, Paris; London: J.B. Baillière (1832-37), p. 295.
[111] Thomas Stewart Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 19, London (1808), p. 82.
[112] For eighteenth-century debate about changes to the human complexion from the effects of climate see Chapter 1.

rejects the idea of this conformation being produced by the air of mountainous regions'.[113] The English doctor cites as evidence for this view that the, 'three albinos I have just described were born near the sea, on the extensive plains of Lancashire, and the birthplace of the parents is the flat island of Anglesey'.[114] As for the argument made by Buzzi for an internal disease contracted by the mother during pregnancy, Traill argues that, '…it is difficult to conceive of any disease of the mother capable of producing so extensive an effect'.[115] Traill argued in this regard that Ann Edmund, the mother of three albino children, 'neither experienced any sensation, which could lead her to distinguish between each kind of fetus; nor was her general health sensibly affected in one case more than in the other'.[116] Therefore in Traill's view, 'where facts are so few, and the causes so seemingly remote from human investigation, it is better to rest satisfied with having observed them, than to waste time on useless hypothesis'.[117]

In 1836, John Bostock (1773-1846), English physician and geologist, restated the skeptical lines drawn by Traill as to the causes of albinism in the *Cyclopedia of Anatomy and Physiology* (1836). Bostock argued:

> What are the circumstances in the constitution of the parents which should lead to this peculiarity in their offspring is entirely unknown, nor have any conjectures been formed on the subject, which can be considered as even plausible.[118]

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[113] Thomas Stewart Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, vol. 19, (1808), p. 82.
[114] Traill, 'On Albinos', *Journal of Natural Philosophy, Chemistry and the Arts*, (1808), p. 82.
[115] Traill, 'On Albinos', p. 84.
[116] Traill, p. 84.
[117] Traill, p. 84.
[118] John Bostock, 'Albino', *Cyclopedia of Anatomy and Physiology*, vol. 1, London (1836), p. 88.

Like Traill, Bostock doubted attempts to explain the cause of albinism, but was convinced it was heritable. For Bostock:

> This peculiarity occurs in individuals, who did not derive it from their parents, yet, like all those deviations from the ordinary structure of the body, which have been styled accidental varieties, when once produced, it is disposed to propagate itself by hereditary descent.[119]

As evidence for the hereditary nature of albinism Bostock cites the case of the two 'albino' brothers of Chamouni, the case of Sachs and his sister along with examples cited by Cornelius De Pauw, Bory Saint Vincent and Isidore Geoffroy Saint Hilaire.[120] Thus for Bostock only people born with albinism could pass on this condition via hereditary descent. The initial generation of a person with albinism, however, still relied on a chance deviation from what Bostock saw as the 'ordinary structure' of the human.

Bostock and Traill's arguments concerning the transmission of albinism were buttressed by centuries of investigation into selective breeding of humans and animals originating in ancient Greek thought.[121] Agriculture is probably the earliest

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[119] John Bostock, 'Albino', *Cyclopedia of Anatomy and Physiology*, vol. 1, London (1836), p. 88.
[120] Isidore Geoffroy Saint-Hilaire, *Histoire générale et particulière des anomalies de l'organisation chez l'homme et les animaux, ou, traité de tératologié*…etc., vol. 1, Paris; London: J.B. Baillière (1832-37); Cornelius de Pauw, *Recherches philosophiques sur les Américains, ou mémoires intéressants pour servir à l'histoire de l'espece humaine*, vol. 2, London (1770); Bory de Saint Vincent, *Essai Zoologique sur le genre humain*, vol. 2, Paris (1827), pp. 143-5.
[121] Jim Endersby, *A Guinea Pig's History of Biology: the plants and animals who taught us the facts of life*, London: William Heinemann (2007); Margaret E. Derry, *Bred for Perfection: shorthorn cattle, collies and Arabian horses since 1800*, Baltimore, Md.; London: Johns Hopkins University Press (2003); Charles Gladitz, *Horse Breeding in the Medieval World*, Dublin: Four Courts Press (1997); I.A. Phillips, *Concepts and Methods in Animal Breeding, 1770-1870*, Thesis, Manchester: UMIST (1989); Nicholas Russell, *Like Engend'ring Like: heredity and animal breeding in early modern England*, Cambridge: Cambridge University Press (1986); Keith Thomas, *Man and the Natural World: changing attitudes in England, 1500-1800*, London: Allen Lane (1983); Robert Trow-Smith, *A History of British Livestock Husbandry to 1700*,

form of applied biology.[122] Plato discussed the benefits of selectively uniting young healthy parents in *The Republic*, while Xenophon lauded the breeding of 'good' dogs in his *Kynegeticos*.[123] During the early modern period of 1500-1800, Keith Thomas shows there was widespread breeding and domestication of cows, sheep, chickens, pigeons and pigs in Britain.[124] In seventeenth-century England, horse breeding was common, buttressed by Nicholas Morgan's contention in his book *The Horseman's Honour* (1620) that like engendered like.[125]

At the time of this fecund period for the practice and study of the 'generation' of animals, naturalists and agriculturalists carried out countless breeding experiments on plants, exotic trees, flowers, fruits and vegetables.[126] This atmosphere intensified during the eighteenth century when interest in selectively breeding livestock spread across Europe.[127] Those who practiced rather than theorized about generation spread information and lore via a rich oral tradition amongst families and trusted friends involved in agriculture and horticulture.[128] Such practices were complemented by scientific studies on the subject of generation such as William Harvey's *Exercitationes de Generatione Animalium* (1651).[129] However, the results obtained in these attempts to improve the health and quality of humans,

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London: Routledge and Paul (1957); Roger J. Wood, *Genetic Prehistory in Selective Breeding: a prelude to Mendel*, Oxford: Oxford University Press (2001), p. vi.

[122] Lois N. Magner, *A History of the Life Sciences*, New York; Basel: Marcel Dekker (1979), p. 3.

[123] Jim Endersby, *A Guinea Pig's History of Biology: the plants and animals who taught us the facts of life*, London: William Heinemann (2007), p. 12.

[124] Keith Thomas, *Man and the Natural World: changing attitudes in England, 1500-1800*, London: Allen Lane (1983), p. 27.

[125] Nicholas Russell, *Like Engend'ring Like: heredity and animal breeding in early modern England*, Cambridge: Cambridge University Press (1986), p. 78.

[126] Thomas, *Man and the Natural World: changing attitudes in England, 1500-1800* (1983), p. 28.

[127] Roger J. Wood, *Genetic Prehistory in Selective Breeding: a prelude to Mendel*, Oxford: Oxford University Press (2001), p. vi.

[128] Wood, *Genetic Prehistory in Selective Breeding: a prelude to Mendel* (2001), p. ix.

[129] Endersby, *A Guinea Pig's History of Biology: the plants and animals who taught us the facts of life* (2007), p. 14.

animals and plants were variable, since no one really understood how and why variation occurred.[130] Many eighteenth- and early nineteenth-century scientists, philosophers, and policy-makers used congenital diseases to study heredity in humans.[131] For example, Johann Peter Frank (1745-1821, the father of the 'medical police' in Germany, discussed marriage, reproduction, childbirth and pregnancy in the first volume of his widely-read book *System einer vollständigen medizinischen Polizey* (1779).[132] Part of Frank's aim to further the health of human beings living in society required that persons with 'exceptionally severe and disadvantageous hereditary diseases' should not be allowed to marry without previous medical examination.[133]

The disadvantages that Frank foresaw through the spread of heredity disease are linked to cameralism, an idea that prevailed during the second half of the eighteenth century across Germany. Cameralism was effectively mercantilism but instead of increasing territory it was concerned with augmenting population growth. Germany hoped to increase its population to stimulate agricultural production and

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[130] Jim Endersby, *A Guinea Pig's History of Biology: the plants and animals who taught us the facts of life*, London: William Heinemann (2007), p. 12.
[131] Sara Eigen Figal, *Heredity, Race, and the Birth of the Modern*, New York; London: Routledge (2008), p. 86.
[132] Ernst Mayr, *The Growth of Biological Thought: Diversity, Evolution, and Inheritance, Cambridge,* Mass.; London: Belknap Press (1982), p. 54.
[133] Mayr, *The Growth of Biological Thought: diversity, evolution, and inheritance* (1982), p. 54.

increase the strength of its army.[134] Frank's ideas spread throughout the nineteenth century from Germany to Austria, France, Great Britain and Italy.[135]

Health and disease were thus in this period linked with a notion of human value, and of how to breed the good through 'the elimination of heritable illness and deformity'.[136] This biological good was measured through the prism of social and aesthetic standards of health, physiological proportion, and temperamental balance.[137] In the case of albinism, Pierre-Louis Moreau de Maupertuis argued its heritable character and inherent value as early as 1744: 'whether the whiteness is taken for a sickness or for whatever accident one chooses, it can only be of an hereditary variety, which becomes established or disappears with successive generations'.[138]

Two decades later the Scottish philosopher John Gregory published similar ideas about transmission of a discernable physical 'stamp' among family relations in *A Comparative View of the State and Faculties of Man with those of the Animal World* (1764).[139] The notion that beauty and disease could be passed down thus held firm into the nineteenth century. For example in *The Temple of Nature, or the Origin of Society* (1804), Erasmus Darwin wrote that:

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[134] Mayr (1982), p. 59. For Cameralism see: Andre Wakefield, *The Disordered Police State: German Cameralism as science and practice*, Chicago: University of Chicago Press (2009); David F. Lindenfeld, *The Practical Imagination: the German sciences of state in the nineteenth century*, Chicago, Ill.; London: University of Chicago Press (1997); Isabel V. Hull, *Sexuality, State and Civil Society in Germany, 1700-1815*, Ithaca; London: Cornell University Press (1996).
[135] George Rosen, *From Medical Police to Social Medicine: essays on the history of health care*, New York: Science History Publications (1974), p. 142.
[136] Sara Eigen Figal, *Heredity, Race, and the Birth of the Modern*, New York; London: Routledge (2008), p. 86.
[137] Figal, *Heredity, Race, and the Birth of the Modern* (2008), p. 87.
[138] Pierre-Louis Moreau de Maupertuis, *The Earthly Venus*, The Sources of Science, Vol. 29, Johnson Reprint Corporation (1966), p. 77.
[139] Figal (2008), p. 92.

> The art to improve the sexual progeny of either vegetables or animals must consist in choosing the most perfect of both sexes, that is the most beautiful in respect to the body, and the most ingenious in respect to mind.[140]

This quest for perfection involved an understanding of how diseases such as albinism are transmitted from parents to children.

Out of this eighteenth-century focus on the heredity of disease, family histories of people with albinism began to appear in the middle of the nineteenth century in Europe. The most striking example is found in the genealogical investigations of Charles Auguste Edouard Cornaz (1825-1911). Cornaz's research was first published in a short article in *Annales de la Société de médecine pratique de la province d'Anvers* (1852) and then in full monograph form in the *Annals of the Society of Medicine of Gand* (Ghent) in 1855.[141] Cornaz was a French physician and ophthalmologist born in Marseille and educated in Switzerland; he was taught partly by biologist and geologist Jean Louis Rodolphe Agassiz (1807-1873).[142] His interest in albinism came about through his initial interest in congenital abnormalities of the eye.[143]

Cornaz's work on albinism intensified between 1849-1850. Cornaz focused his research on several generations of the Chassot and Rey family living in Switzerland. The Chassot's were from Bussy, which is near Estavayer in the canton of Fribourg.

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[140] Erasmus Darwin, *The Temple of Nature, or the Origin of Society*, London: Bonsal and Niles (1804), p. xi, cited in Sara Eigen Figal, *Heredity, Race, and the Birth of the Modern*, Routledge (2008), p. 93.
[141] Edouard Cornaz, 'Quelques mots sur l'Albinisme', *Annales de la Société de médecine pratique de la province d'Anvers*, vol. 9, Malines (1851), pp. 30-37; 'De l'Albinisme', *Annales de la société de médecine de Gand*, vol. 33, Gand (1855), pp. 269-395.
[142] De Tribolet, 'Edouard Cornaz', *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, vol. 39 (1911-12), p. 22.
[143] Edouard Cornaz, 'Quelques observations d'anormalités congéniales des yeux et de leurs annexes', *Annales oculistiques*, vol. 23, Lausanne (1848), p. 24.

The Chassots married into the Rey family from Montet, a village near Bussy.[144] Cornaz collected information on the Chassots from Bussy, and collaborated with l'abbé Antoine-Joseph Wuilleret for information on the Rey family in Montet. Wuilleret is praised by Cornaz for giving him the opportunity to 'complete my genealogical research and permit me to report with exactitude the relationships between the parents and the eight albinos in this these two localities'.[145]

The Chassot and Reys' genealogy is complex, but is worth going through in full in order to comprehend the logic and extent of Cornaz's research. Cornaz reproduced and simplified his findings in the form of a diagram; the earliest example of a family tree used to track the appearance of albinism (Fig. 3).[146] The individuals with albinism are marked in italics. Moving from the top of the tree, Jean Chassot of Bussy had three daughters and two sons.[147] One of these daughters, Françoise, married Jacques-Laurent Rey from Montet. Jean Chassot had a son named Jean (II).[148] Jean Chassot II had six sons and one daughter. Jean Chassot II's son, Jean-Pierre, married into the Planceval family and had three daughters: Joséphine (born with albinism), Henriette and Nanette both of whom did not have albinism.[149]

Meanwhile, from her marriage to Jacques-Laurent Rey, Françoise Chassot had four sons and two daughters: Jacques, Charles, Laurent, Jean, Marie and Josette.[150] Jacques and Charles Rey married two daughters of lieutenant Chaney. Jacques Rey and Françoise Chaney had the following children: Laurent, Marguerite (born with

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144 Edouard Cornaz, 'De l'Albinisme', *Annales de la société de médecine de Gand*, vol. 33, Gand (1855), p. 303.
145 Cornaz, 'De l'Albinisme', *Annales de la société de médecine de Gand*, vol. 33, Gand (1855), p. 303.
146 Cornaz, 'De l'Albinisme' (1855), p. 305.
147 Cornaz (1855), p. 303.
148 Cornaz, p. 303.
149 Cornaz, p. 303.
150 Cornaz, p. 303.

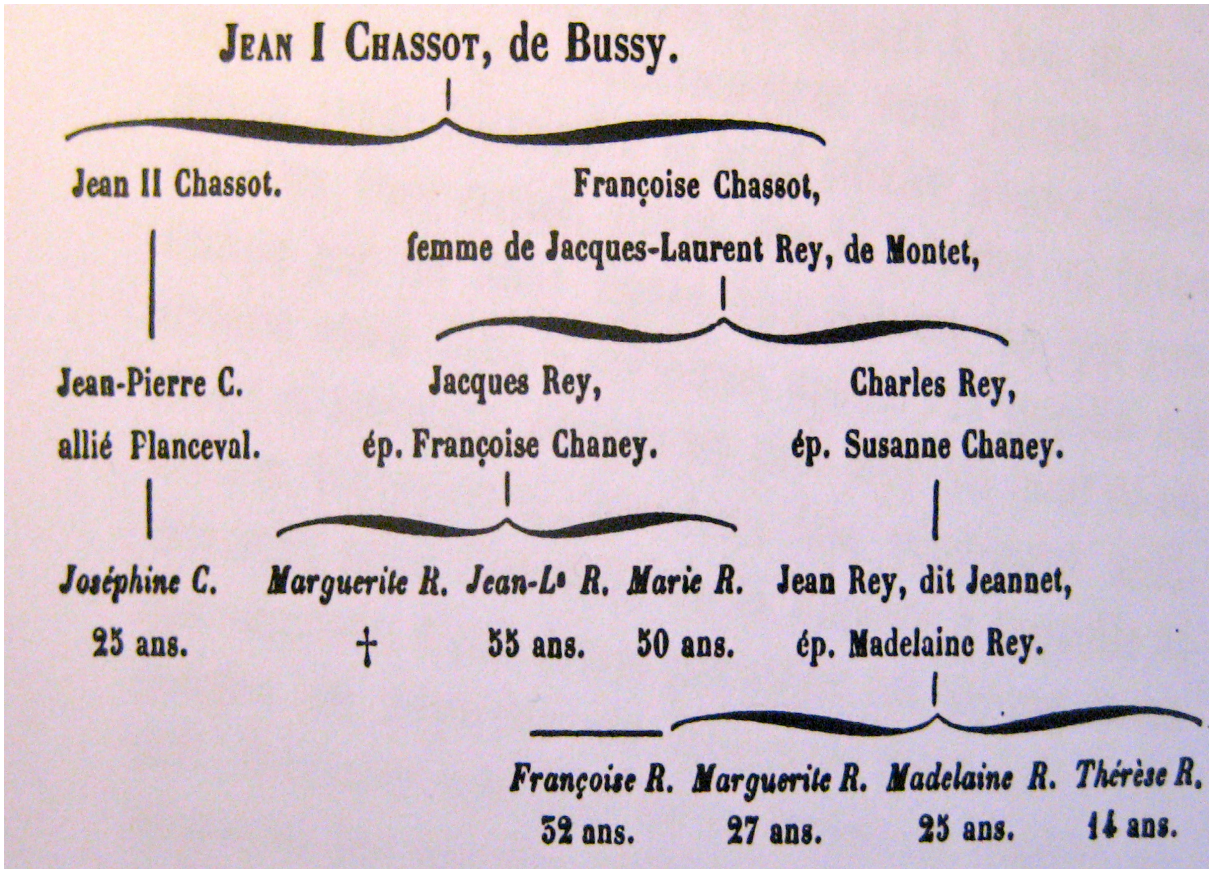

Fig. 3: The Chassot Family Tree in Edouard Cornaz, 'De l'Albinisme', *Annales de la société de médecine de Gand*, vol. 33, Gand (1855), p. 305.

albinism), Jacques, Jean-Louis (born with albinism), Marie and Nicolas.[151] Charles Rey had seven sons with his wife Suanne Chaney all of whom were born without albinism. One of these sons, Jean Rey, had with his wife Marguerite Rey (cousin of Charles Rey and thus Jean Rey's father) twelve children, of which four had albinism.[152] Thus the list of people born with albinism in the Chassot and Rey family tree is: Marie, Françoise, Joseph, Marguerite, Madeleine, Nanette, Célestine, Joséphine, Jacques, Ursule, Thérèse, and Pierre.[153]

Cornaz sought a pattern to explain the inheritance of albinism without success. In the introduction to his research Cornaz admits that, 'Albinism in several branches of the same family, as far as we can ascertain…is difficult to explain amongst the descendents of the Chassot family.[154] Perhaps he hoped to correlate consanguinity with a tendency towards albinism. Though the etiology of albinism was uncertain, Cornaz expressed the desire that his research could be of therapeutic value. Cornaz believed that, 'a cure for albinism has not obtained the attention it has every right to receive from science'.

In a similar vain to Cornaz, in 1869 the American physician Joseph Jones (1833-1896) published a detailed genealogy of the Atkins family from Tennessee.[155] Jones was a hugely influential figure in several branches of scientific medicine; he

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[151] Edouard Cornaz, 'De l'Albinisme', *Annales de la société de médecine de Gand*, vol. 33, Gand (1855), p. 303.
[152] Cornaz, 'De l'Albinisme', *Annales de la société de médecine de Gand* (1855), p. 303.
[153] Cornaz,, 'De l'Albinisme' (1855), p. 304.
[154] Cornaz (1855), p. 304.
[155] Joseph Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro', *Transactions of the American Medical Association*, vol. 20 (1869), pp. 619-730. For the life and work of Joseph Jones see: Harris D. Riley, 'Doctors Joseph Jones and Stanhope Bayne-Jones: two distinguished Louisianans', *Louisiana History The Journal of the Louisiana Historical Association*, vol. 25, no. 2, Spring (1984), pp. 155-180; James O. Breeden, *Joseph Jones, M.D.: scientists of the old south*, Lexington: University Press of Kentucky (1975).

was one of the most prolific writers in the Confederate south and, perhaps, in the United States.[156] The focus of his research during the 1860s was in part on the various diseases found in the south such as leprosy, smallpox, malaria and diphtheria.[157] The same year as the publication of his research into Albinism, Jones was Professor of physiology and pathology at the University of Nashville, President of the *Louisiana Medical Society*, member of both the *American Medical Association* and the *Academy of Natural Sciences* in Philadelphia.[158] Thus Jones clearly held an authoritative and respected place in medical and academic circles.

Jones's professional connections brought the case of the Atkins family to his attention. At the start of his paper, Jones thanks his 'friend and colleague' Dr. Thomas R. Jennings, professor of anatomy at the medical department of the University of Nashville, for directing his attention to the 'following interesting case'.[159] The first member of the Atkins family with albinism under examination by Jones is Alfred Atkins, eighteenth months old, and the second son of Lewis and Margaret Atkins. Jones makes a short description of Alfred's 'skin (being) over the entire surface totally white', but he stressed Alfred's photograph printed in the next page should 'convey a more full and truthful idea of this *lusus naturae*…than the most elaborate description' (Fig 4).[160] Jones accompanies this photograph of Alfred

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[156] Harris D. Riley, 'Doctors Joseph Jones and Stanhope Bayne-Jones: two distinguished Louisianans', *Louisiana History The Journal of the Louisiana Historical Association*, vol. 25 no. 2 (1984), p. 164.
[157] Riley, 'Doctors Joseph Jones and Stanhope Bayne-Jones: two distinguished Louisianans' (1984), p. 163.
[158] Riley (1984), p. 165.
[159] Joseph Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro', *Transactions of the American Medical Association*, vol. 20 (1869), pp. 619-730.
[160] Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro' (1869), p. 690.

MARGARET AIKINS AND HER ALBINO SON ALFRED.

Fig. 4: A 'Photograph' of Alfred and Margaret Atkins in Joseph Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro', *Transactions of the American Medical Association*, vol. 20 (1869), p. 690.

with one of his recently deceased brother, William Atkins (Fig 5). Jones reports the image was taken of William 'after death'.[161] In search of a hereditary connection through physiological examination, Jones examines Alfred and William's mother, Margaret. He observes that she, 'enjoys good health, and has never been sick in her life'.[162] Jones discovers 'a few perfectly white spots on the arms', and, after questioning Margaret further that 'similar spots exist on her thighs'. Jones did not explicitly make any connection with the white spots of the mother and her 'albino' children, however. Meanwhile, Jones only briefly mentions the father, Lewis Atkins. The physicians find few signs of pathology in this, 'stout, active Negro man, with black complexion like that of his wife…and has all the characteristics of a Negro'.[163]

To obtain even deeper genealogical data, Jones turns to study Margaret and Lewis's fifty four year old grandmother, Sarah Hill. Jones records that her, 'complexion considerable (sic) lighter than her daughter, but features and hair that of the Negro'. However, Jones uncovers that Sarah had 'white spots on her arm' some fourteen years before his examination. Nevertheless, he concludes that Sarah has, 'always been of good health' and that there is, 'no appearance of any disease of the skin'. Jones did however believe the 'white spots' may be connected to albinism as he notes down that Sarah had seven sisters, 'all of whom had white spots', though she also had four brothers 'none of whom had white spots'. [164]

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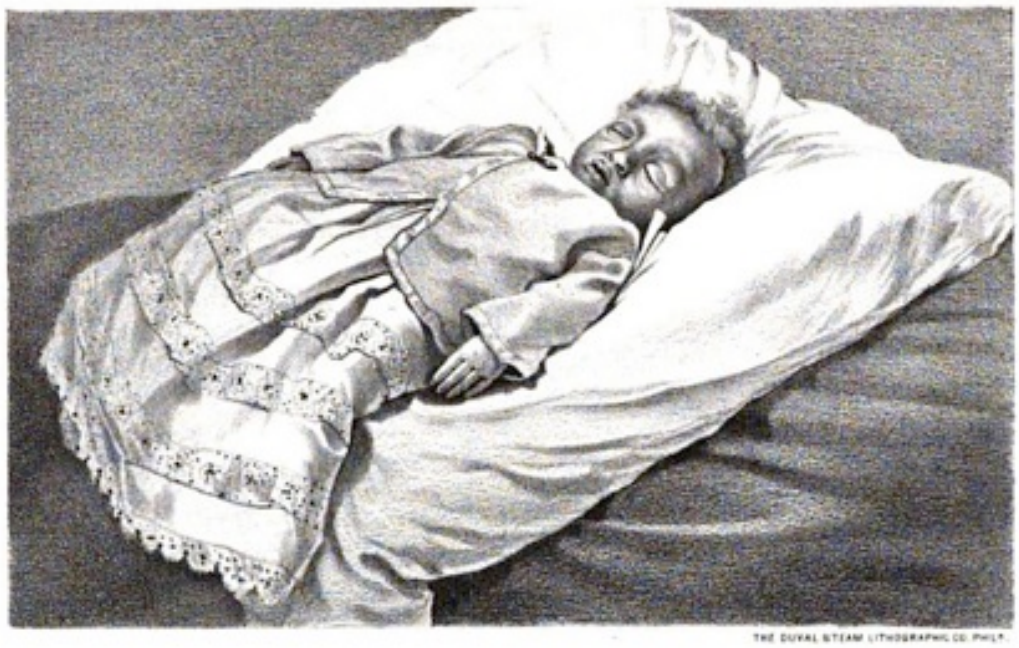
[161]Joseph Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro', *Transactions of the American Medical Association*, vol. 20 (1869), p. 690.
[162]Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro' (1869), p. 690.
[163] Jones (1869), p. 690.
[164] Jones, p. 691.



WILLIAM AIKINS, ALBINO CHILD OF MARGARET & LOUIS AIKINS.

Fig. 5: A 'photograph' of William Atkins after death in Joseph Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro', *Transactions of the American Medical Association*, vol. 20 (1869), p. 691.

Jones traced the connection between Sarah's white spots and the Atkins's 'albino' children even further back in their family history. He inquired about Sarah's father, Abner Evans, who is said to have had 'white spots on arms and legs, which increased with age'. [165] Abner was of 'good health', and of his fourteen children, the seven daughters mentioned above had 'white spot's on their bodies. Jones was trying to understand how albinism could be transmitted to the Atkins' children by reconstructing their family history. Jones concluded that in certain instances the 'skin of the Negro, originally black…may gradually change its colour form black to white, until the complete Albino character is induced'.[166]

Jones and Cornaz's reconstructions of family histories arose at the same time as the publication of articles and monographs from the 1850s on the subject of albinism and consanguinity. In 1858, the American physician S.M. Bemiss published his statistical research in the *Transactions of the American Medical Society* on eight hundred and seventy three examples of consanguineous marriages across the United States.[167] Bemiss's work was backed by a committee formed by the *American Medical Association*, which was interested in the effects of consanguinity on the physical and mental capacity of offspring.[168]

The statistical methodology deployed by Bemiss owes much to Adolphe Quetelet's pioneering anthropometric analysis in *Sur l'homme et le développement de*

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[165] Joseph Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro', *Transactions of the American Medical Association*, vol. 20 (1869), p. 690.
[166] Jones, 'Observations and Researches on Albinism (Leucopathia, Leucaethiopia) in the Negro' (1869) p. 693.
[167] S. M. Bemiss, 'Report on the Influence of Marriages of Consanguinity upon Offspringng', *The Transactions of the American Medical Association*, vol. 11 (1858).
[168] Bemiss, 'Report on Influence of marriages of Consanguinity upon offspring', *The Transactions of the American Medical Association* (1858), p. 332.

ses facultés, ou Essai de physique sociale (1835).[169] Quetelet also took statistical analysis to a national level, using his techniques to undertake a census of Belgium in 1846 in search of averages in man and society.[170] For Quetelet:

> The greater the number of individuals observed, the more do individual peculiarities, whether physical or moral, become effaced, and allow the general facts to predominate, by which society exists and is preserved.[171]

However, Bemiss hoped to obtain the opposite outcome to Quetelet's effacement of physical and mental peculiarities. Such ideas about inbreeding and 'defective' births were linked to notions of degeneration, which emerged strongly in mid nineteenth-century France under the auspices of Bénédict Augustin Morel.[172] Morel detailed his fears about the deviation from the normal type through physical, psychological and moral 'dégénérescences' of the French nation, which explicitly refers to 'albinism'.[173] This link between albinism and degeneration theory is further investigated in the following chapter.

Bemiss's study into consanguinity sought the anomalous through 'statistical testimony'; he hoped to understand whether children produced by blood relatives

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[169] For Quetelet and his influence on statistics and anthropometry see: John Komlos, *The Biological Standard of Living in Europe, 1700-1900*, Aldershot: Variorum (1995); Steven M. Stigler, *The History of Statistics: the measurement of uncertainty before 1900*, Cambridge, Mass.; London: Belknap (1986); O.B. Sheynin, 'Quetelet as Statistician', *Archive for History of Exact Sciences*, vol. 36 (1986), pp. 281-325; Theodore M. Porter, 'The Mathematics of Society: variation and error in Quetelet's statistics', *British Journal for the History of Science*, vol. 18, part 1, no. 58, March (1985), pp. 51-69.
[170] Richard Wall (ed.), *Comparative Statistics of the 19th Century*, Farnborough: Gregg International (1973), p. 4.
[171] Lambert Adolphe Jacques Quetelet, *Sur l'homme et le development de ses facultés: ou Essai de physique sociale*, Paris: Bachelier (1835), p. 2.
[172] Daniel Pick, *Faces of Degeneration: a European disorder, 1848-1918*, Cambridge: Cambridge University Press (1989), p. 2.
[173] Pick, *Face of Degeneration: a European disorder* (1989) p. 50.

resulted in higher instances of somatic abnormalities.[174] For Bemiss, 'no questions can concern us more closely than those which relate to the prevention of the numerous congenital abnormalities…of our species'.[175]

Bemiss tabulated what he called 'the four classes of infirmities which are so common in this country as to demand the construction of numerous institutions for their alleviation…deaf-dumbness, blindness, idiocy and insanity'.[176] Bemiss and the committee were concerned with the correlation between people with 'infirmities' and the cost to keep them in 'numerous institutions'. Indeed Bemiss's conclusion was that, '…parental infirmities are entailed with great certainty upon the offspring…(and) this constitutes the strongest argument against the intermarriage of relatives'.[177] Nevertheless, there is no information or argument given by Bemiss on how intermarriage amongst relatives could be curtailed.

There is one individual with albinism in Bemiss's report. This instance is sufficient to understand the biological value placed upon albinism by the American physician and his colleagues at the *American Medical Association*. In the statistical tables compiled from the reports of 'reputable physicians' from across the United States there is an example of a 'defective' twelve-year-old 'albino' female. The remarks about the condition of the child state 'the child is an albino, of delicate constitution, not deficient in mental endowments, is tall and stooping and has an awkward shambling gait'.[178] As with most case studies published on people with

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[174] S.M. Bemiss, 'Report on Influence of marriages of Consanguinity upon offspring', *The Transactions of the American Medical Association*, vol. 11 (1858), p. 321.
[175] Bemiss, 'Report on Influence of marriages of Consanguinity upon offspring' (1858), p. 321.
[176] Bemiss (1858), p. 325.
[177] Bemiss (1858), p. 332.
[178] Bemiss, p. 335.

albinism during the first half of the nineteenth century in the United States, the report on this child sent to Bemiss linked albinism with a 'delicate constitution' and emphasizes physical abnormality.

At the close of the 1850s, and throughout the 1860s, there were a flurry of publications built upon Bemiss's pioneering study on consanguinity in France and Belgium.[179] Debates about albinism formed an important part of this heightened interest into the potential impact of consanguinity on the health of children. For example, in a note published by the *l'Académie de Sciences* in 1863, a military doctor based in Rome called Balley detailed his recent observations of four marriages between cousins.[180] Balley reported that two cousins produced two children, one with albinism, and one with lowered 'intelligence'.[181] The other cases all featured abnormalities of body and mind, supporting Balley's thesis that 'consanguineous unions' always involved such 'inconveniences'.

A year earlier, the French physician Francis Devay, reported the case of two brothers marrying their two cousins in Yverdon, Switzerland. All seven children

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[179] Alfred Bourgeois, *Quelle est l'influence des marraiges consanguins sur les generation?* Thèse de Paris (1859); T. Chazarin, *Du mariage entre consanguins consideré comme cause de dégénèresence organique et particulièrement de surdi-mutité congènitale*, Thèse de Montpellier (1859); Francis Devay, *Du danger des mariages consanguins sous le rapport sanitaire*, Paris: Victor Masson (1862); Antony Chipault, *Étude sur les mariages consanguins et sur les croisements dans les règnes animal et vegetal*, Paris: Germer Baillière (1863); Boudin, 'Danger des unions consanguins et nécessité des croisements', *Annales D'Hygiène Publique*, vol. 18, no. 2 (1865); Auguste Voisin, 'Études sur les mariages entre consanguins dans la commune de Batz', *Annales d'Hygiène Publique*, vol. 23, no. 2 (1865); Jean-Baptise Legrain, 'Recherches critiques et expérimentales relatives aux mariages consanguins', *L'Académie Royale de Médecine de Belgique*, vol. 9, Brussels (1866).

[180] Balley, 'Notes sur les inconvenient des unions consanguines', *Comptes rendus de l'Académie de Sciences,* vol. LVI, Paris (1863), p. 135 see also *Gazette Médicale de Paris*, vol. 18 (1863), p. 111

[181] Balley, 'Notes sur les inconvenient des unions consanguines', *Comptes rendus de l'Académie de Sciences,* Paris (1863), p. 135.

produced from both couples are said to have been 'albinos' to the highest degree'.[182] Yet, Devay argued that albinism belonged in the category of 'bizarrerie' and not pathology.[183] Furthermore, of the one hundred and twenty cases of children born to consanguineous parents, Devay showed that only thirty-five cases were affected by a 'truly pathological' condition.[184] In short, the evidence for the impact of consanguinity on physical and mental health was supported by 'insufficient evidence for a definitive answer to the question we seek to answer'.[185] The French physician Jean Christian Mark François Boudin (1806-1867) disagreed with Devay's conclusions about consanguinity. In a brief summary of recent evidence of consanguinity among families producing children with albinism, Boudin argued, 'if they continue, consanguineous unions will continue to produce instances of albinism in animals and humans…there is no other cause for this degeneracy'.[186]

Conclusion

Between 1800-1870, people with albinism in Europe and North America underwent extensive medical and ophthalmological examination. Physicians' burgeoning interest in the bodies of people with albinism continued the work of late eighteenth-century naturalists and scientists who first denitrified 'albinos' amongst Europeans. During the first two decades of the nineteenth century, dozens of medical cases of people with albinism circulated among medical practitioners in a growing number

[182] Francis Devay, *Du danger des mariages consanguins sous le rapport sanitaire*, Paris: Victor Masson (1862), p. 103.
[183] Devay, *Du danger des mariages consanguins sous le rapport sanitaire* (1862), p. 103.
[184] Devay (1862), p. 105.
[185] Devay, p. 106.
[186] Jean Christian Mark François Boudin, 'Dangers des unions consanguines, et nécessité des croisements dans l'espèce humaine et parmi les animaux', *Annales d'Hygiène Publique*, vol. 18 (second series, 1862), p. 46.

of journals, books, dictionaries, encyclopedias and dissertations. This accumulation of cases allowed thinkers and practitioners in Germany and France to commence the classification of albinism in the 1820s and 1830s. These shades of whiteness described in cases of albinism became indisputably pathological in nature, at least in the definitions and writing of medical men.

By the 1840s, medical and ophthalmological diagnosis of albinism as a disease with varying symptoms led to its involvement in wider regional and national debates about the place of health and disease in the population. Medical practitioners explored nascent ideas about heredity during this period by reconstructing the genealogies of families. However, practitioners interested in the transmission of albinism in families produced inconclusive results on the question of its heritability.

Nevertheless, in spite of a lack of hard evidence for how albinism was inherited in families, some thinkers and practitioners in France, Belgium and the United States believed albinism was likely brought about by consanguineous relationships. As with the genealogical research into albinism, the link between the frequency of albinism and the breeding of closely related families remained contested and unconfirmed.

Furthermore, the mid-century idea among medical men that albinism was congenital led to the assimilation of the condition into mainstream debates about heredity in humans and animals. At the close of the nineteenth century, the medical practices of examination and observation shifted decidedly towards biological

experimentation in the newly emerging fields of Biometrics, Mendelism, and Genetics.

Albinism was clearly an ideal congenital condition for medical men to study. Unlike other illnesses of the mind or the unpredictable occurrences of tuberculosis, albinism provided a visible pathological marker. Yet, in the face of this avalanche of medical research into albinism, what were the consequences for people with albinism? Certainly this medicalisation and pathologisation of people with albinism completely altered the way of knowing this bodily condition from its eighteenth-century unusually white forbear.

Chapter Three

Experimental Subjects: Albinism, Humans and Animals in Biological Research, 1849-1914

> The application of Mendelian rules to Mankind has not made the progress that was to have been expected…even in regard to albinism – usually the most obvious Mendelian recessive in animals and plants – the human evidence is not yet clear.
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> William Bateson, 'An Address on Mendelian Heredity and its Application to Man', *British Medical Journal* (1906).[1]

William Bateson's (1861-1926) address to the Neurological Society of London on February 1, 1906, cited recent results from experiments with animals and plants with albinism to highlight the lack of advancement made by biologists towards understanding heredity in 'Mankind'.[2] From 1901, massive institutional breeding experiments with thousands of animals and plants with albinism conducted by biologists had certainly shown promising results in favour of the Mendelian laws of

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[1] William Bateson, 'An Address on Mendelian Heredity and its Application to Man', *British Medical Journal*, vol. 2, no. 2376, July 14 (1906), p. 64. For the best recent treatment of Bateson's life and work see: Alan G. Cock, *Treasure Your Exceptions: the science and life of William Bateson*, New York: Springer (2008). See also: Patrick Bateson, 'William Bateson: a biologist ahead of his time', *Journal of Genetics*, vol. 81, No. 2, August (2002), pp. 49-58.

[2] William Bateson coined the term 'genetics' in a letter to Adam Sedgwick in 1905. Genetics was in wide usage from the second decade of the twentieth century. The term 'Mendelism' was predominant from 1900 after the rediscovery of Mendel's paper detailing his laws of heredity. Many historians refer to this period as the era of classical genetics. See: Peter J. Bowler, *The Mendelian Revolution: the emergence of hereditarian concepts in science and society*, London: Athlone Press (1989), p. 1.

heredity.[3] However, uncovering the mechanisms of heredity in 'Man' proved more taxing for these experimental scientists without this scale of experimental proof.

In Britain, Karl Pearson – opponent of Bateson, and leader of the biometric school – favoured the theory of ancestral heredity. This ancestral theory stated that physical differences accumulate in decreasing proportions from the nearest to the most distant generation; according to Pearson the inheritance of albinism in humans did not obviously follow Mendel's theory. Pearson proposed heredity in 'Man' required further experimental investigation, and to this end he pursued the most ambitious decade-long research project into albinism and heredity in humans and animals ever undertaken between 1905-1914. The eugenicist and Mendelian Charles B. Davenport in the United States took up Pearson's experimental research into albinism from 1908. Davenport sought to calculate the number of people with albinism in the city of New York, and was in direct contact with people with albinism. It is in Pearson and Davenport's studies that the human subject with albinism emerged as a critical facet of experimental attempts to unlock the complexities of heredity transmission. Bateson's observation thus captured the extent to which albinism as hereditary concept, and as experimental animal and human subject, was central to biological and biometric research across Europe and North America during the first two decades of the twentieth century.

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[3] According to Mendel's law of segregation, characters are transmitted unchanged from parents to offspring. The character or factor such as height was 'dominant', as when tall plants were bred with small plants the tall prevailed. Shortness, like albinism, was 'recessive', as it disappeared in the first generation of Mendel's breeding experiment only to reappear in the next generation at a stable ratio of 3 dominant characters to one recessive character. Biologists' experiments with plants and animals with albinism during the first decade of the twentieth century pointed towards the accuracy of Mendel's findings. For a more detailed account of Mendel's experiments and findings see: Peter J. Bowler, *The Mendelian Revolution: the emergence of hereditarian concepts in modern science and society*, London: Athlone Press (1989), p. 100.

The nineteenth century saw the somatic territorializing of deviance, which became part and parcel of a larger effort to organize social relations according to categories denoting normality versus aberration, health versus pathology, and national security versus social danger.[4] The social body was therefore a concept increasingly associated with geographically specific knowledge of mortality rates, educational levels and population concentration.[5]

This chapter charts the making of albinism as a concept in scientific discourses of heredity through the use of animals and humans in theoretical and experimental biology between 1849-1914. It highlights the extent to which nineteenth-century medical discourses of observation and diagnosis established in Europe and North American changed course, and headed towards a greater focus on the hereditary aspects of the condition in the wake of increasingly experimental research in biology, Mendelism, genetics and eugenics. It questions how albinism became chiefly understood as a congenital abnormality. It investigates how the heredity of albinism as abnormality was allied to categories of deformity, delinquency or sexual deviancy that were defined either along lines of physical and mental deficiency or as moral degeneracy by a whole raft of thinkers in the sciences.

It is divided into four sections. It traces the significance of albinism in theories of heredity formulated by Prosper Lucas in French medicine in the 1840s. It links Lucas's ideas about albinism and heredity to the rise of degeneration in the middle of the nineteenth century led by Bénédict-August Morel. It connects Morel's and

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[4] Jennifer Terry and Jacqueline Urla, *Deviant Bodies: critical perspectives on difference in science and popular culture*, Bloomington: Indiana University Press (1995), p. 1.
[5] Pamela Gilbert, *Mapping the Victorian Social Body*, Albany: State University of New York Press (2004), p. 4.

Lucas's work on albinism with Charles Darwin's 1859 discussion about albinism, heredity and evolution. The second section takes up this practice of breeding animals with albinism as part of experimental biology in the laboratory. It argues animals with albinism were central to European and North American debates about theories of heredity. It questions why albino animals registered so prominently in massive institutionally funded breeding programmes during the first decade of the twentieth century. It investigates the extent to which experimental breeding with animals with albinism became a transnational practice in French, German and North American laboratories.

Coeval with Mendelian experimental breeding was the biometric analysis of albinism and heredity. This approach is investigated in the third section of this chapter. It examines Pearson's experimental and statistically driven approach to the heredity of albinism in humans and animals. It analyses why Pearson was so concerned with albinism, and seeks to understand how far his research chimed with both his biometric theory and his eugenic ideas. Building on this third part on Pearson's experimental quantification of humans and animals with albinism, the final section crosses the Atlantic. It concentrates on the making of the experimental human subject with albinism in the heredity research of Charles B. Davenport in the United States. It establishes the purpose of Davenport's interest in albinism, and it places his research into albinism within wider developments in Mendelism and eugenics during the first two decades of the twentieth century. It then explores the role of the experimental subject with albinism through the letters exchanged between Robert Roy, a man with albinism, and Davenport.

This chapter contributes to the historiographies of genetics, eugenics and human and animal experimentation. By tracing the destinies of experimental subjects with albinism, it adopts a similar approach to historians of science Jim Endersby, Robert Kohler and Karen Rader, who examined the history of biology from the point of view of the fruit fly, the guinea pig, and the mouse.[6] It emphasises how the experimental sciences concerned with heredity were shaped by 'the practical imperatives of choosing organisms' and the consequent 'moral ordering of experimental production'.[7] It also draws on the ideas presented in Bruno Latour's sociological and anthropological analysis of the material life of the laboratory.[8] It especially emphasises the extent to which animals such as mice, rats and guinea pigs with albinism became standardized organisms for biologists and geneticists in heredity experiments.

Prioritising the experimental subject necessarily involves taking an alternative perspective on much of the existing historiography on genetics. Histories of genetics in the 1960s lionised Gregor Mendel and his ideas when tracing the formation of this

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[6] Jim Endesby, *A Guinea Pig's History of Biology: the plants and animals who taught us the facts of* life, London: Heinemann (2007); Karen A. Rader, *Making Mice: standardizing animals for American biomedical research, 1900-1950*, Princeton; Oxford: Princeton University Press (2004); Robert Kohler, *Lords of the Fly: Drosophila genetics and the experimental life*, Chicago; London: University of Chicago Press (1994). See also: Lorraine Daston (ed.), *Biography of Scientific Objects*, Chicago; London: University of Chicago Press (2000). For histories of plants as experimental subjects see: Jack Ralph Kloppenburg, *First the Seed: a social history of plant breeding and the seed industry in the United States*, Thesis: Ph.D.: Cornell University (1985); Angela Creager, *The Life of a Virus: Tobacco Mosaic Virus as an experimental model, 1930-1965*, Chicago: University of Chicago Press (2002).
[7] Kohler, *Lords of the Fly: Drosophila genetics and the experimental life* (1994), pp. 2-3.
[8] Bruno Latour, *The Pasteurization of France*, Harvard: Harvard University Press (1988); *Science in Action: how to follow scientists and engineers through society*, Harvard: Harvard University Press (1987); Bruno Latour and Steve Woolgar, *Laboratory Life: the construction of scientific facts*, Beverley Hills: Sage (1979).

new discipline.[9] Robert Olby has contended Mendel's 1865 hybridization experiments with *pisum sativum* have been distorted by 'inflated Whiggish interpretations' and established in 'mythical elements' of geneticists and plant breeders' accounts of the 'heroic' origins of genetics.[10] Olby argues Mendel is disproportionately cited in accounts biased towards the valorisation of science to mark 'the birth of the modern theory of heredity known as genetics'.[11]

From the 1980s, historians responded and revised the status of Mendel. They defined his work as part of the rise of 'Mendelism' as a broad concept in early twentieth-century heredity theory and experimentation.[12] Furthermore, in a bid to shift the focus from individual scientists and their ideas, several scholars have sought to explore the history of genetics from the perspective of the gene.[13] Thus this chapter combines each element of this rich historiographical tradition when viewing genetics through the prism of albinism as heredity concept and as experimental animal and human subject in the histories of biology, genetics and eugenics.

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[9] For example see: Elof Axel Carlson, *The Gene: a critical history*, Philadelphia: W.B. Saunders and Co. (1966); L.C. Dunn, *A Short History of Genetics*, New York: McGraw-Hill (1965); A.H. Sturtevant, *A History of Genetics*, London: Harper (1965).
[10] Gavin de Beer, 'Mendel, Darwin and the Centre of Science', *The Listener*, vol. 73 (1965), p. 364; A.H. Sturtevant, *A History of Genetics*, London: Harper (1965); Herbert Fuller Roberts, *Plant Hybridization Before Mendel*, New York: Hafner (1965).
[11] Robert Olby, 'Mendel No Mendelian?' *History of Science*, vol. 17 (1979), p. 54. See also: Raphael Falk, 'Mendel's Impact', in Staffan Müller-Wille and Hans-Jörg Rheinberger (eds.), *A Cultural History of Heredity III: 19th and early 20th centuries*, Preprint, Berlin: Max-Planck-Institute for the History of Science (2005); A. Brannigan, 'The Reification of Mendel', *Social Studies of Science*, vol. 9, no. 4 (1979), pp. 423-454.
[12] Colin Tudge, *In Mendel's Footnotes: an introduction to the science and technologies of genes and genetics from the nineteenth century to the twenty second*, London: Vintage (2002); Peter J. Bowler, *The Mendelian Revolution: the emergence of hereditarian concepts in science and society*, London: Athlone Press (1989); Robert Olby, *Origins of Mendelism*, Chicago; London: University of Chicago Press (1985).
[13] James Schwartz, *In Pursuit of the Gene: from Darwin to DNA*, Cambridge, Mass.; London: Harvard University Press (2008); Evelyn Fox Keller, *The Century of the Gene*, Cambridge, Mass.; London: Harvard University Press (2000).

The relationship between animal and human experimental subjects in breeding experiments has equally drawn little attention in the historiography of vivisection.[14] This crossover between animal and human subjects in experimental biology was a crucial dialectic for the provision of experimental proof in biology, genetics and eugenics. Historians Anita Guerrini and Nicholas Rupke link the rise of animal welfare movements of the second half of the nineteenth century with the practice of vivisection on live subjects in experimental physiology, microbiology and biomedical science; they include no mention, however, of breeding experiments in biology, genetics and eugenics.[15]

This absence of the experimental subject in breeding experiments is perhaps due to anti-vivisection movements across Europe and North America being motivated by a resistance to the infliction of unjustifiable pain on live animal subjects.[16] Breeding experiments did not obviously involve pain or suffering. In addition, the choice of animals such as mice, guinea pigs, rats and rabbits for all kinds of scientific experiment attracted far less public controversy than other animals, particularly dogs. Anti-vivisection supporters in Britain at the turn of the twentieth century broadcast their anger at the use of dogs in experiments, initially inflamed by the use of the 'brown dog' in procedures undertaken at University

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[14] For experimentation and vivisection on animals see: Jean Gayon and Doris Zallen, 'The Role of the Vilmorin Company in the Promotion and Diffusion of the Experimental Science of Heredity in France, 1840-1920', *Journal of the History of Biology*, vol. 31 (1998), pp. 241-62; Nicolaas Rupke (ed.), *Vivisection in Historical Perspective*, London: Croom Helm (1987); James Turner, *Reckoning with the Beast: animals, pain, and humanity in the Victorian mind*, Baltimore; London: Johns Hopkins University Press (1980).

[15] Anita Guerrini, *Experimenting with Humans and Animals: from Galen to animal rights*, Baltimore; London: Johns Hopkins University press (2003), p. 74; Nicholas Rupke (ed.), *Vivisection in Historical Perspective*, New York; London: Croom Helm (1987), pp. 6-7.

[16] Stewart Richards, 'Vicarious Suffering, Necessary Pain: physiological method in late nineteenth-century Britain', in Nicholas Rupke (ed.), *Vivisection in Historical Perspective* (1987), p. 134.

College, London.[17] Experimental breeding with animals, therefore, seems to be an important unexplored grey area in the histories of animal welfare and experimental science.

This silence on the animal subject with albinism in the literature on animal experimentation and anti-vivisection is matched by a dearth of discussion about the experimental human subject in heredity research. Susan Lederer rightly emphasises pharmacology, bacteriology and immunology as providing stimulus for considerable experimentation on human beings from the late nineteenth century, but she does not explore the place of humans in early twentieth century eugenics research.[18] Historians have also located experimentation on humans in developments in experimental medicine.[19] As expanded upon further below, human with albinism were closely associated with experimental research in North American and British eugenics. The major ethical question revolved around consent rather than pain, and included the appropriation of body samples, anatomical photographs and details of family histories.[20]

The study of humans and animals with albinism involves the epistemological connection between the analytical and experimental. The experimental sought to overthrow existing empirical knowledge about the physiological and heritable

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[17] Richard Dudley Ryder, *Animal Revolution: changing attitudes towards speciesism*, London: Berg (2000), p. 136; Coral Lansbury, *The Old Brown Dog: women, workers and vivisection in Edwardian England*, Madison, Wis.; London: University of Wisconsin Press (1985).
[18] Susan Lederer, *Subjected to Science: human experimentation in America before the Second World War*, Baltimore; London: Johns Hopkins University Press (1994), p. 2.
[19] Jordan Goodman, Anthony McElligot and Lara Marks (eds.), *Using Bodies: humans in the service of medical science in the twentieth century*, Baltimore; London: Johns Hopkins University Press (2003), p. 2.
[20] For the history and theory of informed consent see: Ruth R. Faden, Tom L. Beauchamp, Nancy M. P. King (eds.), *A History and Theory of Informed Consent*, New York; Oxford: Oxford University Press (1986).

character of albinism. Using experimental subjects with albinism, biologists created new empirical knowledge by manipulating the conditions under which their animal subjects bred. Albinism is not simply present in discourses and experiments conducted in experimental biology, genetics and eugenics. This experimental knowledge contributed to a broader late nineteenth and early twentieth-century political and juridical focus on identifying and objectifying abnormal individuals and groups in society.[21]

Out of this emerging experimental science of heredity, biological evidence was deployed by biologists especially in Britain and the United States in pursuit of ideological and political ends encapsulated in the ideas of eugenics and Social Darwinism.[22] At the turn of the twentieth century, albinism was embroiled in public health initiatives that hoped to improve health on a national scale.[23] Politicians, scientists and social commentators were committed to health improving measures as many subscribed to the idea that the west was degenerating in body and spirit.[24]

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[21] Michel Foucault, *Abnormal: lectures at the College de France, 1974-75*, New York: Picador (2003), p. 323, translated from *Les Anormaux: cours au collège de France*, Éditions de Seuil/Gallimard (1999).
[22] The scholarship on Social Darwinism is vast. For the best recent treatments of the subject see: Peter Dickens, *Social Darwinism: linking evolutionary thought to social theory*, Buckingham: Open University Press (2000), Mike Hawkins, *Social Darwinism in European and American Thought, 1860-1945: nature as model and nature as threat*, Cambridge: Cambridge University Press (1997); Linda Clark, *Social Darwinism in France*, University, Ala.: University of Alabama Press (1984), Robert C. Banister, *Social Darwinism: science and myth in Anglo-American social thought*, Philadelphia: Temple University Press (1979).
[23] Andrew Wear (ed.), *Medicine in Society*, Cambridge: Cambridge University Press (1992), pp. 10-11. See also: Dorothy Porter, *Health, Civilisation and the State: a history of public health from ancient to modern times*, London: Routledge (1999); Janet Batsleer and Beth Humphries (eds.), *Welfare, Exclusion and Political Agency*, London: Routledge (2000); Francis Barrymore Smith, *The People's Health, 1830-1910*, London: Croom Helm (1973); Daniel Pick, *Faces of Degeneration: a European disorder, 1848-1918*, Cambridge: Cambridge University Press (1989).
[24] For degeneration and health see: R.A. Soloway, *Demography and Degeneration: eugenics and the declining birth rate in twentieth-century Britain*, Chapel Hill; London: University of North Carolina Press (1995); Edward J. Chamberlain and Sander L. Gilman, *Degeneration: the dark side of progress*, New York; Guildford: Colombia University Press (1985). For cultural degeneration see: William Greenslade, *Degeneration, Culture, and the Novel, 1880-1940*, Cambridge: Cambridge University Press (2004);

Albinism and Heredity, 1859-1899

From the second half of the nineteenth century interest in the inheritance of albinism gathered pace among biologists. There are three strands to this heredity discourse that supported the formation of a novel way of analyzing albinism. The first area involved discussion of heredity in French medicine. These works on heredity during this period concentrated on hereditary diseases. Allied to this attention of heredity was the idea that albinism had a certain biological and socio-economic value. This notion of albinism as in some way possessing an inherent value was formally expressed in degeneration theory. Albinism featured prominently in heredity and degeneration theory in France from the 1840s. Degeneration and heredity were often considered to be one and the same thing.[25] Finally, this emphasis on theories of heredity and degeneration of albinism formed the bedrock for experimental breeding. Biologists used rats and mice with albinism in experiments in support of ongoing efforts from the second half of the nineteenth century to construct a credible theory for heredity.

The broader concept of heredity originated from *l'hérédité*, a term developed by French physicians between 1810-1830. They concentrated on the transmission of disease.[26] As with inheritance in general, however, there remained great uncertainty about the inheritance of albinism. There was no accepted theory to explain the

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Donald J. Childs, *Modernism and Eugenics: Wolf, Eliot, Yeats and the culture of degeneration*, Cambridge: Cambridge University Press (2001); Stephen Arata, *Fictions of Loss in the Victorian Fin de Siècle*, Cambridge: Cambridge University Press (1996).

[25] Laure Catron, 'Degeneration and 'Alienism' in Early Nineteenth-Century France', in Staffan Müller-Wille and Hans-Jörg Rheinberger (eds.), *Heredity Produced: at the crossroads of biology, politics, and culture, 1500-1870*, Cambridge, Mass.; London: MIT Press (2007), p. 156.

[26] Carlos López-Beltrán, 'In The Crade of Heredity: French physicians and l'hérédité naturelle in the early nineteenth century', *Journal of the History of Biology*, vol. 37 (2004), pp. 39-72.

underlying cause of albinism in humans and animals. Several attempts had been made by medical practitioners to address this unsolved puzzle of albinism and heredity. Edouard Cornaz's genealogical research of the 1840s, and consanguinity studies by Francis Devay and S.M. Bemiss from the 1850s among others pointed towards the possible link between the proliferations of albinism within families. Close relations seemed to account for greater numbers of people with albinism, but the results did not achieve any consensus among medical thinkers and practitioners. These observations and inferences drawn within French, Swiss and North American medicine about albinism and its tendency to appear more frequently amongst blood relatives became an important idea, however, in allying albinism with emerging ideas about heredity in general across Europe.

Albinism featured prominently in early formulations of heredity theory. For instance, the French doctor Prosper Lucas (1805-1885) explored albinism and inheritance in the first study dedicated specifically to the laws of heredity.[27] Lucas was the Father of heredity theory. In his influential *Traité philosophique et physiologique de l'hérédité naturelle dans les états de santé et de maladie du système nerveux* (1847), Lucas argued heredity is a 'law, a force, a fact, one of the great marvels of existence'.[28] In a lengthy discussion of the present state of knowledge about the generation and heredity of albinism, Lucas argued it was a congenital and

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[27] Prosper Lucas, *Traité philosophique et physiologique de l'hérédité naturelle…etc.*, 2 vols., Paris: Corbeil (1847-1850). For Propser Lucas' importance to the emergence of theories of heredity see: R. Noguera-Solano and R. Guitérrez, 'Darwin and Inheritance: the influence of Prosper Lucas, *Journal of the History of Biology*, vol. 42, issue 4 (2009), pp. 685-714; Staffan Müller-Wille and Hans-Jörg Rheinberger (eds.), *Heredity Produced: at the crossroads of biology, politics, and culture, 1500-1870*, Cambridge, Mass.; London: MIT Press (2007), p. 12; Robert A. Nye, *Masculinity and Male Codes of Honour in France*, California: University of California Press (1998), p. 73.

[28] Lucas, *Traité philosophique et physiologique de l'hérédité naturelle…etc.*, vol. 1 (1847-1850), pp. 5-6.

anomalous variation caused by arrested development during pregnancy.[29] Lucas here drew on David Mansfeld's taxonomy for 'albinoismus' published in 1822, and Geoffroy St. Hilaire's arguments made in 1832 that albinism is caused by some form of interruption or disruption during pregnancy.[30] Shifting from the immediate cause of albinism to the underlying law of heredity, Lucas argued that the, 'heredity…of albinism is almost beyond doubt'.[31] As evidence for his argument, Lucas pointed to the inheritance of albinism in a family of 'albinos' living at Choisy-le-Roi as described by Blandin in the *Dictionnaire de médecine et de chirurgie pratique*.[32] Thus Lucas echoed the methods and ideas of Cornaz and the French and North American studies on consanguinity.

In Lucas's formulation, instances of albinism seemed to increase when identified in families. Inheritance of albinism could therefore be to some extent predicted. In this heredity theory, albinism could be seen as a disease of the future. Its hitherto unfathomable manifestation here begins to take a more tangible form through the collation of family cases shared within the European and trans-Atlantic networks of medical and scientific knowledge.

However, albinism could also be a disease of the past. Some thinkers interpreted the whiteness as a throwback to an earlier human being, whose physical, mental and moral attributes had since begun to run down. This association of albinism with a primeval or degenerative physical state was obtained from Georges

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[29] Prosper Lucas, *Traité philosophique et physiologique de l'hérédité naturelle…etc.*, 2 vols., Paris: Corbeil (1847-1850), pp. 296-97.
[30] See Chapter Two.
[31] Lucas, *Traité philosophique et physiologique de l'hérédité naturelle* (1847-1850), p. 302.
[32] Lucas (1847-1850), p. 305.

Buffon's initial speculations in his *Natural History* about unusually white humans and animals embodying the primitive colour in nature.[33]

On this notion of nature as following a downward path, Lucas's heredity theory influenced the French physician and psychiatrist Bénédict-August Morel (1809-73).[34] In his book *Traité des dégénérescences physiques, intellectuelles et morales de l'espèce humaine et des causes qui produisent ces variétés maladives* (1857), Morel clearly locates albinism with a broad notion of degeneration perpetuated by heredity. Whereas Lucas argued albinism was a non-pathological anomaly, Morel stressed albinism was a degenerate condition like criminality, imbecility and insanity. Morbid and moral deviations for Morel amounted to symptoms of degeneration.

These degenerative conditions – that for Morel shaded humanity away from its primitive form – were linked to Lucas's ideas about heredity. Morel argued 'hereditary transmission is one of the most essential characteristics of degenerations'.[35] In the case of albinism, Morel classified it as, 'a degenerative congenital infirmity acquired from birth'.[36] In Morel's formulation, albinism was able to 'become hereditary and from a distinctive character within races'.[37] Morel's focus on degeneration was encapsulated in a moral question. He sought to prove the

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[33] See Chapter One.
[34] On Morel and degeneration see: Nicole Hahn Rafter, *The Origins of Criminology: a reader*, London: Taylor and Francis (2009), chp. 10; Laure Catron, 'Degeneration and 'Alienism' in Early Nineteenth-Century France', in Staffan Müller-Wille and Hans-Jörg Rheinberger (eds.), *Heredity Produced: at the crossroads of biology, politics, and culture, 1500-1870*, Cambridge, Mass.; London: MIT Press (2007), Daniel Pick, *Faces of Degeneration: a European disorder, 1848-1918*, Cambridge: Cambridge University Press (1993).
[35] Bénédict-August Morel, *Traité des dégénérescences physiques, intellectuelles et morales de l'espèce humaine et des causes qui produisent ces variétés maladives*, Paris: J.B. Baillière (1857), p. 4.
[36] Morel, *Traité des dégénérescences physiques, intellectuelles et morales de l'espèce humaine et des causes qui produisent ces variétés maladives* (1857), p. 57.
[37] Morel (1857), p. 57.

quality of life overall was deteriorating and not improving and progressing.[38] Indeed, as Modris Eksteins makes clear, degeneration was possibly 'the crucial intellectual dilemma of the century'.[39] For Morel, albinism shared its status with other 'abnormalities, abnormal physiological states and cases of arrested development'.[40] This union of pathology with social value encapsulated a new departure in studies of albinism. Through the inheritance of albinism, Morel argues people and animals are visibly identifiable as degenerate. Morel's association of albinism with degeneracy is to a great extent analogous with the early twentieth-century notion of 'national deterioration' in eugenics supported by Karl Pearson.

Away from developments in French medicine and heredity theory, the second half of the nineteenth century witnessed greater collective efforts in the life sciences to formulate a theory of heredity. Heredity required a more systematic point of focus, and this came in the form of evolutionary theory. The introduction of the idea of evolution is attributable to the work of Erasmus Darwin, Jean-Baptiste Lamarck and Charles Darwin.[41] Charles Darwin's research provides a particularly important example to demonstrate just how crucial albinism was to the foundations of theories of inheritance during the second half of the nineteenth century.

The paradigm shift affected by Darwin's evolutionary theory opened up new questions about heredity. Novel characters such as albinism must be created and then maintained within the species, so evolutionism concentrated its attention on the

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[38] J. Edward Chamberlain and Sander L. Gilman (eds.), *Degeneration: the dark side of progress*, New York: Columbia University Press (1985), p. 1.
[39] Chamberlain and Gilman (eds.), *Degeneration: the dark side of progress* (1985), p. 1.
[40] Bénédict-August Morel, *Traité des dégénérescences physiques, intellectuelles et morales de l'espèce humaine et des causes qui produisent ces variétés maladives*, Paris: J.B. Baillière (1857), p. 57.
[41] Staffan Müller-Wille and Hans-Jörg Rheinberger (eds.), *Heredity Produced: at the crossroads of biology, politics, and culture, 1500-1870*, Cambridge, Mass.; London: MIT Press (2007), p. 12.

relationship between variation and inheritance.[42] An industry of Darwin scholars contests the impact and importance of Darwin, and his idea of natural selection after the publication of his *Origin of Species* (1859).[43] Michael Ruse argues the arrival of the *Origin* 'changed Man's world'.[44] For James Secord, on the other hand, singling out Darwin over simplifies the broader canvas of discussion and debate about evolution and nature in Victorian Britain.[45] For instance, the debate about the age of the Earth led by Charles Lyell is shown by Ruse to have had a significant impact on ways of thinking about the origins of humanity and nature.[46] Scholars, however, overwhelmingly accept Darwin's theory of evolution as a highly successful idea. A whole range of thinkers took up evolution quickly in cultural and social thought.[47]

From 1859, biologists invoked the heredity of albinism in wider biological and evolutionary debates about inheritance in general. After Lucas, Darwin proposed one of the earliest fully-fledged theories of heredity.[48] Darwin favoured the idea of

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[42] Peter J. Bowler, *The Mendelian Revolution: the emergence of hereditarian concepts in science and society*, London: Athlone Press (1989), p. 46.
[43] For a skeptical view of Darwin's import and the impact of his work see: Peter J. Bowler and Iwan Rhys Morus, *Making Modern Science*: Chicago Ill.: Chicago University Press (2005); Peter J. Bowler, *The non-Darwinian Revolution: reinterpreting a historical myth*, Baltimore; London: Johns Hopkins University Press (1988).
[44] Michael Ruse, *The Darwinian Revolution: science red in tooth and claw*, Chicago; London: University of Chicago Press (1979).
[45] James A. Secord, *Victorian Sensation: the extraordinary publication, reception, and secret authorship of Vestiges of the Natural History of Creation*, Chicago: University of Chicago Press (2000).
[46] Michael Ruse, *The Darwinian Revolution: science red in tooth and claw*, Chicago; London: University of Chicago Press (1979), p. xii. For histories of geology see: Charles Coulston Gillispie, *Genesis and Geology: a study in the relations of scientific thought, natural theology, and social opinion in Great Britain, 1790-1850*, Cambridge, Mass.: Harvard University Press (1996); Roy Porter, *The Making of Geology: earth science in Britain, 1660-1815*, Cambridge: Cambridge University Press (1977); Nicolaas Rupke, *The Great Chain of History: William Buckland and the English school of geology, 1814-1849*, Oxford: Clarendon Press (1983).
[47] Martin Fichman, *Evolutionary Theory and Victorian Culture*, Amherst, N.Y.; Oxford: Lavis Marketing (2002); I. Lerner and William J. Libby, *Heredity, Evolution and Society*, San Francisco: W.H. Freeman (1976); J.W. Burrow, *Evolution and Society: a study in Victorian social theory*, London: Cambridge University Press (1966).
[48] Staffan Müller-Wille and Hans-Jörg Rheinberger (eds.), *Heredity Produced: at the crossroads of biology, politics, and culture, 1500-1870*, Cambridge, Mass.; London: MIT Press (2007), p. 22.

blending heredity, where 'parental differences are merged in the offspring of bisexual reproduction so that variation is constantly being diminished'.[49] The two assumptions of blending heredity were that each parent contributes equally to the offspring, and these contributions are halved at each successive generation.[50] However, Darwin's theory of heredity – pangenesis – changed quite dramatically after the publication of his seminal text *On the Origins of Species by Means of Natural Selection* (1859). According to James Schwartz, Darwin had been anti-Lamarckian but he:

> Did a complete turnaround after the publication of the *Origin* and began to collect evidence for the heritability of mutations and many other acquired characteristics.[51]

Albinism was one of these characteristics.

Thus Darwin's position on the inheritance of albinism must have had an equally shifting character. As Olby argued, Darwin:

> Did not deny the existence of other forms of variation and heredity: he simply discarded them since they were irrelevant to his argument for evolution'.[52]

Darwin investigated heredity in relation to albinism without using live animal subjects in breeding experiments. The experimental evidence that was available to Darwin was obtained from professional animal breeders. Darwin summarised how

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[49] Robert Olby, *Origins of Mendelism*, Chicago; London: University of Chicago Press (1985), p. 40.
[50] Olby, *Origins of Mendelism* (1985), pp. 52-53.
[51] James Schwartz, *In Pursuit of the Gene: from Darwin to DNA*, Cambridge, Mass.; London: Harvard University Press (2008), p. 389.
[52] Olby (1985), p. 47.

in spite of a range of nineteenth-century attempts to grasp the mechanisms of inheritance the answer as to how different traits were passed on remained illusive.[53] His arguments about the importance of inheritance were based in part on his knowledge of cases of albinism. Darwin cast doubt on the theory of 'like produces like' – long followed by animal breeders – and cited albinism as an important exception to this rule. He wrote:

> Everyone must have heard of cases of albinism, prickly skin, and hairy bodies, &c., appearing in several members of the same family. If strange and rare deviations of structure are truly inherited, less strange and commoner deviations may be freely admitted to be inheritable.

Due to its substantial deviation away from the expected physical structure albinism pointed towards more complex laws of inheritance. Darwin therefore tentatively posited that:

> Perhaps the correct way of viewing the whole subject, would be, to look at the inheritance of every character whatever as the rule, and non-inheritance as the anomaly.[54]

Albinism is therefore an integral aspect of the debate about inheritance in Darwin's work.

Darwin's research into albinism encouraged medical men and biologists especially in England to further investigate the hereditary nature of this condition.

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[53] Michael Ruse, *Darwinism and its Discontents*, Cambridge, N.Y.: Cambridge University Press (2006), p. 18.
[54] Charles Darwin, *On the Origin of Species by Means of Natural Selection: or, the preservation of favoured races in the struggle for life*, London: John Murray (1859), p. 13.

Darwin's speculations about albinism and heredity caught the attention of practicing physician William Sedgwick. Two years after the publication of the *Origin*, Sedgwick wrote an article in the *British and Foreign Medical-Chirurgical Review* (1861) on 'The Sexual Limitation of Hereditary Disease'.[55] It included a section on albinism. Sedgwick cited Darwin when lamenting that:

> The hereditary transmission of disease is a subject for enquiry so vast and so little understood…little progress appears to have been made in this field of science.[56]

Nevertheless, Sedgwick hoped to open up a debate about how diseases of the skin such as ichthyosis, leprosy and albinism were limited to one particular sex. In the case of albinism, Sedgwick argued that the 'rose-coloured eyes of albinoes (sic.) have been observed to be often hereditarily connected with one sex'.[57]

Sedgwick did not base his theory of albinism and sex linked heredity to experimental data. Instead, as evidence Sedgwick used cases published by Saussure, Traill and Cornaz.[58] For Sedgwick, knowledge about hereditary diseases such as albinism was potentially important for 'social life'.[59] By this he meant its 'moral importance in connection with marriage' and its 'commercial importance in connection with the insurance of life'.[60] Sedgwick's invocation of albinism as a morally dubious condition is due here to the explicit influence of Morel's idea of

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[55] William Sedgwick, 'On Sexual Limitation in Hereditary Disease', *British and Foreign Medical-Chirurgical Review*, vol. 27 (1861), pp. 477-489.
[56] Sedgwick, 'On Sexual Limitation in Hereditary Disease' (1861), p. 477.
[57] Sedgwick (1861), p. 480.
[58] See Chapter Two.
[59] Sedgwick, p. 480.
[60] Sedgwick, p. 478.

degeneration. Additionally, this value-laden conception is attached to the notion that the chance occurrence of albinism is being gradually reduced to a more stable and manageable state. Marriages and insurance can be planned and prepared better for the apparent threat posed by the spread of albinism to 'social life'.

Sedgwick says nothing more about this moral aspect and marriage. Not only had he read Morel's work on degeneration, but he also was doubtless familiar with the many discussions about marriage and consanguinity in France and the United States during this period.[61] On the question of life insurance Sedgwick elaborates that, 'some sound information…on the probable duration of health and life, seems to be much needed by our life insurance companies'.[62] Thus Sedgwick believed greater understanding of how diseases such as albinism are inherited could benefit insurers who had from the late seventeenth and eighteenth century relied on mathematical calculation of probability.[63]

For medical men and biologists, the collection of cases of families containing several members with albinism strongly suggested it was a hereditary disease. Two decades after the initial debates about evolution and heredity, the British medical practitioner C.S. Jeaffreson furthered the argument that albinism proliferated in families.[64] Jeaffreson was surgeon at the children's hospital and eye infirmary at Newcastle-on-Tyne.[65] He addressed the subject of albinism and heredity in his

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[61] See Chapter Two.
[62] William Sedgwick, 'On Sexual Limitation in Hereditary Disease', *British and Foreign Medical-Chirurgical Review*, vol. 27 (1861), p. 478.
[63] Gerd Gigerenzer (ed.), *The Empire of Chance: how probability changed science and everyday life*, Cambridge: Cambridge University Press (1989), p. 23. See also: Geoffrey Wilson Clark, *Betting on Live: the culture of life insurance in England, 1695-1775*, Manchester: Manchester University Press (1999).
[64] C.S. Jeaffreason, 'Observations on Albinism', *British Medical Journal*, vol. 2 (1873), p. 224.
[65] Jeaffreason, 'Observations on Albinism' (1873), p. 224.

'Observations on Albinism' in the *British Medical Journal* (1873).[66] Jeaffreson argued, 'there can be little question that their condition is liable to descend hereditarily to their offspring'.[67] As evidence he noted that when two people with albinism have children there is a marked increase in the number of children with albinism. He wrote:

> This is especially the case when both parents present the same peculiarity…in countries where albinos are common, families of them may occasionally be seen, the result of marriages between persons of the same condition.

For Jeaffreson, therefore, the reason the hereditary nature of albinism had not been confirmed earlier in the west was that, 'Albino children are so rare in Europe as to render such a combination of circumstances unlikely to occur.[68]

The combination of these theories of heredity with experimental breeding was less apparent between 1859-1899. Nevertheless, there are crucial examples of breeding experiments on rats with albinism. For instance, between 1877-1885, Hermann Cramper, a German doctor, used 'albino' and 'wild' rats in the earliest breeding experiment on rats on record.[69] He published his findings in four separate articles in the *Landwirtschaftliche Jahrbücher* (Agricultural Annual).[70] Crampe crossed grey, grey-white, and black rats with 'albino' rats. He found that albinism

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[66] C.S. Jeaffreason, 'Observations on Albinism', *British Medical Journal*, vol. 2 (1873), pp. 224-25.
[67] Jeaffreason, 'Observations on Albinism' (1873), p. 224.
[68] Jeaffreason (1873), p. 224.
[69] Mark A. Suckow (ed.), *The Laboratory Rate*, Amsterdam; Boston: Elsevier (2006), p. 2.
[70] H. Crampe, 'Kreutzungen Zwischen Wanderratten verschiedener Farber', *Landwirtschaftliche Jahrbücher*, vol. 6, pp. 385-395; 'Zuchtversuche mit zahmen Wanderratten I: Resultate der Zucht in Verwandtschaft', *Landwirtschaftliche Jahrbücher*, vol. 12, pp. 389-449; 'Zuchtversuche mit zahmen Wanderratten II: Resultate der kreuzung der zahmen Ratten mit Wilden', *Landwirtschaftliche Jahrbücher*, vol. 13, pp. 699-754; 'Die Gesetze der Vererbung der Farbe', *Landwirtschaftliche Jahrbücher*, vol. 14, pp. 539-619.

disappeared after being crossed with each of these three colours. Crampe also noted that 'albino' rats would reappear in later generations, though he did not uncover a law of heredity to explain the transmission of albinism from one rat to another.[71] Crampe's substantial breeding research on rats with albinism was hailed as significant by biologists only after the rediscovery of Mendel's laws of inheritance. Nevertheless, he clearly contributed to a growing interest and focus on experimental research.

Besides Crampe's experiments on rats with albinism, non-breeding research had taken place prior to his efforts. In 1856, a now obscure French doctor and neuro-anatomist Jean-Marie Phillipeaux (1823-?) published a short note in the *Comptes Rendus de l'Académie de Sciences* (1856) of the results of his experiments on four 'albino' rats.[72] Phillipeaux removed the adrenal glands of each rat in order to see if it could survive. His results claimed his intervention made no difference to the life expectancy of his experimental subjects. Philipeaux's research obtained coverage in several French journals and medical gazettes the following year in 1857.[73]

In summary, the period 1859-1899 was dominated by the incorporation of albinism in heredity theory without drawing on significant experimental evidence. There are two strains of thought that mark out the way albinism was redefined in this heredity discourse. The first was more disinterested, and was spearheaded by

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[71] William E. Castle and Grover M. Allen, 'The Heredity of Albinism', *Proceedings of the American Academy of Arts and Sciences*, vol. 38, no. 21, April (1903), p. 604.
[72] Jean-Marie Philipeaux, *Gazette hebdomadaire de médecine et du chirurgie*, Vol. 4, Masson et Cie. (1857), p. 166; *Gazette Médicale de Paris*, vol. 27, p. 16; *Journal de la physioloige de l'homme et des animaux*, vol. 1 (1858), p. 168.
[73] Jean-Marie Philipeaux, *Gazette Hebdomadaire de Médecine et du Chirurgie*, Vol. 4, Masson et Cie. (1857), p. 166; *Gazette Médicale de Paris*, vol. 27, p. 16; *Journal de la physioloige de l'homme et des animaux*, vol. 1 (1858), p. 168.

Lucas and Darwin. Both men sought to explain the inheritance of albinism without commenting on its value in biological or socio-economic terms. In fact, Lucas argued albinism was not a disease at all but simply an anomalous occurrence. However, the second strand of thought proposed that albinism was degenerate, a potential danger to biological, social and even moral stability. The idea here that albinism was spread within families was crucial. It saw the birth of a new way of projecting this apparent disease into future decisions about marriage, and, more generally, morality. Albinism could now be diagnosed, but also potentially avoided through the administration of marriage. The evidence was empirical and observational in nature. What experiments had been conducted on rats with albinism lacked a heredity theory to interpret the results.

The Experimental Animal Subject

As a physically distinctive and well-publicised congenital condition in nineteenth-century medicine, albinism was ideal for testing theories of heredity with animal breeding experiments.[74] Breeding experiments with mice conducted between 1900-1903 in Germany and North America seemed to prove that Gregor Mendel's laws of heredity were correct. However, the inheritance of albinism in humans was difficult to prove, as breeding experiments with albinism was ethically unacceptable. Thus biologists used animals with albinism in place of humans in the belief that any results could be translated across.

[74] Peter J. Bowler, *The Mendelian Revolution: the emergence of hereditarian concepts in science and society*, London: Athlone Press (1989), p. 4.

As with the preceding century, there emerged two interlinked ways of interpreting and studying albinism and heredity. For many biologists and breeders involved in the foundation of genetics, their aim was to solve the debate about heredity transmission. They pursued this goal through the use of mice, guinea pigs and rats with albinism in breeding experiments. The second way of knowing albinism was as a 'defect', an undesirable physical state that tainted the individual along with society. This notion of albinism as a pathological 'defect' was expressed most explicitly in the biometric and eugenic research of Karl Pearson based at University College, London. Contemporaneous with Pearson's decade of statistical research, Charles Davenport at the Cold Spring Harbor Laboratory also undertook research into the inheritance of albinism in the name of eugenics.

Gregor Mendel's paper on the laws of heredity in peas encouraged breeding experiments with animals, including those with albinism, in Europe and the United States during the first decade of the twentieth century and beyond.[75] Mendelism and genetics were used to denote this new science of heredity.[76] Historians cite botanists Hugo De Vries (1848-1925), Carl Correns (1864-1933), and Erich von Tschermak-Seysenegg (1871-1962) as variously crucial to the initial acceptance and spread of Mendel's findings.[77]

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[75] For the history of the rediscovery of Mendel's research see: Elof Axel Carlson, *Mendel's Legacy: the origin of classical genetics*, New York: Cold Spring Harbor Laboratory Press (2004); Colin Tudge, *In Mendel's Footnotes: an introduction to the science and technologies of genes and genetics from the nineteenth century to the twenty second*, London: Vintage (2002); Peter J. Bowler, *The Mendelian Revolution: the emergence of hereditarian concepts in science and society*, London: Athlone Press (1989); Robert Olby, *Origins of Mendelism*, Chicago; London: University of Chicago Press (1985).
[76] Bowler, *The Mendelian Revolution: the emergence of hereditarian concepts in science and society* (1989), p. 1.
[77] Peter J. Bowler and John V. Pickstone (eds.), *The Cambridge History of Science: the modern biological and earth sciences*, vol. 6, Cambridge: Cambridge University Press (2009), p. 435; Bowler, *The Mendelian Revolution*, p. 3.

In Britain, William Bateson (1861-1926) quickly became the chief proponent of Mendel's laws of heredity.[78] Bateson saw Mendel's work as fundamental to the research-based approach to the study of heredity and variation.[79] Frank Weldon and Karl Pearson, and their nemesis William Bateson, all played leading parts in the battle over Mendelism.[80] In Britain, William Bateson (1861-1926) championed Mendel's theory, and performed experiments on the transmission of coat colour in mice and rats.[81] Bateson was convinced that albinism in mice and other mammals was a Mendelian recessive.[82]

To further explore the subject of albinism and heritable recessive characters, Bateson corresponded with Archibald Garrod (1857-1936), a physician and lecturer in chemical physiology at St. Bartholomew's Hospital in London.[83] Bateson was particularly interested in Garrod's work on Alkaptonuria, a condition that caused urine to turn red due to the presence of the chemical substance alkapton.[84] Garrod was a pioneering biochemist.[85] He went on to study the chemical physiology of albinism in humans and animals along with Cystinuria (formation of stones in the

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[78] Alan G. Cock, 'William Bateson, Mendelism, and Biometry', *Journal of the History of Biology*, vol. 6 (1973), pp. 1-36; William B. Provine, *The Origins of Theoretical Population Genetics*, Chicago: University of Chicago Press (1971); William Coleman, 'Bateson and Chromosomes: conservative thought in science', *Centaurus*, vol. 15 (1970), pp. 228-314.
[79] Raphael Falk, 'Mendel's Impact', in Staffan Müller-Wille and Hans-Jörg Rheinberger (eds.), *A Cultural History of Heredity III: 19th and early 20th centuries*, Preprint, Berlin: Max-Planck-Institute for the History of Science (2005), p. 11.
[80] James Schwartz, *In Pursuit of the Gene: from Darwin to DNA*, Cambridge, Mass.; London: Harvard University Press (2008), p. x.
[81] William Bateson, 'The Present State of Knowledge of Colour Heredity in Mice and Rats', *Proceedings of the Zoological Society of London*, vol. 2 (1903), pp. 71-99.
[82] William Bateson, *Mendel's Principles of Heredity: a defence*, Cambridge: Cambridge University Press (1902), p. 18.
[83] For a biography of Garrod's life and work see: Alexander G. Beam, *Archibald Garrod and the Individuality of Man*, Oxford: Clarendon Press (1993).
[84] Bateson, *Mendel's Principles of Heredity: a defence* (1902), p. 227.
[85] Anna Piro, *Archibald Edward Garrod: the physician father of biochemistry*, no place, Elsevier (2009).

kidney) and Pentosuria (deficiency detectable in the urine). Garrod called these conditions 'inborn errors of metabolism'.[86]

Garrod presented his findings to the *Royal Society* in the form of the prestigious Croonian lectures in 1908. His research was published the following year as a book.[87] According to Garrod, albinism had a chemical cause that had received far less attention than its hereditary nature. Garrod wrote:

> The essential phenomenon of albinism is the absence of the pigments of the melanin group, which play the chief part in the colouration of man and lower animals, and which serve the important function of rendering the eye a dark chamber.[88]

To test this experimentally, Garrod analyzed the, 'urine of albinos', where he found the 'ordinary pigment present'. [89] Garrod was already aware that melanin could not be successfully administered. He cited the paper published by the Austrian physician Rudolf Kobert. Kobert injected rabbits, some of which were 'albino', with melanin. The substance was excreted with no apparent harm to the experimental rabbit subjects.[90]

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[86] Alexander G. Beam and Elizabeth D. Miller, 'Archibald Garrod and the Development of the Concept of Inborn Errors of Metabolism', *Bulletin of the History of Medicine*, vol. 53, No. 3, Fall (1979), pp. 315-327.
[87] Archibald Garrod, *Inborn Errors of Metabolism: the Croonian lectures delivered before the royal College of Physicians in London, June, 1908*, London: Henry Froude and Hodder and Staughton (1909).
[88] Garrod, *Inborn Errors of Metabolism: the Croonian lectures delivered before the royal College of Physicians in London, June, 1908* (1909), p. 35.
[89] Garrod (1909), p. 35.
[90] Rudolf Kobert, 'Ueber Melanine', *Wiener Klinik*, vol. 27 (1901), p. 99.

In France, from 1900 to 1902, biologist Lucien Cuénot (1866-1951) set out to see if Mendel's laws 'applied not only to plants but also to animals'.[91] Cuénot spent two years breeding 270 house mice of which 198 were born grey and 72 had albinism.[92] Cuénot's findings matched the one in four distribution of dominant and recessive characters expected by Mendel's laws.[93] Similarly in Germany, from 1899 to 1902, Georg Von Guaita experimented on crossing various races of mice.[94]

The American biologist William Ernest Castle (1867-1962) heralded Von Guatia's results as proof that, 'albinism in mice is a recessive character'.[95] Castle studied under Charles B. Davenport at Harvard in the 1890s and became a lecturer in zoology.[96] He built up extensive knowledge of animal breeding by undertaking research with over 1,500 rabbits, 4,000 rats and 11,000 guinea pigs.[97] Based at the Zoölogical Laboratory at Harvard University – funded in part by the Carnegie Institute – Castle, and his assistant Grover M. Allen, published their own results of breeding experiments, not only with mice, but also with rabbits and guinea pigs. They arrived at the same result.[98] Castle and Allen's paper, 'The Heredity of Albinism', detailed Allen and Castle's results obtained from two and a half years of

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[91] Lucien Cuénot, 'La loi de Mendel et l'hérédité de la pigmentation chez les souris', *Archives de Zoologie Expérimentale et Générale,* vol. 3 (1902), pp. 27-30.
[92] Cuénot, 'La loi de Mendel et l'hérédité de la pigmentation chez les souris' (1902), p. 28.
[93] Cuénot (1902), p. 28.
[94] Georg Von Guaita, 'Versuchung von kreutungen mit verschiedenen Rassen der Hausmaus', *Berichte der naturforschenden Gesellschaft zu Freiburg*, vol. 10 (1899), pp. 317-332.
[95] William Ernest Castle, 'Note on Mr. Farabee's Observation', *Science*, vol. 17, No. 419 (1903), p. 75.
[96] Jim Endesby, *A Guinea Pig's History of Biology: the plants and animals who taught us the facts of life*, London: Heinemann (2007), p. 226.
[97] Endesby, *A Guinea Pig's History of Biology: the plants and animals who taught us the facts of life* (2007), p. 226.
[98] William E Castle and Grover M. Allen, 'The Heredity of Albinism', *Proceedings of the American Academy of Arts and Sciences*, vol. 38, no. 21, April (1903), pp. 603-622.

experimental breeding research.[99] Allen bred mice, while Castle concentrated on guinea pigs and rabbits. In the case of mice, Castle found that mating albino mice with normal mice results in 'no albino offspring'.[100] However, he also discovered that:

> The albino character has not ceased to exist, but has merely become latent in the offspring…and will reappear in the next generation if the cross-bred individuals be mated *inter se*.[101]

Castle and Allen's experimental evidence, and the experiments of Cramper, Von Guaita and Cuénot, were sufficient for Castle to argue albinism – at least in mice – is 'inherited in conformity with Mendel's Law of heredity, and that it is, in the terminology of that law, a *recessive* character.[102]

Castle's experiments on guinea pigs and rabbits brought similar results to mice. Castle reports that, 'we have many times mated together guinea pigs born of mottled parents…never with any but the expected Mendelian result'. As for rabbits, according to Castle, 'the same law appears to hold'.[103] Castle bred one 'albino' male and two 'albino' female rabbits that produced 'seventeen young, in three litters, all albinos'.[104] It is clear, therefore, that heredity experiments with animals played a highly prominent role in biologists' general conclusions about the mechanisms of inheritance during the first decade of the twentieth century.

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[99] William E. Castle and Grover M. Allen, 'The Heredity of Albinism', *Proceedings of the American Academy of Arts and Sciences*, vol. 38, no. 21, April (1903), p. 603.
[100] Castle and Allen, 'The Heredity of Albinism' (1903), p. 603.
[101] Castle and Allen (1903), p. 604.
[102] Castle and Allen, p. 605.
[103] Castle and Allen, p. 605
[104] Castle and Allen, p. 606.

Beyond Harvard, the experimental animal subject with albinism was equally visible in broader studies of heredity in other parts of the United States. For example, rats with albinism took up an important role at the *Wistar Institute of Anatomy and Biology* in Philadelphia in North American biological research. Henry H. Donaldson – a neuroanatomist conducting research at Wistar – emphasized the diverse appeal of using 'albino rats' in a variety of experiments. He wrote:

> The albino rat is easy to keep, breeds freely, bears young that are both numerous and immature, and is also responsive to changes in its environment as well as being easily trained. It would be hard to find another animal that combined so many virtues in so compact and pleasing a form.[105]

The Wistar Rats were bred and distributed from 1906 until the 1940s.[106] From 1910, Helen Dean King (1869-1955), a biologist and eugenics advocate conducted extensive breeding experiments on 'albino rats'.[107] Rats with albinism are in this context used as ideal experimental subjects. Its rapid breeding makes it both profitable and useful for biologists for undertaking a range of experiments on heredity.

During this period of experimentation on animals, the recessive nature of albinism began to be associated also with humans. In 1902 the journal *Science*

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[105] Henry H. Donaldson, 'An Outline of Studies on the Growth of the Nervous System in Progress at the Wistar Institute of Anatomy and biology', in Milton J. Greenman, 'Preliminary Statement to the Board of Managers of the Wistar Institute', November (1909), p. 8, in Wistar Institute Library, cited by Bonnie Tocher Clause, 'The Wistar Rat as a Right Choice: establishing mammalian standards and the ideal of a standardized mammal', *Journal of the History of Biology*, vol. 26, No. 2, Summer (1996), p. 329.
[106] Clause, 'The Wistar Rat as a Right Choice: establishing mammalian standards and the ideal of a standardized mammal' (1996), p. 331.
[107] Marilyn Bailey Ogilvie, 'Inbreeding, Eugenics and Helen Dean King (1869-1955)', *Journal of the History of Biology*, vol. 40, No. 3, September (2007), p. 469. Several scholars argue King's role in shaping twentieth-century American biology has been overlooked. See: Clause, 'The Wistar Rat as a Right Choice: establishing mammalian standards and the ideal of a standardized mammal', p. 6; Jane M. Oppenheimer, 'Thomas Hunt Morgan as an Embryologist: the view from Bryn Mawr', *American Zoologist*, vol. 23, issue 4 (1983), p. 853.

published an account by the archeologist William C. Farabee of a family in Coahoma County, Mississippi, who had six people with albinism in separate generations.[108] After seeing some 'albino negro children hoeing in the cotton field', Farabee made enquiries and found out their grandfather had albinism.[109] He speculated that the disappearance and reappearance of albinism in a later generation is due to the possibility that albinism was recessive.[110] In response to Farabee's findings, Castle argued that, 'in the case of Negro albinism…the result throughout is a Mendelian one, on the hypothesis that albinism is recessive'.[111] The following year Castle claimed in his paper on 'The Heredity of Albinism', that he and Farabee, 'have recently shown albinism (in man) to be in all probability recessive'.[112] This is the only sentence in this paper that deals with humans, since any sort of breeding experiments on men and women were ethically out of bounds.

It is clear experimental breeding with animals with albinism was pivotal to the rise of Mendelism during the first decade of the twentieth. Biologists in Britain and the United States drew on late nineteenth-century studies from Germany and France to test the Mendelian theories of heredity. Their experimental work with animals with albinism achieved impressive and consistent results. Yet, in humans the laws of Mendelian heredity, and particularly the recessive nature of albinism, could only be inferred from the results of animal experimentation. Even Bateson, a

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[108] W.C. Farabee, 'Notes on Negro albinism', *Science*, vol. 17, No. 419 (1903), p. 75.
[109] Farabee, 'Notes on Negro albinism' (1903), p. 75.
[110] Farabee (1903), p. 75.
[111] William Ernest Castle, 'Note on Mr. Farabee's Observation', *Science*, vol. 17, No. 419 (1903), p. 75.
[112] William E. Castle and Grover M. Allen, 'The Heredity of Albinism', *Proceedings of the American Academy of Arts and Sciences*, vol. 38, no. 21, April (1903), p. 604.

staunch supporter of Mendelism, questioned whether albinism in animals followed the same heredity principles in Man.

Pathological Whiteness Quantified: Karl Pearson and experimental biometrics

Just as animals with albinism featured prominently in experimental biological breeding research, it was also central to Karl Pearson's biometric research. Karl Pearson, mathematician, biometrician, and eugenicist studied the heredity of albinism in humans and animals for over a decade between 1905-1914. He was initially drawn to studying the heredity of albinism in humans in part to challenge William Bateson's position on the Mendelian heredity of albinism. Bateson had argued from 1902 that albinism, at least in many animals, was a Mendelian recessive.[113] Bateson clashed with Pearson and his allies W.F.R. Weldon and his assistant Arthur Darbishire over inconclusive results from their breeding experiments with 'albino' and Japanese waltzing mice undertaken between 1901 and 1904.[114] Nevertheless, as historian Eileen Magnello emphasised, from 1904 Pearson did partially accept Mendel's theory: not on the question of segregation and recessive inheritance (thus not in the case of albinism), but Pearson did condone Mendel's theory in relation to inherited dominant factors such as height.[115]

Disagreement between Pearson's school of biometrics and the Mendelian therefore is exaggerated in the historiography, which disproportionately pits

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[113] W.A. Branford, 'Hutchinson and Nettleship, Nettlerash and Albinism', *British Journal of Dermatology*, vol. 143, issue 1, July (2000), p. 20.
[114] W.F.R. Weldon, 'Albinism in Sicily and Mendel's Laws', *Biometrika*, vol. 3, No. 1, January (1904), pp. 286-298; Arthur D. Darbishire, 'On the Result of Crossing Japanese Waltzing with Albino Mice', *Biometrika*, vol. 3, No. 1, January (1904), pp. 1-51.
[115] M. Eileen Magnello, 'Karl Pearson's Mathematization of Heredity: from Ancestral Heredity to Mendelian Genetics, 1895-1909', *Annals of Science*, vol. 55 (1998), p. 80.

Mendelians and Biometricians in opposing camps in part due to the 'bitterness' of the rhetoric exchanged between Bateson, Weldon and Pearson that had its origins in personal grievance rather than scientific disagreement.[116] The point is that Pearson did not flatly deny the possibility that Mendelism was potentially correct but he needed 'definite proof'.[117] He sought this evidence by commencing a global study of albinism in humans and animals in 1905.

Pearson believed the accumulation of sufficient information on albinism through his biometric method of analysis would better support or disprove what he saw as the unproven hypothesis of Mendelian heredity. For Pearson:

> Biometry was the application of exact statistical method to the problem of biology…it is no more pledged to one hypothesis of heredity than to another'.[118]

The scientific arm of eugenics, and its statistical and biometric approach to the heredity of albinism in humans and animals, originated with the ideas, research and resources of the Victorian polymath Francis Galton (1822-1911). Galton funded the foundation of the Francis Galton Laboratory for National Eugenics in 1904. Galton was undoubtedly the greatest influence on Pearson's research into inherited conditions such as albinism. The two men shared a close bond by the turn of the

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[116] For example see: Alan R. Rushton, 'Nettleship, Pearson and Bateson: The Biometric-Mendelian Debate in a Medical Context', *Journal of the History of Medicine*, vol. 55, no. 2, April (2000), p. 134.
[117] *Royal Society of Medicine*, November 18 (1908), cited in Alan G. Cock and Donald R. Forsdyke, *Treasure Your Exceptions: the science and life of William Bateson*, New York: Springer (2008), p. 315.
[118] Karl Pearson, 'Mendel's Law', *Nature*, vol. 70, October 27 (1904), pp. 626-627.

twentieth century and, along with Weldon, published the journal *Biometrika* in 1902 – presenting statistical theories within biological frames of reference.[119]

Then, in 1907, Pearson took over the Eugenics Record Office and renamed it the Francis Galton Laboratory for National Eugenics – funded by Galton.[120] Under Pearson, the primary role of the Eugenics Laboratory was to produce research using larges masses of collected statistical data on physical and mental 'defects'.[121] In 1911, both the Biometric and the Galton Laboratories were united within the Department of Applied Statistics at University College, following the appointment of Pearson as chair of eugenics.[122] From 1907, Pearson's research increasingly focused upon physical and mental 'defects', which included studies into alcoholism, pulmonary tuberculosis and albinism.[123]

Whilst Pearson was an avowed eugenist, he was also an English nationalist and socialist. During the 1880s, while studying in Germany, Pearson developed and published his political views, which constituted a combination of a sort of National Socialism with social-imperialism.[124] Pearson supported the introduction of socialism through a gradual 'reformist' approach as opposed to 'revolutionary' measures. He envisioned a system of state planning where all capital was controlled by the state. In his treatise on 'The moral basis of Socialism' Pearson argued that,

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[119] Daniel J. Kevles, *In The Name of Eugenics: genetics and the uses of human heredity*, New York: Knopf (1985), p. 35.
[120] Joanne Woiak, *Drunkenness, Degeneration, and Eugenics in Britain, 1900-1914*, Thesis: Ph.D., University of Toronto (1998), p. 200.
[121] Lyndsay Farrall, *The Origins and Growth of the English Eugenics Movement:* 1865 -1925, Thesis: Ph.D., Indiana University (1969), p. 116.
[122] Farrall, *The Origins and Growth of the English Eugenics Movement* (1969), p. 116.
[123] Karl Pearson and Ethel Elderton, *A First Study of the Influence of Parental Alcoholism on the Physique and Ability of the Offspring*, London: Dulau (1910); Karl Pearson, *A First Study of the Statistics of Pulmonary Tuberculosis*, Studies in National Deterioration, vol.2, London: Dulau (1907).
[124] Bernard Semmel, *Imperialism and Social Reform: English social-imperial thought, 1895-1914*, London: George Allen and Unwin (1960), p. 38.

'offenders against the state should be given short shrift and the nearest lamp-post…every citizen must learn to say with Louis XIV, '"L'état c'est moi"'![125] Clearly, Pearson believed the state should be privileged over individual interest: a social theory he extended to the biological sphere.[126] Pearson's socialist politics were buttressed by his support for a form of active Social Darwinism; he thought nations must struggle against nations, races against races, in order to achieve military and economic dominance.[127]

In his lecture, *National Life from the Standpoint of* Science (1901), Pearson was highly patriotic and was convinced the 'white Aryan' race was superior above all others, supporting colonial expansion that, if necessary, would 'completely drive out the inferior race'.[128] He preached a nationalism that argued the future of the British nation, if challenged by a similarly powerful nation, rested upon the physical and mental vitality of the 'race', which would require, 'all the brain power and all the muscle power we can lay our hands on'.[129]

Philosophically, as summarized in his hugely popular *The Grammar of Science* (1892), which reached three editions by 1911, Pearson was an absolute positivist, believing that all knowledge could only be based on sense-impressions. Pearson conceptualized science as a 'grammar' with the aim of describing the 'routine of

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[125]Karl Pearson, 'The Moral Basis of Socialism' (1887) in Semmel, *Imperialism and Social Reform: English social-imperial thought* (1960), p. 37.
[126] Donald MacKenzie, 'Karl Pearson and the Professional Middle Class', *Annals of Science*, vol. 36, no. 22, March (1979), p. 129.
[127] Bernard Semmel, *Imperialism and Social Reform: English social-imperial thought, 1895-1914*, London: George Allen and Unwin (1960), p. 30.
[128] Karl Pearson, *National Life from the Standpoint of Science*, London: Adam and Charles Black (1901), p. 21.
[129] Pearson, *National Life from the Standpoint of Science* (1901), p. 29.

perceptions' that should not aspire to know anything beyond what was observable.[130] Therefore what was not science was not knowledge.[131]

In order to put Mendelism to the test, Pearson assembled 'a considerable mass of new material' on albinism that was 'more ample than any yet provided'.[132] Of Pearson's claim made here in the introduction to *A Monograph on Albinism in Man* (1911) there is no doubt that his various data on albinism vastly superseded previous attempts in both size and scope. Pearson collected hundreds of photographs, over 650 family pedigrees, medical reports, autopsy results, hair samples, and a global bibliography on albinism. Pearson received this torrent of data from 'medical men from all parts of the world'.[133] Pearson believed this material would reveal 'statistical conclusions…as to the nature and heredity of albinism'.[134] However, Pearson's study was never finished. Only three of the four volumes were published leaving a vast and complex collection of data without a conclusive unifying theory for the heredity of albinism.

Pearson's *Monograph on Albinism in Man* was produced at the department of Applied Mathematics at University College, London.[135] From 1911-1914, funded in part by a grant of sixty pounds from the Worshipful Company of Drapers, Pearson enlisted Cambridge University to print three volumes as part of the biometric series

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[130] Karl Pearson, *The Grammar of Science*, London: J.M. Dent and Sons (1937), p. 14.
[131] Donald MacKenzie, 'Karl Pearson and the Professional Middle Class', *Annals of Science*, vol. 36, no. 22, March (1979), p. 133.
[132] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, part 1, Cambridge: Cambridge University Press (1911), p. 1.
[133] Pearson, Nettleship, Usher, *A Monograph on Albinism in Man*, Part 1 (1911), p. 1.
[134] Pearson et al, *A Monograph on Albinism in Man*, Part 1 (1911), p. 1.
[135] Pearson et al, Part 1 (1911), p. 1.

primarily for an audience of academics and specialist subscribers.[136] The study into albinism was published alongside a series on national deterioration. The research was legitimized and supported through the contributions made by Edward Nettleship and Charles Howard Usher, both respected ophthalmologists working at St. Thomas Hospital in London.[137] In 1904, Nettleship provided Pearson with a wealth of data he had collected on people with albinism, which included sixty 'albino pedigrees' from twenty-three families.[138]

Of crucial importance to Pearson and his pursuit of further data on albinism was the authorization from Nettleship to use his name when contacting three hundred and fifty members of the Ophthalmologic Society for case histories.[139] Nettleship also put Pearson in touch with Dr. Edward Stainer, who worked in the skin department of St. Thomas's Hospital and had been collecting human hereditary material for many years and had several pedigrees with albinism from several generations.[140] Thus Pearson had access not only to a wealth of medical data on 'albinotic eyes' and skin but also he acquired detailed family histories made up of family trees along with photographic plates stretching back several generations. Furthermore his research was directly associated to mainstream medical research, undoubtedly providing the study into albinism with increased authority.

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[136] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, 3 vols., Cambridge: Cambridge University Press (1911-14).
[137] W.A. Branford, 'Hutchinson and Nettleship, Nettlerash and Albinism', *British Journal of Dermatology*, vol. 143 (2000), pp. 16-22.
[138] UCL: *Pearson Papers* 205/29: Edward Nettleship to Karl Pearson, 14 December (1904), cited in Alan R. Rushton, 'Nettleship, Pearson and Bateson: The Biometric-Menedlian Deabte in a Medical Context', *Journal of the History of Medicine*, vol. 55 (2000), p. 142.
[139] Alan Rushton, 'Nettleship, Peasron and Bateson: The Biometric-Mendelian debate in a medical context', *Journal of the History of Medicine*, vol. 55 (2000), p. 142.
[140] Rushton, 'Nettleship, Peasron and Bateson: The Biometric-Mendelian debate in a medical context' (2000), p. 142.

Such a diverse collection of information on albinism presented Pearson with the difficulty of how to scientifically classify and define the condition. Any discussion of the heredity of albinism required an acceptable and verifiable system of identification. In the introduction to the *Monograph*, Pearson wrote that,

> The data collected in this monograph will illustrate how difficult it is at present to grade the various types of albinism and how relatively frequent imperfect and partial albinism is in what we venture to term 'albinotic stocks'.[141]

For Pearson, people with albinism belonged within this 'albinotic stock', a grouping that signified 'pathological defect'.[142] This way of defining albinism exemplified Pearson's underlying eugenic approach to albinism, which coloured Pearson's attitude towards the value of inheriting albinism within a national context. Membership within a 'stock' was for Pearson fixed since,

> You cannot change the leopard's spots, and you cannot change bad stock to good; you may dilute it, possibly spread it over a wider area, spoiling good stock, but until it ceases to multiply it will not cease to be.[143]

For Pearson albinism was clearly definable as 'bad stock'. In his *Monograph* he argues that,

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[141] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, Part 1, Cambridge: Cambridge University Press (1911), p. 9.
[142] Pearson, Nettleship, Usher, *A Monograph on Albinism in Man*, Part 1 (1911), p. 2.
[143] Karl Pearson, *National Life from the Standpoint of Science*, London: Adam and Charles Black (1905), p. 18.

> It is idle to disregard the fact that, however many be the exceptions, albinism is very often associated with lowered physique and lessened mentality and that from the standpoint of the efficiency of the population its present extent and possible increase is a matter of national importance.[144]

As a solution to the apparent threat posed by albinism to the 'efficiency of the population', Pearson suggested a 'special type of voluntary census', pigmentation surveys of schools, and inclusion on the compulsory national census alongside blindness and 'deafmutism'.[145]

Thus Pearson hoped to clarify how albinism was inherited and how it could be identified without error for the purposes of 'national efficiency'.[146] Like the endemic diseases of 'feeblemindedness' or the social diseases of 'alcoholism', Pearson and his eugenist supporters feared albinism could spread and bring about the 'national deterioration' of the British population. Pearson sought sufficient statistical data on the heredity of albinism both to vindicate the science of biometry, and to persuade the state to actively intervene to control the spread of what he thought was a 'pathological stock'. Indeed, Pearson's research into albinism mirrored studies into inherited pathological disorders, such as tuberculosis, as well as a comparative project assessing the relative influence of heredity and environment on school children.[147]

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[144] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, part 1, Cambridge: Cambridge University Press (1911), p. 28.
[145] Pearson, Nettleship, Usher, *A Monograph on Albinism in Man*, Part 1 (1911), p. 28.
[146] For early Edwardian debates about national efficiency see: G.R. Searle, *The Quest for National Efficiency: a study in British politics and political thought, 1899-1914*, Berkeley: University of California Press (1971).
[147] Lyndsay Farrall, *The Origins and Growth of the English Eugenics Movement:* 1865 -1925, Thesis: Ph.D., Indiana University (1969), p. 111.

It is therefore apparent that experimentation on animals and humans with albinism was tied to an emerging ethics variously governing experimental scientific research in general.[148] Out of this science of heredity, eugenicists and social commentators increasingly positioned people with albinism into wider debate about the place and value of a visible population of abnormal and disabled individuals in rapidly modernising industrial capitalist nation-states.[149]

Beyond Pearson's artificial grouping of albinism in to pathological stocks, he also sought an exact and irrefutable empirical definition for albinism in humans. Pearson stressed that it is, 'practically impossible to test the *complete* absence of pigment from the eye without microscopic examinations of sections of the iris, choroid and retina.[150] This need for definite proof of albinism through close examination of the human eye was due to Pearson's outlook as an absolute positivist. He conceptualized science as a 'grammar' with the aim of describing the

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[148] There is a burgeoning literature on the history of scientific experimentation on humans and animals. For humans see: Andrew Goliszek, *In the Name of Science: a history of secret programs, medical research, and human experimentation*, New York: St. Martins Press (2003); Anita Guerrini, *Experimenting with Humans and Animals: from Galen to animal rights*, Baltimore, Md.: Johns Hopkins University Press (2003); Jordan Goodman, Anthony McElligot and Lara Marks (eds.), *Using Bodies: humans in the service of medical science in the twentieth century*, Baltimore; London: Johns Hopkins University Press (2003); Susan E. Lederer, *Subjected to Science: human experimentation in America before the Second World War*, Baltimore; London: Johns Hopkins University Press (1994); William Bynum, 'Reflections on the History of Human Experimentation', in Stuart F. Spicker, Ilai Alon, Andre de Vries, and H.T. Engelhardt, Jr. (eds.), *The Use of Human Beings in Research: with special reference to clinical trials*, Dordrecht: Kluwer Academic (1988), pp. 29-46; Laurence K. Altman, *Who Goes First: the story of self-experimentation in medicine*, Wellingborough: Equation (1988); Gert H. Brieger, 'Human Experimentation: history' in Warren T. Reich (ed.), *Encyclopaedia of Bioethics*, New York: Free Press (1978), pp. 684-692.

[149] For general surveys of disability and society see: David Turner and Kevin Stagg (eds.), *Social Histories of Disability and Deformity*, London: Routledge (2006); Henri-Jacques Stiker, *A History of Disability*, Ann Arbor: University of Michigan Press (1999), originally published as *Corps Infirmes et Sociétés*, Paris: Éditions Dunod (1997). For the body and modernity see: Ina Zweiniger-Bargielowska, *Managing the Body: beauty, health and fitness in Britain, 1880-1939*, Oxford: Oxford University Press (2010); Dalia Judovitz, *The Culture of the Body: genealogies of modernity*, Ann Arbor: University of Michigan Press (2000); Ian Burkitt, *Bodies of Thought: embodiment, identity and modernity*, London: SAGE (1999).

[150] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, Part 1, Cambridge: Cambridge University Press (1911), p. 3.

'routine of perceptions' that should not aspire to know anything beyond what was observable.[151] He believed that all knowledge could only be based on sense-impressions and thus to be totally sure pigment was not present he emphasized the centrality of 'microscopic examination' otherwise he could 'not be certain that the albinism, even for the eye alone, was complete'.[152] As shown below, Pearson was unable to obtain sufficient autopsy data on the eyes of humans with albinism so he decided to pursue an experimental breeding program with Pekinese dogs.

For researching heredity in humans, Pearson adopted a less exacting definition for 'practical purposes'. In his definition:

> A complete albino is for our present purposes one whose skin is of characteristic pallor or milky whiteness, whose hair is 'white', tinged possibly with yellow or straw, and whose eyes have pink or red pupils.

Pearson's description is surprisingly unscientific in its language, mirroring the early nineteenth-century descriptions of the first case studies of albinism published in France and Germany. Pearson's definition clearly rests on a highly subjective way of judging the symptoms of albinism, but ultimately for Pearson this visible test proves most effective in identifying 'this albinotic condition, which once seen is hardly again mistakable'.[153] To inherit albinism, and to be identified as an 'albino', was for Pearson a matter of empirical judgment that rested on analogy and comparison.

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[151] Karl Pearson, *The Grammar of Science*, London: .M. Dent and Sons (1937), p. 14.
[152] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, Part 1, Cambridge: Cambridge University Press (1911), p, 3.
[153] Pearson, Nettleship, Usher, *A Monograph on Albinism in Man*, Part 1 (1911), p. 7.

To support his epistemological basis for the inheritance and identification of albinism, Pearson collected and published scores of photographs of people with albinism. The photographs acted as visible evidence of albinism in humans for Pearson, though this notion of what constitutes evidence has been shown by historian John Tagg to shaped by its own distinct 'techniques and procedures'.[154] Pearson's endeavors to collect mirrored the efforts of late nineteenth-century scientists whom, according to historian Lorraine Daston:

> Enlisted polygraphs, photographs, and a host of other devices in a near fanatical effort to create atlases – the bibles of the observational sciences – documenting birds, fossils, human bodies, elementary particles and flowers in images that were certified free of human interference.[155]

Pearson's visual documentation of humans with albinism was similar to allied research in Anthropometry and ethnology, which at times used photography to reduce innumerable recorded data to simple human types.[156]

The photographs of people with albinism collected by Pearson accompanied the written text in a separate 'atlas', which when combined made up the first volume of the *Monograph* issued in 1911. The atlas of photographs was organized in two ways. First, it mapped out the borders of pathological whiteness by beginning with cases of 'leucoderma' and 'Piebalds and Spotlings', and finished with cases of 'albinos'. The second organizing principle sits below this primary level of pathological definition, and seems to place people with albinism within a hierarchy

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[154] John Tagg, *The Burden of Representation*, London: Macmillan (1988), p. 4.
[155] Lorraine Daston and Peter Galison, 'The Image of Objectivity', *Representations*, No. 40, Special Issue: Seeing Science, Autumn (1992), p. 81.
[156] Michel Frizot (ed.), *A New History of Photography*, Köln: Könemann (1998), p. 259.

of racial value. For instance, 'European Albinos' appear first and are then followed by 'Asiatic and Australasian Albinos', 'American Indian Albinos', and finally 'Negro Albinos'. The photographic collection ends with 'Albinism in Lower forms of life'. It is clearly not coincidence that 'Negro Albinos' are placed just above the section on animals, a trope of nineteenth-century racial hierarchies.

The images of each racial and national group with albinism identified by Pearson in the published *Monograph* presented the 'albino' subject within drastically differing circumstances. Historian and philosopher of photography Suren Lalvani emphasizes how the power to organize such images within strict boundaries of meaning re-orientates the chosen objects with 'a new luminous visibility'.[157] The photographs of people with albinism ranged from professional portraits and anatomical images. Just as with portraiture, where artists and sitters are what Ludmilla Jordanova calls 'collaborators' and 'co-conspirators', these photographs of people with albinism did not come from one individual or institutional source, and were doubtless mediated by the photographer and the photographed subject.[158]

Under 'European Albinos' Pearson also makes a gender distinction between women and men. The photographs of 'complete albinism in European women appear as posed portraits, and not as intrusive images of the body. In the first image, a well-dressed middle-aged lady is shown in the act of reading, and in the second image she stands posed with a book clasped between two hands (Fig. 6). The archived original of the photograph reveals her name is Mary Anderson, and she is

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[157] Suren Lalvani, *Photography, Vision and the Production of Modern Bodies*, Albany: State University of New York Press (1996), p. 87.
[158] Ludmilla Jordanova, *Defining Features: scientific and medical portraits, 1660-2000*, London: Reaktion (2000), p. 134.

Fig. 6: 'Complete Albinism in European Women', Karl Pearson et al, *A Monograph on Albinism in Man*, vol. 1 (1911), plate K.

shown with her sister though not with the obvious intention of direct comparison.[159] On the same plate, the lady below is similarly well attired, though the two photographs from different perspectives were clearly chosen to allow the gaze of the reader to linger on a front and side view of her face and hair.

The representation of 'complete albinism in European Men' analogously depicts three men in portrait images. In their suits and shirts they appear as respectable middle-class gentlemen (Fig. 7). Furthermore, the photographs depicting 'European children and parents' equally reveal well- dressed posed images that inadvertently emphasize the straining normality of those defined as 'albinos' (Fig 8). If placed out of the context of Pearson's monograph, the images could hardly be considered as photographs taken for medical or biometric purposes. Only in the case of the 'Norwegian Albinos' is the visual impairment of albinism highlighted by a young girl who is shown holding a book close to her face (See. Fig. 9). This is possibly an affected pose as the book appears to be held almost vertically, and the girl in the photograph does not seem to be actually reading it. Thus Pearson's archetypal images of albinism in Europeans reveal nothing in the way of an obvious 'pathological defect', nor do the images seek to uncover the bodies and thus the modesty of these Europeans with albinism. The findings here concur with Ludmilla Jordanova's argument in *Defining Features: scientific and medical portraits* (2000) that, 'there are multiple contexts and practices underlying any given portrait'.[160]

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[159] UCL: *Pearson Papers*: 204/3.
[160] Ludmilla Jordanova, *Defining Features: scientific and medical portraits, 1660-2000*, London: Reaktion (2000), p. 134.

Fig. 7: 'Complete Albinism in European Men' in Karl Pearson et al, *A Monograph on Albinism in Man*, vol. 1 (1911), plate L.

Fig. 8: 'European Children and Parents' in Karl Pearson et al., *A Monograph on Albinism in Man*, vol. 1 (1911) Plate M.

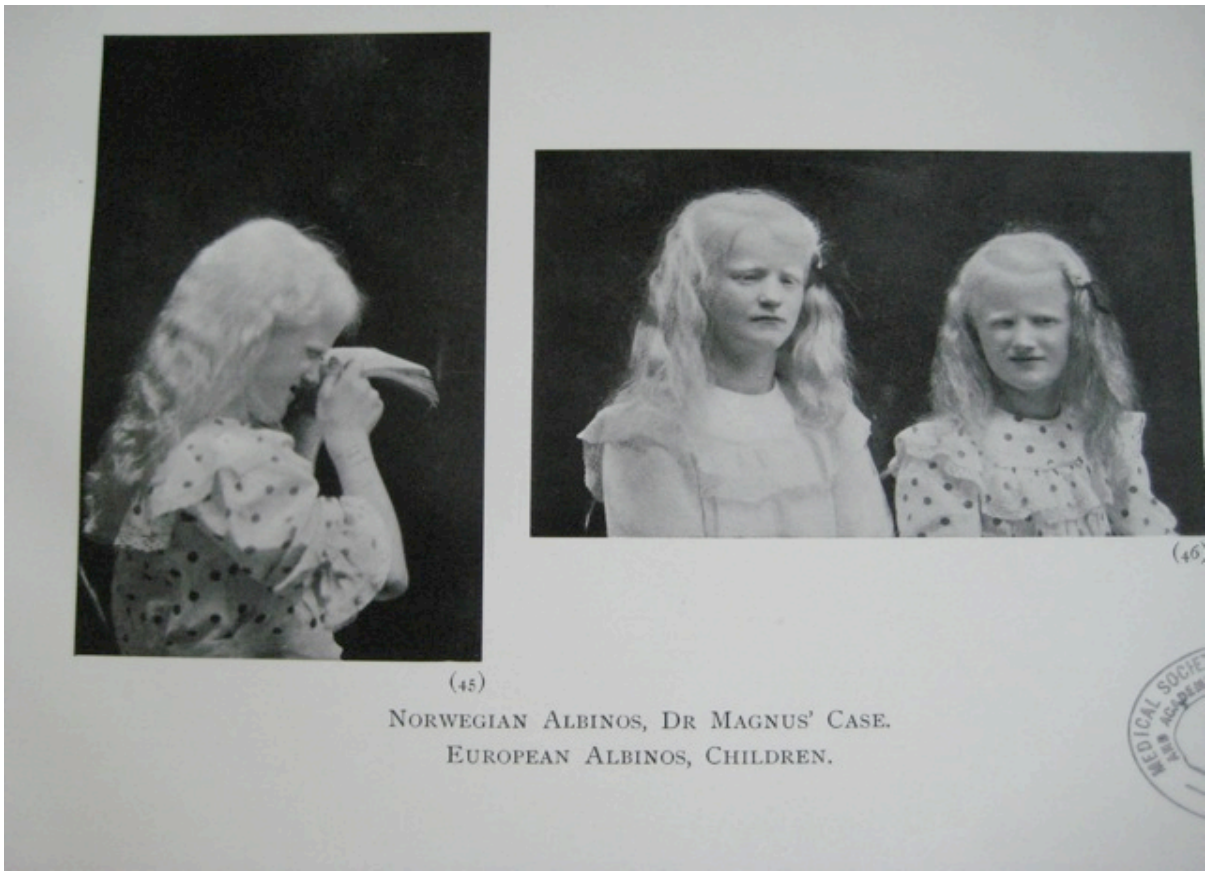

Fig. 9: 'Norwegian Albino', Karl Pearson et al, *A Monograph on Albinism in Man*, vol. 1 (1911), plate O.

In the case of 'Europeans with albinism' this diverse and layered interpretation allows the images to be lifted from Pearson's scientific context into a far more ambiguous sphere.

Amongst Pearson's papers at UCL there are many photographs of 'Europeans with albinism' that were not published. Pearson's criteria for selecting the 'right' subject with albinism for publication are unknown. However, it seems he may have elected to include photographs that best contrast the whiteness of albinism with a dark background. This is likely since Pearson's *Enquiry as to Albinism in Man: appeal for pedigrees* sent out to medical men and ophthalmologists in 1905 stipulated specific instructions for how photographs of people with albinism should be taken. It states that, 'the portrait should be taken in a strong light, and the background be dark'.[161] An example of an unpublished image is that of 'Helen' (See. Fig. 10). The whiteness in the image caused by the photographic conditions renders her features less distinct than the published photographs and could therefore have been reason enough for it not be included in the *Monograph*. This imbalance of colour is also present in an unused portrait of William Grieg. The background to Grieg's portrait was likely deemed by Pearson to be too light, and would therefore not provide an acceptably clear image of its subject (Fig. 11).

The shift from the domestic portraits of 'Europeans with albinism' to the more overly medical images in Pearson's 'Asiatic and Australasian' section is profound. The first two images in this section are of Singhalese brothers stood side by side.

[161] UCL, Pearson *Papers*: 204/2.

Fig. 10: 'Helen', *Pearson Papers*, UCL: 204/3.

Fig 11 'William Grieg', *Pearson Papers*, UCL: 204/3.

The photograph was submitted to Pearson by Sir Allen Perry, a colonial physician and ophthalmologist working as a medical officer and inspector general of hospitals on the island of Ceylon. Except for a loincloth, the two brothers are both photographed naked (Fig. 12). The image is meant to convey a visual representation of the normal and the pathologically white Singhalese body. Perry clearly followed Pearson's instructions that stated, 'in the case of dark races a normal native, when possible, should be placed alongside the Albino'.[162] The medical origin of this image is revealed in its desire to display an archetypical 'albino' in an artificially posed manner that reveals as much of the pathologically white body as possible.

This technique of elucidating the whiteness of albinism by placing it alongside normally pigmented individuals is also evident in many other cases in Pearson's photographic collection. Following the Singhalese brothers, there are two images of Malay and Tamil people with albinism standing alongside a 'normal' individual (See Fig. 13.). The Malay child with albinism in the image furthest to the left is placed on a chair to eliminate height from the equation of comparison. This adjustment is not required for the two 'Tamil Albinos' shown in the image on the far right. The 'normal' Tamil is photographed with his legs covered by trousers whilst the 'Albino' is wearing cloth around his midriff that leaves most of his body on display.

As the reader progresses through the collection of images, there begin to appear images of people with albinism who are entirely naked. A small child called Bodowa from Papua New Guinea is shown standing naked next to a 'normal'

[162] UCL: *Pearson Papers*: 204/2.

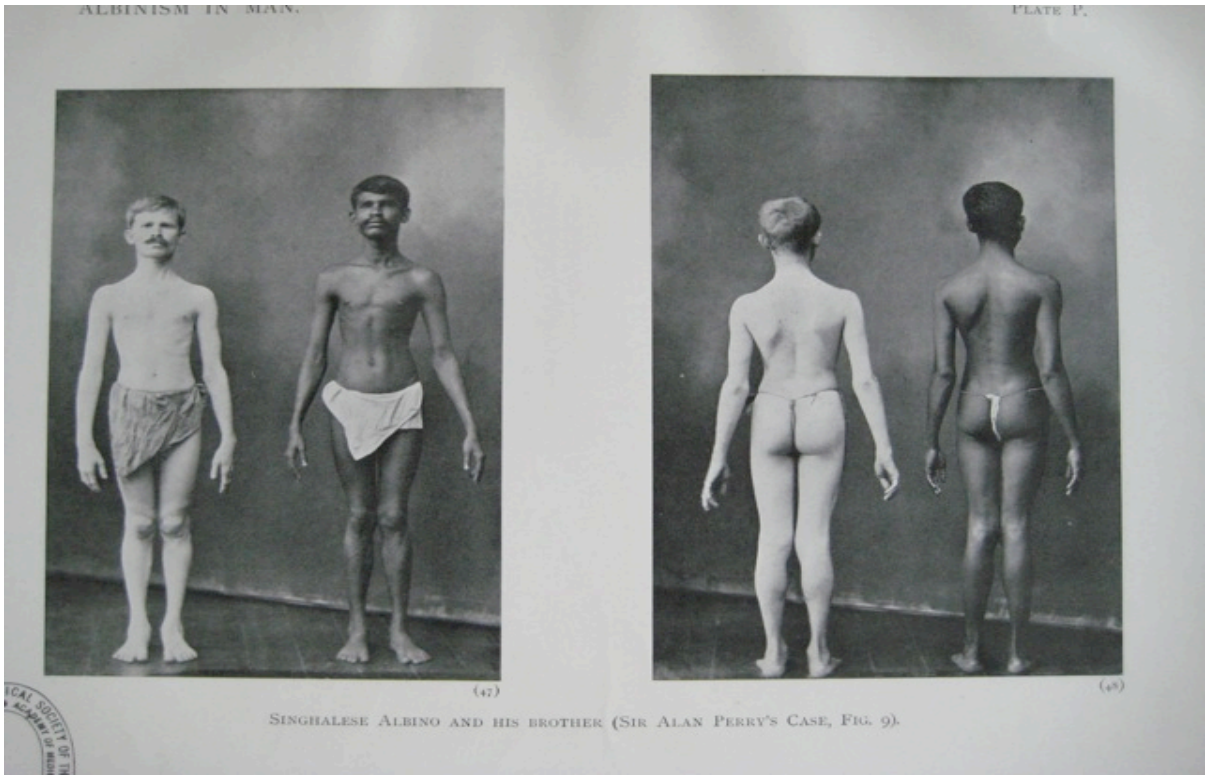

Fig. 12: 'Singhalese Albino and his brother' in Karl Pearson et al, *A Monograph on Albinism in Man*, vol. 1 (1911), plate P.

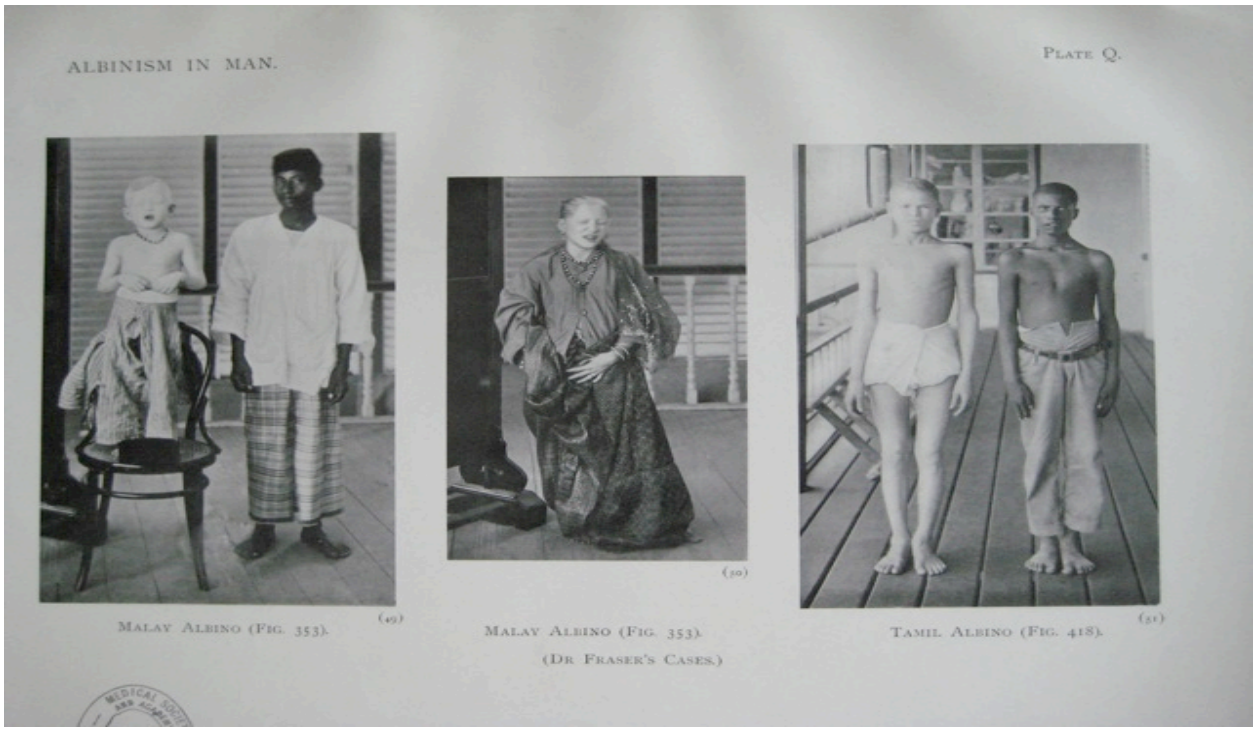

Fig. 13: 'Malay Albino' (left and centre) and 'Tamil Albino' (right)' in Pearson et al, *A Monograph on Albinism in Man*, vol. 1 (1911), Plate Q.

Papuan (See. Fig. 14). The background may have been chosen to accentuate and equate the exotic vegetation with the unusual whiteness of albinism. The very use of the child's name also suggests his identity is not required to be hidden as with the 'European Albinos'.

This tendency to show the naked 'albino' body is most prevalent in the section on 'negro albinos'. Dr. G.A. Turner, a medical officer in South Africa, sent Pearson two photographs of a man from the Shangoan people. The man was photographed in a way that expressed the triumph of colonial and medical power over the naked African body with albinism. It is unlikely he was aware of why he was being photographed, and, indeed, it is possible a level of coercion was required to obtain his consent. The two images hide nothing of the surface of his body (See Fig 15). The man is so far removed from the families and well-dressed European men and women from the first section to the extent that he is represented and reduced to an object for study. Indeed the unrestricted exploration of the colonial body here seems to be equivalent to the way animals were used in place of humans in European science. To photograph a naked European body was unacceptable, but to display a naked image of a colonial subject was clearly undertaken without hesitation.

Pearson's photographic collection of humans with albinism are allied to broader philosophical questions about the cultural implications of the photograph

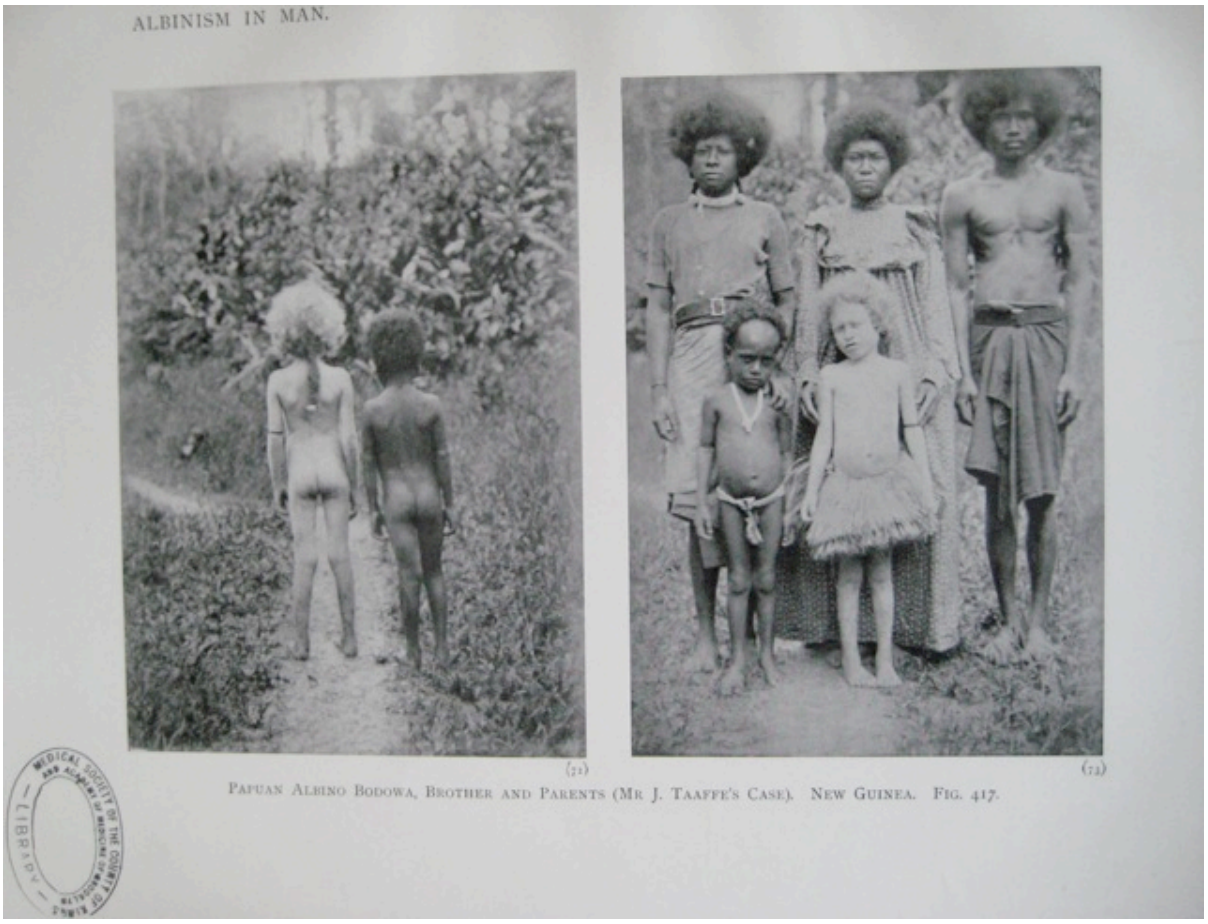

Fig. 14: 'Papuan Albino Bodowa' in Pearson et al, *A Monograph on Albinism in Man*, vol. 1 (1911), plate V.

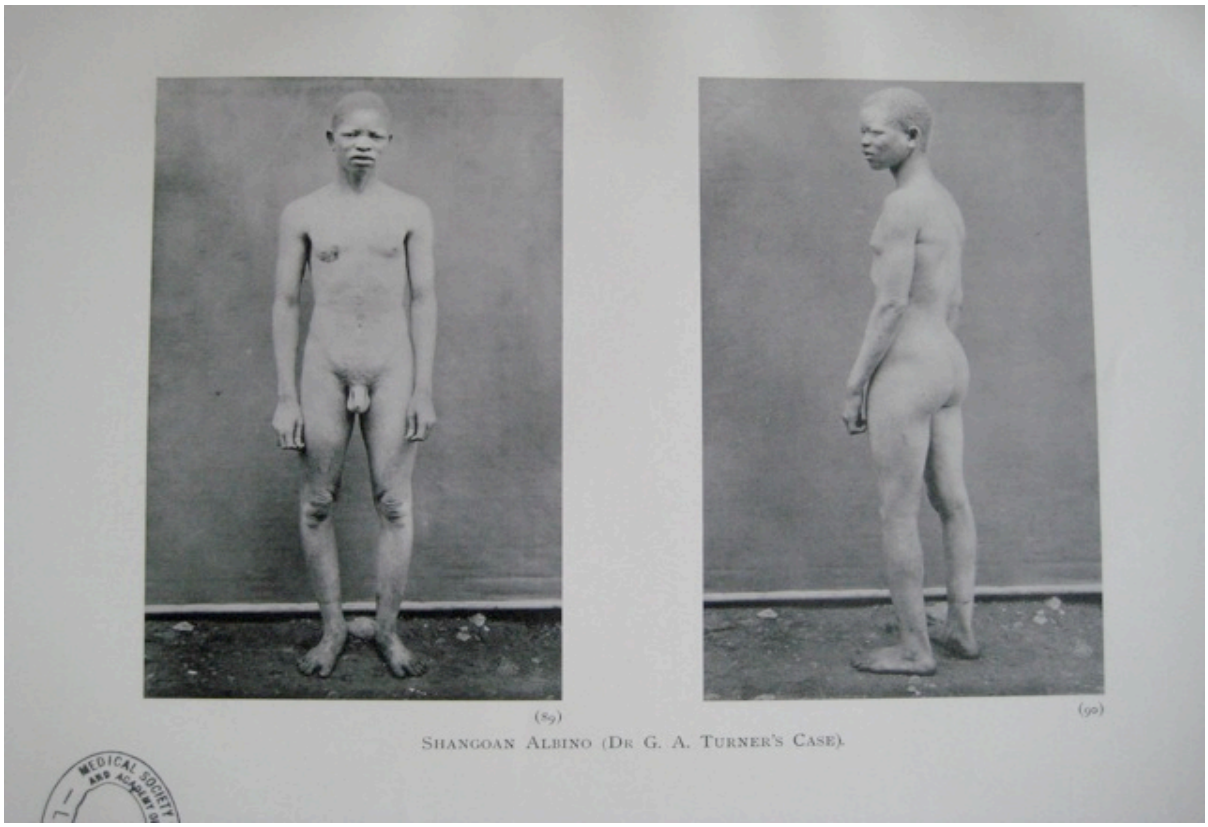

Fig 15: 'Shangoan Albino' in Pearson et al, *Monograph on Albinism in Man*, vol. 1 (1911), plate W.

raised by Roland Barthes.[163] Barthes reflections on photographs is translatable to Pearson's collection and are paramount to understand why this set of images can beconsidered as a space characterized by the relocation of pathological whiteness. In *Camera Lucida* (1980) Barthes wrote:

> What the photograph reproduces to infinity has occurred only once: the Photograph mechanically repeats what could never be repeated existentially.[164]

In this sense, Pearson's photographic representations of people with albinism is novel as it captures and collects such a vast global array of images that can be gazed upon for as long as the reader liked. Indeed, as historian of photography Liz Wells emphasizes:

> Once the image could be fixed it became an agent of disruption, changing the sense of space and time – of geography and history – people were able to view images of people and places otherwise unseen.[165]

For philosopher Vilem Flusser, the significance of such images is on the surface. He suggests that

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[163] Liz Wells (ed.), *The Photography Reader*, London: Routledge (2002), p. 4. For more on the philosophy and history of photography see: Michel Frizot (ed.), *A New History of Photography*, Köln: Könemann (1998); John Tagg, *The Burden of Representation*, London: Macmillan (1988).
[164] Roland Barthes, *Camera Lucida: reflections on photography*, London: Flamingo (1984).
[165] Liz Wells (ed.), *The Photography Reader*, London: Routledge (2002), p. 13.

> One can take them in at a single glance yet this remains superficial. If one wishes to deepen the significance, i.e. to reconstruct the abstracted dimensions, one has to allow one's gaze to wander over the surface feeling the way as one goes…They are supposed to be maps but they turn into screens: Instead of representing the world, they obscure it until human beings' lives finally become a function of the images they create.[166]

Moving on from Pearson's photographic collection, the second major area of his research into albinism and heredity was the collection of family pedigrees.

In Britain, Pearson tried to find subjects with albinism for his study at institutions and schools for the blind. He thought he might find people with albinism because of their impairment of vision. There was certainly no dedicated institution for people with albinism anywhere in the world. Thus in September 1908, Pearson sent letters and questionnaires to institutions, schools and asylums for the blind across Britain.[167] In the monograph he wrote:

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[166] Vilém Flusser, *Towards a Philosophy of Photography*, London: Reaktion Books (2000), pp. 8-10.
[167] Pearson wrote to at least fifteen institutions in England, Scotland, Ireland and Wales: Liverpool School for the Blind, Henshaw's Blind Asylum in Manchester, Yorkshire School for the Blind, The Hull Blind Institution, The Bradford Incorporated Institute for the Blind, Sheffield Institution for the Blind, The Institution for the Blind of Leicester, Linden Lodge School for the Blind in London, Royal Normal College and Academy of Music for the Blind, Hastings and St. Leonard's Registered Special School for the Blind, Mission for the Outdoor Blind of Glasgow and Western Scotland, The Royal Blind Asylum and School in Edinburgh, National Institution and Molyneux Asylum for the Female Blind of Ireland, St. Joseph's Asylum and School for Male Blind in Dublin, Swansea and South Wales Institution for the Blind. For a history of the education of blind and partially sighted people see: Gordon Ashton Phillips, *The Blind in British Society: charity, state and Community, 1780-1930*, Aldershot: Ashgate (2004).

> We have recently addressed inquiries to about thirty of the schools and institutions for the blind in the United Kingdom and have received information of about fifteen to twenty albinos who have been inmates during several years past or are so now. None of these have been blind; and by no means all appear to have had exceptionally bad sight as albinos; they seem to have been admitted generally speaking because the ordinary or 'sighted' schools were thought unsuitable for them.[168]

Pearson's search revealed few children with albinism even though the Elementary Education of the Blind and Deaf Act of 1893 in England stated that children are blind by law if they are unable to read 'ordinary books of sighted schools'.[169] A notable exception was Arthur Cooper Radford, a seventeen-year-old with albinism from New Brinsley, Nottingham. Radford went to the Midland Institution for the Blind.[170] He had two brothers and three sisters, his parents were unrelated, and he had no record of illnesses or diseases.[171] He clearly did not meet any of Pearson's expectations for the causes and symptoms of albinism.

In addition to institutions for the blind, Pearson persuaded the biochemist and psychologist Dr. Frederick Walker Mott (1853-1926) to search the asylums of the London County Council for any individuals with albinism.[172] Dr. Mott revealed

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[168] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, Part 2, Cambridge: Cambridge University Press (1913), p. 295.
[169] Pearson's letters to these institutions are likely lost. Scotland introduced the 1889 Education for Blind and Deaf-Mute Children Act that allowed free education in approved institutions.
[170] UCL: *Pearson Papers*: 205/25. The Sheffield Institution for the Blind has a list of pupils which includes Emily Kent from Leicester who was three years old in 1905. There is no other information given about her life.
[171] UCL: *Pearson Papers*: 205/25.
[172] Frederick Walker Mott was a member of the Eugenics Education Society and addressed the subject directly. See: F.W. Mott, *Heredity and Eugenics in Relation to Insanity*, London: Eugenics Education Society (c. 1912).

there was, 'one albino among many thousand imbecile and insane'.[173] Pearson was unsure if impaired physical and mental ability was directly related to a lack of pigmentation. In 1910, Pearson published a 'Note on Internal Albinism' in the eugenics journal *Biometrika*, which explored the possibility that, 'senile imbecility might be associated with diminishing internal pigment in certain brain centers'.[174] Pearson summarized the findings of the research from the monograph in his article by claiming that:

> When examining albinotic stocks there appears, partly in the albinotic and partly in the non-albinotic members to be an excessive proportion of imbecility, idiocy and deaf-mutism.[175]

Yet, in Mott's summary of his findings he contradicts Pearson's general claim and emphasizes that 'this data does not justify any sweeping comparisons, either mentally or physically about the link between albinism and cretinism'.[176] Thus Pearson seems to be ignoring the facts in order not to discount his underlying assumption that an absence of pigmentation in people with albinism must, at least to some extent, be also linked to other debilitating physical and mental conditions.

The information Pearson was searching for to generate enough material to form a generalized theory of heredity in man was detailed in the request form he sent to medical practitioners and ophthalmologists that included the instructions for

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[173] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, Part 1, Cambridge: Cambridge University Press (1911) p. 176.
[174] Karl Pearson, 'Note on Internal Albinism', *Biometrika*, No. 7, Vol. 3 (1910), p. 246.
[175] Pearson, 'Note on Internal Albinism' (1910), p. 246.
[176]Pearson, Nettleship, Usher, *A Monograph on Albinism in Man*, Part 1 (1911), p. 176.

the photographs entitled 'Enquiry as to Albinism in Man'.[177] Pearson requested 'pedigrees of families where one or more cases of albinism has occurred'.[178] Pearson did not seek individual cases of albinism, as he needed highly detailed and accurate multi-generational family histories in order to uncover patterns of heredity from a large body of data using statistical or biometric analysis. In this regard, Pearson requested that:

> The more extensive such pedigrees can be made the better, because albinism in man seldom passes from parent to child, but is often found in lateral kinsfolk and ancestors'; one, two or more intervening generations having apparently escaped.

Thus Pearson had a working hypothesis that albinism was more likely to occur through consanguineous relationships, an idea prevalent in studies of albinism from the 1850s in Europe.

Indeed, Pearson emphasized that, 'the influence of cousin marriages is a point of great importance, which should be carefully followed up'.[179] His also seems to adopt the Ancestral theory of heredity first developed by Galton where contributions to offspring occur from parents, grandparents, and great-grandparents. Along with a theory of consanguinity and Ancestral Heredity, Pearson also hoped to prove the existence of families who belong to a separate 'stock' where the relative absence of pigmentation is a constant presence. He wrote that, 'All information is important that bears on the question whether albinism is, or

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[177] UCL: *Pearson Papers*: 204/2.
[178] UCL: *Pearson Papers*: 204/2.
[179] UCL: *Pearson Papers*: 204/2.

not, the expression of a long continued prevalence of scanty pigmentation in a particular stock'.[180] In this sense, once albinism occurs, it can only lead to further accumulation in families if relationships are formed with closely related individuals.

The response Pearson received from the many ophthalmological surgeons, medical men and lay workers was sufficient to allow for the reconstruction of over 650 family genealogies.[181] The family pedigrees were published in a separate volume in Part 4 of the *Monograph* issued in 1913 (Fig. 16). The description of these family pedigrees was also placed in a separate volume. The black circular marks represent cases of 'complete albinism' while the half white half black circles represent 'partial albinism'. For instance the first pedigree, labeled by Pearson as Fig. 1 shows a case of 'three albinos' in the fifth, sixth and eighth generation of an unnamed family. The first 'albino', 'no. 6' in the fourth generation, is revealed in the accompanying notes to be a 'single women aged 32'.[182] There then follows a detailed description of her physical appearance. According to Stanford Morton, the physician who examined the unnamed women at Moorfields Ophthalmic Hospital, he recorded, 'hair of head fine, moderately abundant, bright yellowish red; eyelashes almost and eyebrows quite white, hair of…pubes said to be like head'.[183]

Morton then moved on to an ophthalmic examination where he reports, 'eyes fully albinotic, irides being very translucent where thin, the thicker parts almost white; marked nystagmus; refraction H. 4 to 5 D., V corrected, 4 over 60 and reads

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[180] UCL: *Pearson Papers*: 204/2.
[181] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, part 4, Cambridge: Cambridge University Press (1913), p. ix.
[182] Pearson et al, *A Monograph on Albinism in Man*, part 4 (1913), p. 1.
[183] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, part 4, Cambridge: Cambridge University Press (1913), p. 1.

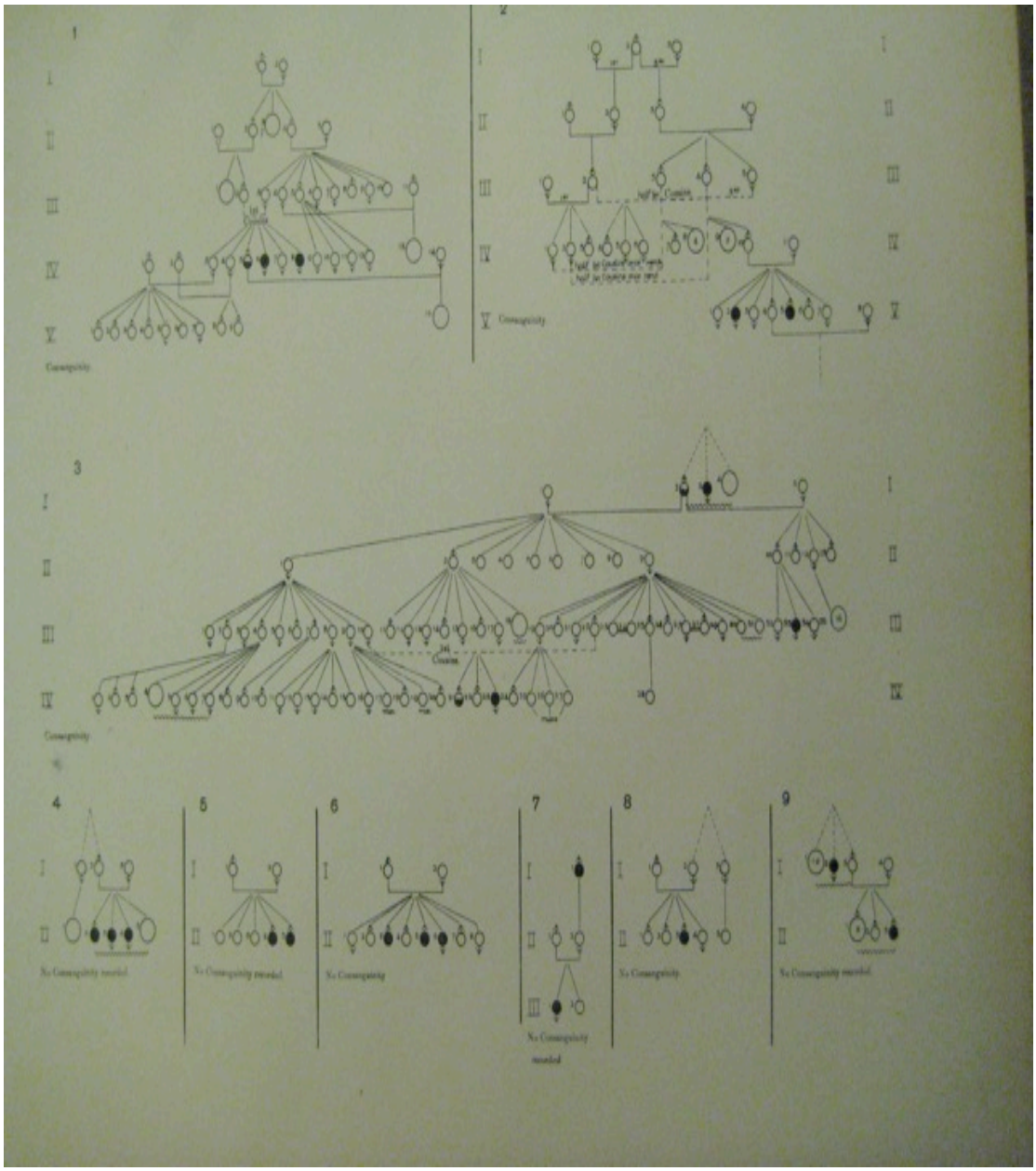

Fig. 16: Nine pedigree plates of families with a history of albinism in Pearson et al, *A Monograph on Albinism in Man*, vol. 4 (1913), plate 1.

12J'. Finally, Morton adds that in terms of mental capacity he concluded her 'intelligence good' (See Fig. 18).[184] Pearson did not just organize the collection of information on the family histories of people with albinism. He also collected physical evidence from individuals with albinism. This evidence came in the form of hair samples. The hair is still present in the original envelopes at the Pearson archive at UCL. Pearson used the hair to draw comparisons with normally pigmented hair (see Fig. 17). He also reconstructed a pedigree of a family by representing each member by a hair sample from each individual (See Fig. 18).

Pearson turned his attention to animals with albinism because human evidence was difficult to obtain. According to Pearson, 'during our five or six years work on this subject we have learnt how difficult it is to obtain material bearing on albinism of the eye and internal organs in man'.[185] The Pekinese dogs with albinism were obtained by Nettleship in the summer of 1908 after speaking to Rayner Batten, Surgeon to the Western Ophthalmic Hospital.[186]Born in November 1907, the two dogs, Jack and Jill, were brother and sister. Nettleship also acquired a third female dog with albinism named Tong I. Jill and Tong I were bred with Jack and their offspring. Pearson and Nettleship bred some sixty puppies that were 'all albinos'.[187] Whilst alive, the dogs were subjected to detailed examination. In terms of eyesight he argued, 'the albinos do not see as well as other dogs and show more or less dislike of bright light'.[188]

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[184] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, part 4 Cambridge: Cambridge University Press (1913), p. 1.
[185]Pearson, Nettleship, Usher, *A Monograph on Albinism in Man*, Part 2, (1913), p. v.
[186]Pearson et al, *A Monograph on Albinism in Man*, Part 2 (1913), p. 461.
[187] Pearson et al, part 2 (1913), p. 462.
[188] Pearson et al, Part 2 (1913), p. 467.

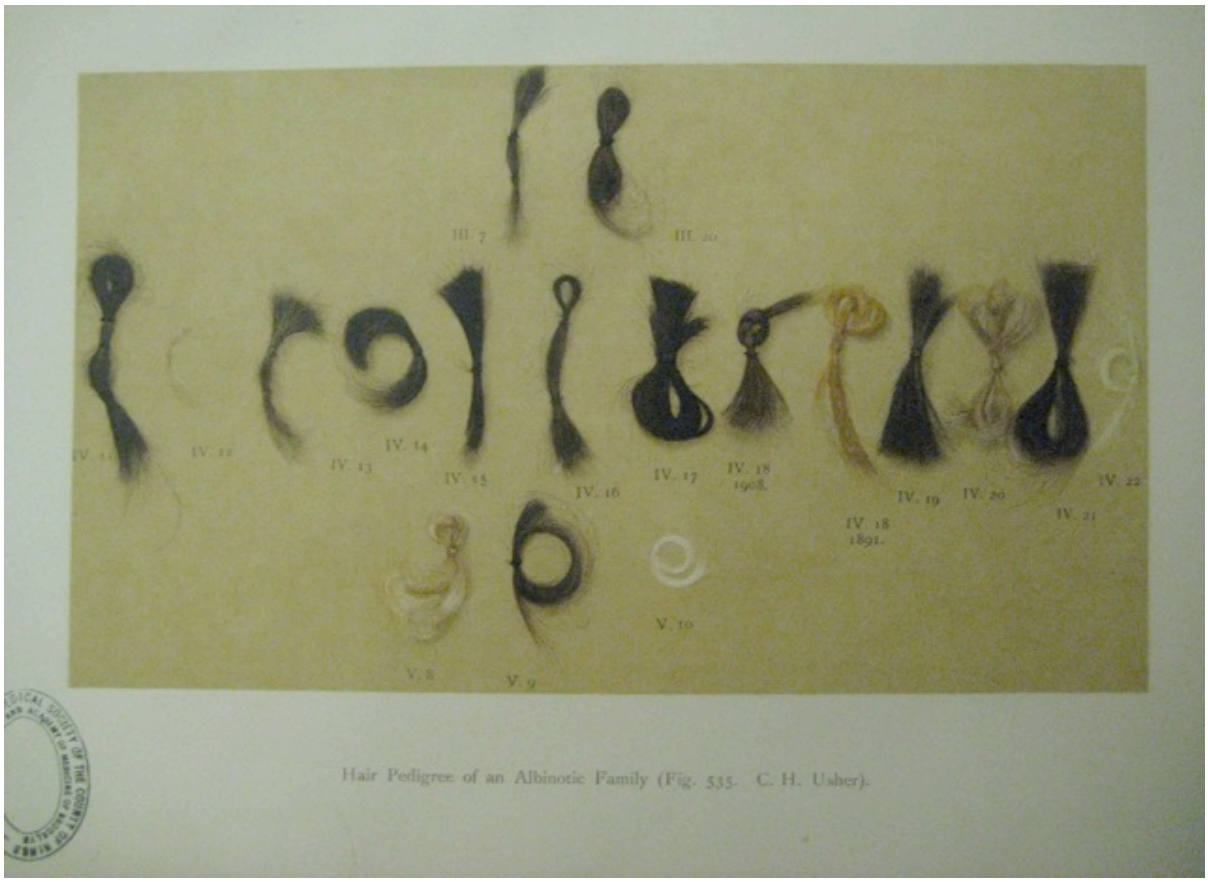

Fig. 17: Hair Pedigree of an 'Albinotic Family' in Pearson et al, *A Monograph on Albinism in Man*, vol. 2 (1913), Plate Ø.

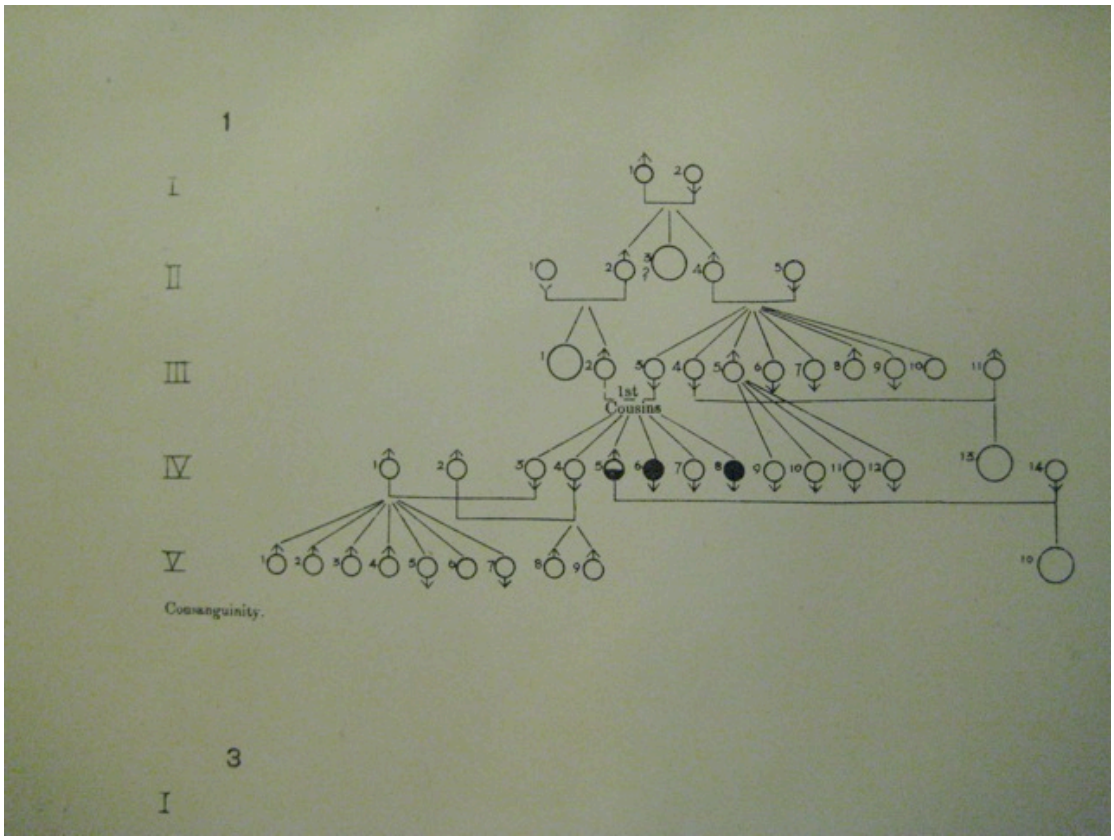

Fig 18: Pedigree plate labelled by Pearson as 'Fig. 1' of one family with a history of albinism in Pearson et al, *A Monograph on Albinism in Man*, vol. 4 (1913), plate 1.

Pearson also hypothesized albinism in dogs may result in a shorter lifespan. However he made it clear that, 'we have not yet had long enough experience to know the average term of life of the albinos'. He also followed up previous enquiries linking albinism in certain animals with deafness but found that in the dogs the 'other senses seem to be perfect, and none of them have been known to be deaf'.[189]Once deceased, many of the dogs bred by Pearson and Nettleship were sent for autopsy. Pigmentation levels in skin, hair, eyes, and internal organs were all of interest to Pearson. For instance, in the case of Tong I, 'the skin, hair and internal organs…have been found by Dr. Low of Aberdeen to contain no granular pigment' (Fig. 19).

The detail and complexity of Pearson's published research into albinism is unquestionably bewildering. Pearson's massive store of data was meant primarily as a rhetorical weapon to neutralise the challenge from Bateson and the Mendelians on the subject of how albinism was inherited. When taken together, the photographs, the human pedigrees, the hair samples and the experimental dog experiments provide a raw database for albinism and associated pigmentary disturbances. However, Pearson's repository of facts about albinism was disjointed, issued as it was in three separate parts with multiple atlases.

What Pearson and his team at the Department of Applied Mathematics did achieve, however, was an unprecedented spread of knowledge about albinism within the medical and ophthalmic community. Pearson made people with albinism undoubtedly more visible within his own chosen framework of physical and mental

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[189] Karl Pearson, Edward Nettleship, Charles Usher, *A Monograph on Albinism in Man*, part 4 Cambridge: Cambridge University Press (1913), p. 467.

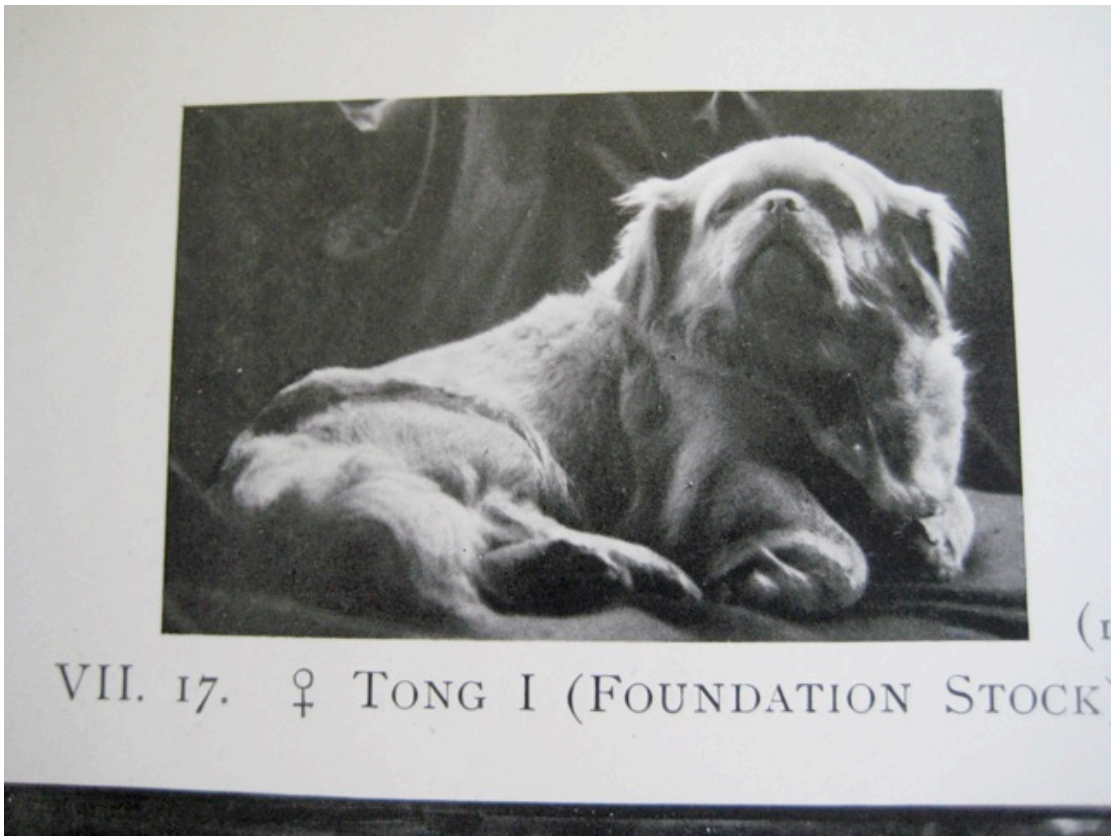

Fig. 19: 'Tong I (foundation stock)' in Pearson et al, *A Monograph on Albinism in Man*, vol. 2 (1913) plate v.

reference points. Pearson may not have personally conducted experiments on humans with albinism, but his research project was responsible for enacting hundreds if not thousands of medical examinations of the bodies and the eyes of people with albinism.

Pearson's biometric and eugenic research into albinism did not go unnoticed in the eugenics movement across the Atlantic. In the United States, the eugenicist Charles B. Davenport began experimental research into albinism and heredity in 1908.[190] Davenport had already crossed paths with Pearson. They had a public disagreement in the British journal *Biometrika* about Mendelism and biometry, the two major competing heredity theories during this period.[191] Davenport believed albinism was inherited through a simplified form of Mendelism (See. Fig. 20). He did, however, never formally reject biometry as a way of interpreting heredity and evolution.[192]

Davenport investigated Mendelian heredity in humans with albinism in the population of New York. Whereas Pearson sought knowledge of cases of albinism from physicians, colonial doctors and other medical professionals, Davenport pursued people with albinism directly. Davenport had substantial funding and support as the head of two institutions dedicated to research into eugenics. In 1904, Davenport became director at the Station for Experimental Evolution. He then took

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[190] Charles B. Davenport, 'Degeneration, Albinism and Inbreeding', *Science*, vol. 28, No. 718, October 2 (1908), pp. 454-455; Charles B. Davenport and Gertrude Davenport, 'Heredity of Skin Pigmentation in Man', *The American Naturlist*, vol. 44, No. 527, November (1910), pp. 641-682; 'Heredity of Albinism', *Journal of Heredity*, vol. 7, no. 5 (1916).
[191] Jan A. Witkowski and John R. Inglis (eds.), *Davenport's Dream: twenty-first century reflections on heredity and eugenics*, Cold Spring Harbor, New York: Cold Spring Harbor University Press (2008), p. 40.
[192] Daniel J. Kevles, *In the Name of Eugenics: genetics and the uses of human heredity*, California: University of California Press (1986), p. 45.

up in 1910 the lead role at the Eugenics Record Office. Harry H. Laughlin assisted Davenport (1880-1940) in the Eugenics Records Office based in the Cold Spring Harbor Laboratory.[193]

Davenport argued that breeding experiments on animals had already proven albinism was a recessive trait. He was convinced it followed Mendel's laws of heredity. Animals with albinism were readily available for breeding experiments during the first two decades of the twentieth century. Therefore, Davenport had to construct his evidence from the chance interactions of people with albinism in society. Through coercion and compensation, people with albinism became redefined in the conceptual field of experimental breeding first established by Mendelian research into animals with albinism.

Yet, in humans at least, Davenport realised the absence of breeding experiments with men and women meant it was difficult to fully support Mendelism in Man. For instance, Davenport wrote:

> That albinism in man follows the same law is a priori probable but it is obviously difficult to secure cases for what is the best test of recessiveness, viz., the exclusively albinic progeny of two albinic parents.

Davenport thus required experimental proof to overcome this difficulty in 'testing recessiveness'. He realised the 'exclusively albinic progeny of two albinic parents'

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[193] A critical historiography for Cold Spring Harbor Laboratory is surprisingly under-developed. For an institutionally supported history of Cold Spring Harbor Laboratory see: Jan A. Witkowski and John R. Inglis (eds.), *Davenport's Dream: twenty first century reflections on heredity and eugenics*, Cold Spring Harbor, New York: Cold Spring Harbor University Press (2008); Elizabeth L. Watson, *Houses for Science: a pictorial history of Cold Spring Harbor Laboratory*, Plainview, N.Y.: Cold Spring Harbor Laboratory Press (1991).

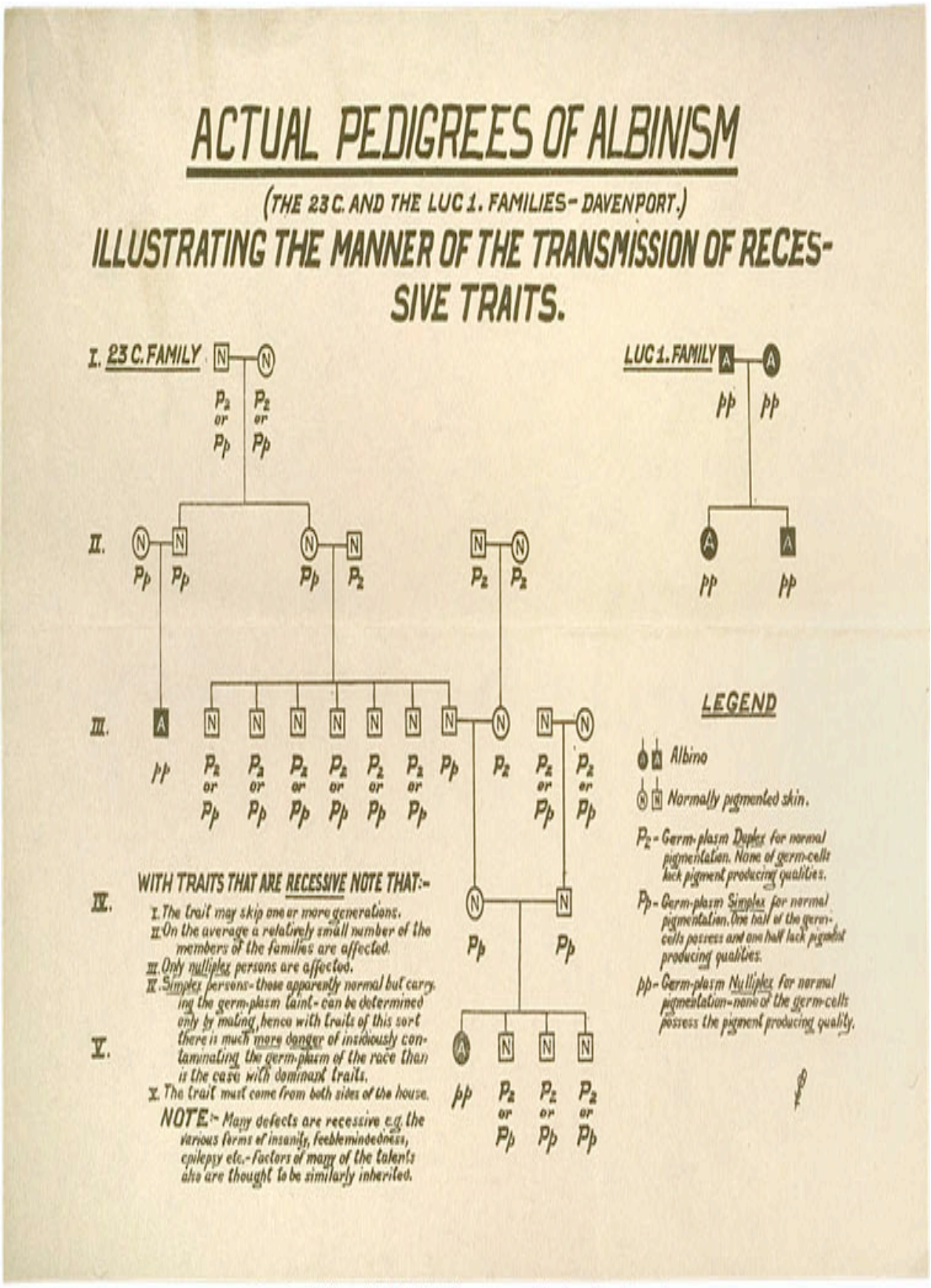

Fig 20: Charles B. Davenport, 'Actual Pedigrees of Albinism', *American Philosophical Society Eugenics Archive* (ca. 1923).

offered the chance to observe and experiment outside any institution or laboratory. To find two parents with albinism who had children would deliver decisive evidence that albinism was recessive if Davenport could secure such a case.

From 1908, as part of his research into albinism in humans, Davenport found the 'albinic' parents he had been searching for during the last few years of his work. He engaged the services of Robert Roy, born in New York in 1865[194] (Fig. 21). Roy was a circus performer with albinism living in New York at 341 West 24th Street.[195] In 1880, Robert Roy married his wife – a fellow performer with albinism – Annie L.W. Annie was born in Pennsylvania (Fig. 22).[196] Robert and Annie had a son with albinism called King Charles Roy. King Charles was born with albinism in Pennsylvania.[197]

Robert Roy collected information about people with albinism for Davenport as part of Davenport's research into the heredity of albinism. Roy received payments of two dollars for providing Davenport with 'blanks' of several people he knew with albinism.[198] The 'blanks' were simply forms used by Davenport to collect specific information about the names, addresses and other family members of people with albinism for the construction of pedigrees. Along with the Roy's own pedigree, he provided Davenport with details of the 'Luc. Family' (Lucasie). Davenport included

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[194] Charles B. Davenport, 'Heredity of Albinism', *Journal of Heredity*, vol. 7, no. 5 (1916), p. 221.
[195] *American Philosophical Society Eugenics Archive*, No. 878, Letter: 'Charles Davenport Response to Robert Roy about Albinism' (1908).
[196] Davenport, 'Heredity of Albinism' (1916), p. 221.
[197] Davenport, p. 221.
[198] *American Philosophical Society Eugenics Archive*, No. 878, Letter: 'Charles Davenport Response to Robert Roy about Albinism' (1908).

ROBERT ROY (FIG. 14)

Fig. 21: 'Robert Roy', father of King Charles Roy in Charles B. Davenport, 'Heredity of Albinism', *Journal of Heredity*, vol. 7, no. 5 (1916), p. 221.

MRS. ROBERT ROY (Fig. 15)

Fig. 22: 'Annie L. W. Roy' in Charles B. Davenport, 'Heredity of Albinism', *Journal of Heredity*, vol. 7, no. 5 (1916), p. 222.

the cases as part of an article in the *American Naturalist* on the 'Heredity of Skin Pigmentation in Man'.[199]

Robert Roy and his family are effectively experimental human subjects in Davenport's research. Their role in Davenport's heredity and eugenics work is active and negotiated. In addition for being rewarded for providing information about people with albinism, Robert Roy and his family agreed for full names and their own photographs to be used in exchange for further remuneration.

As Roy was a performer – clearly aware of the power of curiosity – he emphasised to Davenport that the case of a child with albinism born to parents with albinism was unprecedented. In a letter to Davenport in 1916 Roy wrote:

> But do not forget to mention in your book that King Charles Roy is the first and only Albino child born in the United States of Albino Parents, as we have no record of any other.[200]

Robert Roy included a photographic portrait of King Charles, which exaggerated the national importance of this apparently unprecedented birth of his son, King Charles (Fig 23). The photograph depicts King Charles looking composed and defiant in front of a painted backdrop of the Stars and Stripes of the United States fluttering in the wind in the background. Davenport sent Roy a cheque in compensation for

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[199] Charles Davenport and Gertrude Davenport, 'Heredity of Skin Pigmentation in Man', *The American Naturlist*, vol. 44, No. 527, November (1910), pp. 641-682.
[200] *American Philosophical Society Eugenics Archive*, No. 875, Letter: 'Rob Roy Letter to Charles Davenport' (1916).

THEIR SON, K. C. ROY (Fig. 16)

Fig. 23: 'King Charles Roy' in Charles B. Davenport, 'Heredity of Albinism', *Journal of Heredity*, vol. 7, no. 5 (1916), p. 223.

using their names and photographs in what Roy thought would be part of a 'book'.[201] No book was ever written on the subject. The case of Robert Roy and his son with albinism appeared in a short article in the *Journal of Heredity* entitled 'albinism in heredity' in 1916.[202]

Conclusion

From the second half of the nineteenth century, extensive medical research into individual and family cases of albinism across Europe and the United States provoked mid-century speculation about the heredity of disease among medical practitioners and biologists. Some, like Lucas and Darwin, investigated the inheritance of albinism in a largely disinterested effort to understand the mechanisms governing the hereditary transmission of physical traits. However, Morel, Sedgwick, and other heredity theorists, connected the congenital nature of albinism to a more general social malaise, a symptom of degeneration, a mark of biological inferiority. The few experiments on animals with albinism conducted to test these nineteenth-century theories of heredity did not obtain attention from the scientific community.

By the turn of the twentieth century, albinism emerged as far more than simply an interesting intellectual conundrum. It offered a practical way for a range of scientists to explore the central questions of the age about heredity, disease and biological value in society. As experimental subject, animals with albinism provided

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[201] *American Philosophical Society Eugenics Archive*, No. 875, Letter: 'Rob Roy Letter to Charles Davenport' (1916).
[202] Charles Davenport, 'Heredity of Albinism', *Journal of Heredity*, vol. 7, no. 5 (1916), pp. 221-223; Charles Davenport and Gertrude Davenport, 'Heredity of Skin Pigmentation in Man', vol. 44, No. 527, November (1910), pp. 641-682.

an ideal tool for biologists to test theories of heredity. Widespread experimentation by individuals and institutions on albino animals helped solve many questions about the mechanisms of heredity proposed in Mendel's research. Albinism significantly contributed to the foundation of Mendelism and genetics.

However, the translation of biologists' results of breeding albino animals to understanding the heredity of albinism in humans proved controversial and contested. In clashes with Bateson about the viability of Mendelism as a theory to describe heredity, Pearson used the unsolved example of albinism in Man. To support his own biometric method and ancestral theory of heredity, Pearson pursued highly ambitious statistical research for his own professional advancement and to further his eugenic ideas. Drawing on the genealogical approach of Edouard Cornaz and Joseph Jones in the nineteenth century, Pearson assembled family pedigrees and a wealth of photographic evidence in an attempt to uncover an irrefutable pattern of inheritance. Albinism was an ideal condition for Pearson, as its visible physical differences, its pathological whiteness, could be deployed as an effective way of communicating his scientific and ideological message. However, the impossibility of using humans as experimental subjects in breeding experiments led Pearson to increasingly turn to animals for his research. Pearson failed to prove how albinism was inherited in Man, and he never published his conclusions to accompany the largest database of people with albinism ever created. The question remains, however, how did these powerful medicalising and pathologising discourses play out in the lives of people with albinism?

Chapter Four

'I am an Albino': Social identity, Self-Representation and Subjectivity in the Writing of People with Albinism, 1812-1909

> There is not the slightest doubt as to my being a pure albino, as I possess the main characteristics named by you, in addition to which I have been told so time and again by medical men.[1]
>
> James Thompson's letter to Karl Pearson, *Pearson Papers*, c. March (1909).

Throughout March 1909, James A. Thompson (1877-1929) – a thirty two year old colliery clerk based in Barnsley – wrote four typed letters about being an 'albino' to Professor Karl Pearson at the Department of Applied Mathematics at University College, London.[2] Pearson received this correspondence from Thompson while collecting statistical surveys, family genealogies, and photographs of people with albinism for his biometric research.[3] Thompson wrote to Pearson in part because the 'medical men' in South Yorkshire offered him a diagnosis, but could give him little advice about how best to deal with 'albinism' and 'short-sight'.[4] By contacting Pearson, Thompson hoped to, 'get in touch with other albinos and form a kind of society for mutual aid and encouragement…(as he) had never met anyone similarly

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[1] UCL: *Pearson Papers*: 205/61, J.A. Thompson: 1st Letter, c. March 11 (1909).
[2] Pearson's series of lectures at the Royal Institution and articles in the national press initially caught Thompson's attention. Pearson made identical comments to those made in the *Daily Mail* (January, 1909) about albinism in two addresses given to the Royal Institution on Tuesday, January 19 and Tuesday, January 26. Though Thompson refers to these addresses made by Pearson, they have not been published, since the RI did not preserve public lectures at this time. It is possible that Thompson read both the *Daily Mail* article and the reprint of the lectures in *Graphic* (January, 1909) referred to by Francis Galton in a letter to Pearson. See link, accessed on 14/10/2011: http://galton.org/cgi-bin/searchImages/search/pearson/vol3a/pages/vol3a_0426.htm
[3] See chapter three. Pearson's responses to Thompson are lost.
[4] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 1st Letter, c. March 11 (1909).

placed' with whom he could 'compare notes'.[5] Thompson sought knowledge and experience about albinism that was beyond the bounds of contemporary medicine and ophthalmology.[6] Neither blind nor fully sighted, Thompson resided in a hinterland of uncertainty. He daily experienced an internal struggle for self-worth, a 'certain reticence' over what he called his 'handicap', and he often wondered, 'how much my albinism has to answer for'.[7] His letters to Pearson are in a sense a pragmatic search for advice and aid, but they also communicate Thompson's desire for concrete validation from Pearson's position of expertise on albinism. That aside, the fact that Thompson's letters exist at all is deeply ironic. Thompson's thoughts and experiences – his written self – would never have emerged for historical scrutiny without the publicity surrounding Pearson's research into biometrics, which highlighted the allegedly damaging effects of albinism through 'national deterioration'.[8]

Thompson's articulation of his 'handicap' is one of four sources written by people with albinism analyzed in this chapter. It charts the rise of albinism and the albino as social identity, self-representation and subjectivity in the autobiographical writing of people with albinism throughout the nineteenth and early twentieth century. This chapter addresses several questions fundamental to understanding the whole of this thesis. The answers, if accepted in principal, remain open and plural. The aim is to ascertain what life was like as a recognized albino within particular

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[5] UCL: *Pearson* Papers: 205/61, J.A. Thompson, 1st Letter, c. March 11 (1909).
[6] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 1st Letter, c. March 11 (1909).
[7] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 3rd Letter, c. March 21 (1909).
[8] Pearson's research into albinism was part of a wider series entitled 'Statistical Studies into National Deterioration'. See Chapter three for Pearson, albinism, and the British eugenics movement.

social circumstances, and to comprehend how far social identity, especially medical knowledge, shaped subjectivity or lived experience.

This chapter is divided into three sections. The first section investigates the interaction between the diagnoses of albinism and social identity through the relationship between subjectivity, identity and the concept of camouflage in life writing. It then focuses on two individuals who accepted their albinism primarily in medical terms. The first source is Georg Tobias Ludwig Sach's (1786-1814) medical dissertation, published in 1812 as part of his medical degree at the University of Erlangen, Germany.[9] This dissertation involved a physiological self-examination of Sachs and his sister. The second source is Thompson's letters to Karl Pearson. Thompson's self-identity as an 'albino', and his desire to court the expertise of medicine, are sentiments that appear throughout his correspondence with Pearson.

The third section concentrates on two individuals who at times purposefully camouflaged their 'albino' identities with the aim of removing association with medical diagnosis. The first source is the unpublished diaries and unfinished autobiography of William Archibald Spooner (1844-1930), an Oxford don. The second is Robert Lowe's autobiography. In his life, Lowe was a classics scholar, university tutor, barrister, statesmen, journalist for *The Times*, and Chancellor of the Exchequer under William Gladstone. This life writing involved an inclination to 'revise or even reinvent personal narratives' in order to camouflage from view

[9] Georg Tobias Ludwig Sachs, *Historiae naturalis duorum leucaetiopum: Auctoris ipsius et sororis eius*, Erlangen (1812). Julius Heinrich Gottlieb Schlegel translated Sach's Latin dissertation in 1824. See: Julius Heinrich Gottlieb Schlegel, *Ein Beitrag zur nähern Kenntniß der Albinos* (A Contribution to a Deeper Understanding of Albinos), Meiningen: Keyssner (1824).

associations with diminished ability.[10] The chapter ends with a conclusion drawing out a number of themes, which unite each individual example of autobiography under analysis.

The central contention of this chapter is that 'albinism' and the 'albino' are mutable social identities, which, to an extent, are shaped and are reshaped by the subjective responses and experiences of individuals born with 'albinism'. The 'albino' part of the self, like the self as a whole, is not a fixed entity, however. Existentially it is always already in a state of 'non-essential' becoming.[11] For Bauman, this shifting or liquid notion of identity occurs because identity involves trying to, 'reconcile contradictory and often incompatible demands...eminently negotiable and revocable'.[12] Albinism and the albino as an identity are mutable because class, gender, education and even personal character render this bodily condition more or less visible as a social category and a medical condition. The intrinsic factors, which make albinism more or less visible, include: nature and severity of visual impairment, individual attitudes to this visual impairment, the personal qualities and abilities of the individual, and the individual's personality. The extrinsic or contextual factors amount to attitudes and reactions of others, the extent to which an environment is enabling or disabling, and wider cultural, social and economic issues relevant to disability in that society.[13]

Nevertheless, in spite of this predominant plurality of identity and subjectivity, the biological or corporeal functioning of the body caused by albinism,

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[10] Kristjana Kristiansen, Simo Vehmas, Tom Shakespeare (eds.), *Arguing about disability: philosophical perspectives*, London: Routledge (2009), p. 50.
[11] Kristianson et al (eds.), *Arguing about Disability: philosophical perspectives* (2008), p. 27.
[12] Zygmunt Bauman, *Identity: conversations with Benedetto Vecchi*, London: Polity Press (2004), p. 11.
[13] Tom Shakespeare, *Disability Rights and Wrongs*, London: Routledge (2006), p. 55.

does result in certain shared subjective experiences amongst individuals across space and time. Being unable to see details in the physical world, and being 'peculiar', 'unusual' or 'different' in appearance, results in awareness of otherness, an alterity composed externally and internally.[14] Ideas attached to 'albinism' and the very term 'albinism' form a primary or initial layer under which lies this raw subjective experience of bodily difference. Such experiences are, however, never essential, never isolated entirely from external forces. To render this paradox in more articulate terms, Jerold Seigel's *The Idea of the Self: thought and experience in Western Europe since the seventeenth century* (2005) succinctly orders this entangled interplay between corporeality, social relations and personal reflection.[15] The performance and appearance of the human body is far less distorted or rendered invisible by external ideas. This research tries to uncover and analyze the nature and extent of the physical and psychological impact of these bodily differences in the life writing or pathographies of people with albinism.

Unlike severe hearing or visual impairments, being albino did not require institutionalization or rehabilitation in the nineteenth century.[16] The rise of the 'albino' as social identity nevertheless has its origins in medico-scientific discourses of pathology and heredity. Individuals labeled as 'albino' by medical practitioners therefore had to reconfigure their own sense of self-worth through a complex

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[14] Clearly arguing that peculiarity is essential to people with albinism is problematic. However, the historical records reveal a marked and universal human response to this bodily condition; it seems to be a phenomenon that attracts almost universal attention for being unusual in comparison with the majority.
[15] Jerold Seigel, *The Idea of the Self: thought and experience in Europe since the seventeenth century*, Cambridge: Cambridge University Press (2005), p. 5.
[16] Henri-Jacques Stiker, *A History of Disability*, Ann Arbor: University of Michigan Press (1999), p. 110.

process of re-evaluation.[17] Yet, external social associations of albinism and the 'albino' with disability were not fixed and stable.

This history investigates how the life writing of people with albinism can open up new historical perspectives on the formation of a multi-layered 'albino' identity. It aims to plot out a new social and phenomenological history of people with albinism.[18] It asks whether the written self and the social identity of people with albinism was altered and negotiated by medical knowledge. The crux of this research charts the interplay between individual agency, and the influence of nineteenth-century medical ideas defining albinism, which potentially altered the bodies very meaning, value and way of being in the world.[19]

In Search of the 'Albino'

This life writing by people with albinism fits into a recent historiographical shift towards a more substantial exploration of agency, autobiography and illness. Reconstructing and recovering experiences of illness or disability through autobiographical writing – what Anne Hunsaker Hawkins calls 'pathographies' – has been – and continues to be – subject to sustained scholarly attention.[20]

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[17] Kristjana Kristiansen, Simo Vehmas, Tom Shakespeare (eds.), *Arguing about disability: philosophical perspectives*, London: Routledge (2009), p. 50.
[18] Mutschmann, Sorsby, and Frogatt investigated a number of individuals from the past who may have had albinism, but not using evidence written by people with albinism. See: Heinrich Mutschmann, *The Secret of John Milton: an attempt to prove Milton was an* albino, Dorpat: Esthonia (1925), Arnold Sorsby, 'Noah: an albino', *British Medical Journal*, vol. 2, issue 1, October (1958), pp. 1587-1589, Peter Frogatt, 'The Albinism of Timur, Zal, and Edward The Confessor', *Medical* History, vol. 6, issue 4, October (1962), pp. 328-342.
[19] Carolyn Steedman, *Past Tenses: essays on writing, autobiography and history*, London: Rivers Oram Press (1992), p. 2.
[20] Anne Hunsaker, *Reconstructing Illness: studies in pathography*, West Lafayette; Indiana: Purdue University Press (1998), p. 1. See also: G. T. Couser, *Signifying Bodies: disability in contemporary life-writing*, Ann Arbor: University of Michigan Press (2009); Hermione Lee, *Body Parts: essays in life writing*, London: Pimlico (2008); Elizabeth Grosz, *Volatile Bodies: towards a corporeal feminism*, Bloomington: Indiana University Press (1994).

Pathographies composed by people with an illness or a disability question, 'prevalent descriptions of the category of autobiography as always already created and absorbed by existing cultural constructs and discursive practices'.[21] Bodies are volatile interlocutors where multi-dimensional interactions and expressions of the self and external identity intermittently co-mingle. This dynamic view of identity is both, 'volatile and complex, one in which, in fact, many 'identities' press in and conflict with one another'.[22] As feminist theorist Elizabeth Grosz argues, 'it is this ability of bodies to always extend the frameworks which attempt to contain them, to seep beyond their domains of control'.[23] To be 'albino' constitutes this unfaltering process of 'volatile' resistance against the 'domains of control' produced through the authority of medical science.

Much scholarly research from the 1960s onwards stressed nineteenth-century medicine and 'medicalisation' was a process where pre-existing corporeal differences were rendered into a stable discourse marking out the normal from the pathological judged under the gaze of doctors in positions of epistemological and institutional authority.[24] However, does this process of classification operate in the same manner in the case of people with albinism? Deborah Lupton argues the medicalisation thesis does frequently neglect the way 'hegemonic discourses and practices are variously taken up, negotiated or transformed by lay members of the

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[21] Einat Avrahami, *The Invading Body*, Charlottesville; London: University of Virginia Press (2007), p. 1.
[22] Patrick Joyce, *Class: a reader*, Oxford; New York: Oxford University Press (1995), p. 7.
[23] Grosz, *Volatile Bodies* (2004), p. xi.
[24] The formation of this medicalised self is charted by Michel Foucault in *The Birth of the Clinic* (1966), which traces the increasing dominance of a nineteenth-century medical gaze originating in the late eighteenth-century French clinic where, at a glance, 'the visible lesions of the organism and the coherence of pathological forms' are revealed. See: Michel Foucault, *The Birth of the Clinic*, London: Routledge (1963), p.2.

population in their quest to maximize their health status and avoid physical stress and pain'.[25] Yet, is this transformation of identity possible and necessary for people with albinism during the nineteenth century? The crux of the following analysis explores the limits of negotiation and transformation for the 'albino' in European society.

To trace the lives of Sachs, Thompson, Spooner and Lowe this study deploys methodological approaches first used in micro-history and the history of the every day. It is influenced by the classic micro-histories: Emmanuel Le Roy Ladurie's *Montaillou* (1975), Carlo Ginzberg's *The Cheese and the Worms: the cosmos of a sixteenth century miller* (1980) and Robert Darnton's *The Great Cat Massacre and other Episodes in French Cultural History* (1984). It is also strongly influenced by the work of German scholars in the 1980s concerned with *Alltagsgeschichte*.[26] The history of the everyday explores social practices of the historically invisible, resonating deeply with the aims of this study on recovering individuals with albinism from the margins of the past. For example, Mary Lindeman's *Health and Healing in Eighteenth-Century Germany* (1996) joins three often separate historical approaches: the history of mentalities, a history of everyday lives, and a structural history. In pursuit of this tripartite methodology, Lindeman, scrutinized letters of physicians and officials in Germany.[27]

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[25] Deborah Lupton, 'Foucault and the Medicalisation Critique', in Alan Petersen and Robin Burton (eds.), *Foucault, Health and Medicine*, London: Routledge (1997), p. 94.
[26] Alain Corbin, *Le monde retrouvé de Louis-François Pinagot, sur les traces d'un inconnu, 1798-1876*, translated by Arthur Goldhammer, *The Life of an Unknown: the rediscovered world of a nineteenth-century clog maker in France*, New York: Columbia University Press (2001); F. Crew, 'Alltagsgeschichte: a new social history 'from below', *Journal of Central European History*, vol. 22 (1989), pp. 394-407; Alf Lüdtke, *Histoire du quotidian*, Paris: edition de la maison des sciences de l'homme (1989); Alf Lüdtke (ed.), 'Was ist und wer treibt Alltagsgeschichte?' *Alltagsgeschichte: zur Rekonstrucktion historischer Erfahrung und Lebensweise*, Frankfurt: Campus (1989).
[27] Mary Lindeman, *Health and Healing in Eighteenth-Century Germany*, Baltimore; London: Johns Hopkins University Press (1996).

Elsewhere, in a bid to uncover individuals in even greater obscurity, Alain Corbin based his research around a man who lived almost anonymously. In *The Life of an Unknown: the rediscovered world of a nineteenth-century clog maker in France* (2001), Corbin argued for an entirely new approach to social history, an analysis that would:

> Stand the methods of nineteenth-century social history on their head...(as) social history, not just of elites but also of "the people", is based on a study of a very small sample of people whose fates were exceptional.[28]

Corbin reconstructed the unremarkable life of Louis-François Pinagot as he wanted to:

> Reconstitute the existence of a person whose memory has been abolished...to recreate him to give him a second chance...to become part of the memory of his century.[29]

In Corbin's analysis, Pinagot could be recovered even when analyzing deforestation and other alterations to the landscape.[30] Both the analysis of Thompson and Sachs's lives benefit from this scholarship of the hidden individual otherwise absent from the historical record.[31] Spooner and Lowe, on the other hand, offer an interesting counterpoint. They obtained a level of public fame and social visibility that far surpassed Thompson and Sachs.

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[28] Alain Corbin, *The Life of an Unknown: the rediscovered world of a nineteenth-century clog maker in France*, New York: Columbia University Press (2001), p. vii.
[29] Corbin, *The Life of an Unknown: the rediscovered world of a nineteenth-century clog maker in France* (2001), p. vii.
[30] Corbin (2001), p. viii.
[31] Corbin, p. vii.

This historical intervention into the identity and subjectivity of people with albinism is inspired to an extent by Charles Rosenberg's call for greater focus on, 'the individual experience of disease'.[32] Rosenberg's call for greater nuance, clarity, and depth of understanding of how disease is experienced is linked with Roy Porter's emphasis on 'the patient's view'.[33] By adopting the perspective of the patient, it challenges the power dynamics of medical intervention.[34] Rosenberg's and Porter's emphasis on the subjectivity of disease is exemplified in Maria H. Frawley's recent study on *Invalidism and Identity in Nineteenth-Century Britain* (2004).[35] Frawley demonstrates the extent to which the figure of the invalid can be retrieved from the margins of medical, literary and social history.[36] Indeed, the incurable invalid, as the 'apotheosis of inertia', shares striking similarities to the liminal social and medical position inhabited by people with albinism within the master narratives of progress and mobility in nineteenth-century Britain.

A specific understanding of the subjectivities of people with albinism reveals often purposefully camouflaged realms of identity hidden from the gaze of society. For Lacan, this camouflage is not a, 'question of harmonizing with the background, but against a mottled background, of becoming mottled - exactly like the technique of camouflage practiced in human warfare'.[37] This process of 'becoming mottled' and 'harmonizing with the background' seems to constitute the internal anxieties of

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[32] Janet Golden and Charles Rosenberg (eds.), *Framing Disease*, Brunswick, New Jersey Rutgers University Press (1992), p. xxiii.
[33] Roy Porter, 'The Patient's View: doing medical history from below', *Theory and Society*, vol. 14, no. 2, March (1985), p. 175.
[34] Porter, 'The Patient's View: doing medical history from below' (1985), p. 175.
[35] Maria H. Frawley, *Invalidism and Identity in Nineteenth-Century Britain*, Chicago; London: University of Chicago Press (2004).
[36] Frawley, *Invalidism and Identity in Nineteenth-Century Britain* (2004), p. 2.
[37] Jacques Lacan, 'The Line and the Light', *Of the Gaze*, cited in Homi Bhabha, *The Location of Culture*, London: Routledge (1994), p. 85.

people with albinism of being perceived by friends, family and society as incapable. Although albinism is a highly visible condition, 'albinos' regularly deployed the tactic of social camouflage in order to affect 'a complex disappearing act'.[38] A camouflaged self seeks to melt into the background, to distract entirely from potential prejudice and stigma through strategies of effacement. Stigma – as the sociologist of spoiled identity Erving Goffman argues – is a situation where an individual is labeled, and has then the ever present potential to be irredeemably, 'disqualified from social acceptance'.[39] Camouflage is constituted predominantly by the acquisition of extraordinary abilities that serve to discharge not only the negative value inherent in medical diagnosis of illness or disease, but also broader social attitudes that constitute what it means to be a successful member of any given society.

The practice of camouflage involves adopting certain tactics within established socio-cultural grids or networks. Michel De Certeau's *The Practice of Everyday Life* (1984) explores evidence for, 'ways of operating' or 'tactics' that afford agency in spite of existing discursive frameworks.[40] Close textual analysis of the life writing of people with albinism reveals the range and diversity of such camouflaging tactics.

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[38] Mary Kelly, *Imaging Desire*, Cambridge, Mass.; London: MIT Press (1996), p. 208.
[39] Erving Goffman, *Stigma: notes on the management of spoiled identity*, London: Penguin (1990), first published by Prentice-Hall (1963), p. 9.
[40] Michel De Certeau, *The Practice of Everyday Life*, Berkeley; London: University of California Press (1984), p. xi.

'This Bodily Condition'

This section examines the writing of Georg Sachs and James A. Thompson. In the case of Sachs, it argues his writing mirrors the language and concepts of late eighteenth- and early nineteenth-century medicine on albinism. Sachs sought a deeper understanding of what he called his 'bodily condition' through natural philosophy, experimental science and acute examination of his own physical state. Conversely, whereas Sachs effectively adopts the role of being both simultaneously doctor and patient, Thompson's relationship with medical knowledge is primarily as a voluntary patient. Thompson sought out the expertise of 'medical men', and often internalizes and accepts his 'albino' diagnosis as a way to explain his place in society. The evidence available provides only a fragment of their lives, which may have been lived without frequent recourse to the concept of the 'albino'.

Georg Sachs' life provides a contextual framework within which to analyze his writing. Sach's relationship with Julius Heinrich Gottlieb Schlegel, who met Sachs as a child, and later translated his Latin dissertation into German in 1824, comes under particular scrutiny. Sachs pursued an auto-clinical line of research, not only to dispel myths about his 'bodily condition' perpetuated by preceding authors, but also as part of a German romantic project to chart areas of unexplored knowledge of the natural and the unnatural in the human body.

Georg Tobias Ludwig Sachs was born on April 22, 1786, in St. Ruprecht, Kärnthen, a small village in a mountainous area.[41] Two years after the publication of

[41] Anon., 'Nachruhm des Verdienstes' (obituary), *National-Zeitung der* D*eutschen*, vol. 39 (1814), p. 803; G.C. Hamberger and J.G. Meusel, 'Sachs (G . . . Tobias Ludwig), *Das gelehrte Teutschland oder Lexikon der jetzt lebenden teutschen Schriftsteller*, Vol. 20, no. 3, Lemgo (1824).

his thesis, he died of "nerve fever" on May 6, 1814, shortly after his 28th birthday. His father was born in 1760 in Bayreuth, Bavaria, Germany. Sach's mother, one year older, was born in Oberwürttemberg (Baden-Württemberg, Germany).[42] Sachs was the eldest of five children. Four of them (two sons and two girls) were born prior to 1795. The fifth child again was a girl, who was born January 4, 1797, in a small village, consisting of five houses at the river Drau, near Villach, Kärnten, Austria.[43] Both Sachs and his younger sister had albinism. The other three children of the family and the parents did not. The unnamed sister with albinism was born on January 4, 1797, in another tiny village of five houses in Stoggewoy on Zlan.[44]

From this sheltered adolescence in the Alps, Sachs went on to study medicine at the universities of Tübingen and Erlangen. This movement from one institution to another was not unusual. The nineteenth-century university system in Germany was flexible; students could easily transfer to study from one institution to another. The reason for this was that students and teachers were governed by the freedom to learn (Lernfreiheit) and the freedom to teach (Lehrfreiheit), effectively absorbing what they required from each other.[45] Additionally, by 1813 the political upheaval of the Napoleonic conquests resulted in thirty-four universities becoming eighteen with rapid closures across Germany.[46] Thus when the University of Tübingen was closed in 1809, Sachs simply arranged to finish at Erlangen, where he defended his dissertation in 1812.

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[42] Julius Heinrich Gottlieb Schlegel, Ein *Beitrag zur nähren Kenntniss der Albinos* (A contribution to deeper knowledge of Albinos), Meiningen: Keyssnerichen Hofbuchhandlung (1824), p. 7.
[43] Schlegel, Ein *Beitrag zur nähren Kenntniss der Albinos* (1824), p. 7.
[44] Schlegel (1824), p. 7.
[45] W.F. Bynum, *Science and the Practice of Medicine in the Nineteenth Century*, Cambridge: Cambridge University Press (1994), p. 95.
[46] Walter Rüegg, *A History of the University in Europe*, Cambridge: Cambridge University Press (2004), p. 3.

In his brief career at the University of Erlangen, Sachs gave lectures on pathology, physiology, physical anthropology, the application of mathematics to medical sciences, and astronomy.[47] In addition, he practiced as a doctor, and was engaged in chemical investigations of colour theory following the work of Johann Wolfgang von Goethe (1749-1832).[48] Sachs lived at the centre of a spirit of scientific enquiry growing across Germany epitomized by the establishment in 1810 of the Humboldt University in Berlin. However, as H.S. Jones argues, the foundation of this new university of Berlin itself did not mark the immediate birth of a new spirit of scientific enquiry in higher education, since German universities remained chiefly focused on professional training.[49] Nevertheless, as one of the founders of Berlin University, the philosopher and theologian Friedrich Schleiermacher (1768-1834) proposed this new scientific spirit needed to distance itself from the superficial speculation of the humanist tradition. German science must penetrate:

> More deeply into the particular, to research, combine, and create something of its own, and to confirm by the correctness of its judgment the insight it has gained into nature and the coherence of all knowledge.[50]

Sachs' rigorous and specific research into what he called his 'bodily condition' bares all the hallmarks of this emerging philosophy of science.

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[47] Julius Heinrich Gottlieb Schlegel, *Ein Beitrag zur nähren Kenntniss der Albinos* (A contribution to deeper knowledge of Albinos), Meiningen: Keyssnerichen Hofbuchhandlung (1824), pp. 4-5.
[48] Sachs placed his observations on vision within the theoretical framework of Goethe's published theory of colour. See: Johann Wolfgang von Goethe, *Zur Farbenlehre*, Tübingen: J.G. Cottaschen Buchhandlung (1810).
[49] H.S. Jones, *Intellect and Character in Victorian England: Mark Pattison and the invention of the Don*, Cambridge: Cambridge University Press (2007), p. 5.
[50] Friedrich Daniel Ernst Schleiermacher, *Gelegentliche Gedanken über Universitäten im Deutschen Sinn nebst einem Anhang über eine neu zu errichtende,* Berlin: Realschulbuchhandlung, (1808), p. 39.

Though his life was short, Sachs lived through the rise of German 'romanticism', a momentous political, social and intellectual outpouring.[51] This period of creative efflorescence witnessed the growth of a romantic science, a heterogeneous movement prevalent from the 1790s to around 1830.[52] According to Saul, the romantic sciences reached their peak in Germany by 1815, three years after the publication of Sach's inaugural dissertation on albinism. A central tenet of romantic medicine and the sciences was the idea of synthesis, whereby all human abilities and attributes are unified to forge a new richer understanding of nature.[53] Saul argues romantic science reacted against the decline of religion, the rise of empiricism and specialization in the sciences and persistence of Cartesian thought that separated subject from object, mind from matter. The findings of German romantic science were intended to uncover a wider metaphysical perspective, a unifying principle, erasing the boundaries separating and alienating man from his environment.[54] As with Sachs' own theorizing about colour, romantic science sought to understand invisible and immeasurable forces such as magnetism, galvanism and electricity.[55] Furthermore, the autobiographical style adopted by Sachs in his dissertation exemplifies the Romantic idea of undertaking a journey to obtain knowledge of the self through uncovering a consciousness of the true spirit of nature hidden from view. The scientist Henrik Steffens encapsulated this romantic approach to knowledge:

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[51] Nicholas Saul, *The Cambridge Companion to German Romanticism*, Cambridge: Cambridge University Press (2009), p. 1.
[52] Saul, *The Cambridge Companion to German Romanticism* (2009), p. 210.
[53] Saul (2009), p. 209.
[54] Saul, p. 210.
[55] Saul, p. 10.

> Do you want to investigate nature? Then cast a glance inwards and in the stages of spiritual formation it may be granted to you to see the stages of natural development. Do you want to know yourself? Investigate nature and your actions are those of the Spirit there.[56]

For Sachs, understanding the extent of his outward physical differences was equally aligned to uncovering the underlying spirit or nature that unified him with the rest of humanity.

As a practicing physician and university lecturer in general pathology, physiology and physical anthropology, Sachs belonged to the 'Third Estate' of German society, composed of bureaucrats, court officials, contractors and lawyers.[57] Thomas Broman argues late eighteenth and early nineteenth century physicians were defined less by what they did and more by who they were.[58] By possessing a university degree in medicine from the University of Erlangen, Sachs became a member of the social elite of learned gentlemen (gelehrtenstand). To be learned meant a keen knowledge of ancient literature, an ability to write eloquently in Latin, and to generally be a man broadly inculcated in a shared humanist culture.[59] Such educational and cultural expectations in the sphere of German medicine indicate why Sachs chose to publish his dissertation in Latin.

In 1812, Sachs wrote his only work entitled *Historiae naturalis duorum leucaetiopum: Auctoris ipsius et sororis eius*. It was a detailed medical treatise on

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[56] H. Steffens, 'Ueber die Vegetation', in *Schriften: Alt und Neu*, vol. 2, Breslau: Max Nordau (1812), p. 102.
[57] James J Sheehan, *German History, 1770-1866*, Oxford: Clarendon Press (1989), p. 217.
[58] Thomas H Broman, *The Transformation of Academic Medicine, 1750-1820*, Cambridge: Cambridge University Press (1996), p. 7.
[59] Broman, *The Transformation of Academic Medicine* (1996), p. 7.

albinism though he used 'leucaetiopum' as 'albinoismus' was not used in medicine until Mansfeld's classification in 1822.[60] When translated, the Latin title of the book reads *A Natural History of two Albinos, the Author and his Sister* (1812). The work itself was very well received within German romantic intellectual and medical circles. The *Jenaische Allgemaine Literatur-Zeitung* (1813) praised the form and the content of Sachs' work:

> Just as with autobiographies for the historian, medical studies involving self-examination of illness are of great interest to doctors: the same can also be said for physiological self-examination for physiologists... Much of what is observed in others is undertaken in a superficial and all too brief manner that is insufficiently evaluated, whereas, in the case of this essential study, it shines a light into every corner of its subject, providing a broad exhaustive set of results.[61]

Sachs wrote in a style that exemplified the leitmotif of a romantic search for new knowledge that could overthrow the tyranny of enlightenment empiricism. A contemporary review article suggested this approach was adopted by Sachs to 'make it more comfortable to place himself at the centre of the many aspects under scrutiny'.[62]

Sachs' dissertation is written primarily from a third person perspective using the terms 'The Brother' and 'The Sister'. Significant portions of the work, however,

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[60] Georg Tobias Ludwig Sachs, *Historiae naturalis duorum leucaetiopum: Auctoris ipsius et sororis eius*, Erlangen (1812).
[61] *Jenaische Allgemaine Literatur-Zeitung*, May (1813), p. 233. After his death, Sach's life and work were included in a lexicon of important German authors: G.C. Hamberger and J.G. Meusel, 'Sachs (G . . . Tobias Ludwig), *Das gelehrte Teutschland oder Lexikon der jetzt lebenden teutschen Schriftsteller*, Vol. 20, no. 3, Lemgo (1824).
[62] *Jenaische Allgemaine Literatur-Zeitung* (1813), p. 233.

switch to the first person. According to Mary R. Strand in her work *I/You: paradoxical constructions of the self and other in Early German Romanticism* (1998) the early Jena romantics in Germany sought a new knowledge of the self, which is an 'otherness outside of ourselves as well as within', that resonates with the way Sachs presented his work.[63]

The dissertation begins with an initial chapter on the birthplace and childhood of Sachs and his sister. It discusses his parents, siblings and any illnesses that may be related to albinism. The next chapter discusses the specific physical and psychological effects of albinism. Following this specific discussion of Sachs and his sister, the remainder of the dissertation examines the skin, hair, eyes in a systematic fashion, including original chemical experiments on the colour of human hair undertaken by Sachs. In the dissertation, Sachs argued that the cause of his 'leukäpothia' was physiological in origin, being an absence of pigmenting material in the body.[64] Sachs wrote:

> It is unlikely that the foetus alters in hair, skin and eye colour along the lines of leukäpothia; one can imagine it is necessary for there to be an absence of the dark pigments that serve to provide the natural and familiar colour'.[65]

This notion of physiological absence refers to Blumenbach and Buzzi's research from the late eighteenth century. For Sachs, this absence of colour did not result in any other detrimental effects to his health.

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[63] Mary R. Strand, *I/You: paradoxical constructions of the self and other in early German Romanticism*, Berlin: Peter Lang (1998), p. 1.
[64] Blumenbach proposed this theory in 1775 in his *On the Natural Varieties of Mankind*; it was almost certainly read by Sachs.
[65] Julius Heinrich Gottlieb Schlegel, *Ein Beitrag zur nähren Kenntniss der Albinos* (A contribution to deeper knowledge of Albinos), Meiningen, Keyssnerichen Hofbuchhandlung (1824), pp. 4-5.

Against eighteenth-century ideas that considered 'albinos' weaker physically and mentally, Sachs argued that:

> Aside from a few exceptions, which are discussed below, as far as I can ascertain they are the same as 'Nichtleucaethiopen' in body, temperament, age and sex'.[66]

Sachs refers to the example of his sister, describing her as she grew into adolescence:

> The sister was never fat, and developed consistently. In her later years she was fairly slim and, from day to day, grew up to be ever prettier...and she grew pleasingly taller'. [67]

Additionally, she was 'healthy' and rarely suffered from any illness, other than the usual expected in childhood.[68] This argument that 'leukäpathie' caused no other illnesses was highlighted as an important point in the review contained in the *Jenaische Allgemaine Literatur-Zeitung* (1813) where it states:

> The author makes clear 'Leukäpathie' causes no alteration in the physical form but just an absence of black pigment. Aside from the usual childhood illnesses, both author and sister experienced no particular sicknesses, being unusually healthy.[69]

For Sachs, therefore, it seems this was the most salient point he wished to initially make through writing his dissertation that his 'bodily condition' was neither physically or mentally debilitating. He resists the framing of his condition in

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[66] Julius Heinrich Gottlieb Schlegel, *Ein Beitrag zur nähren Kenntniss der Albinos* (A contribution to deeper knowledge of Albinos), Meiningen, Keyssnerichen Hofbuchhandlung (1824), p. 14.
[67]Schlegel, *Ein Beitrag zur nähren Kenntniss der Albinos* (1824), p. 15.
[68] Schlegel (1824), p. 14.
[69] *Jenaische Allgemaine Literatur-Zeitung*, May (1813), p. 234.

pathological terms, and tries to introduce to medical practitioners a new way of understanding 'Leukäpathie' as a 'bodily condition' that primarily alters the colour of the skin.

James Thompson's writing provides a contrast to Sachs' attempt to redefine albinism along new physiological lines. Sachs hoped to re-align knowledge about his 'bodily condition' by entering into an existing medical discourse that had not yet taken on a concrete and fixed classificatory form. Thompson's situation was less negotiable. He was diagnosed as 'albino' as a child, and embraced his pathology as a way of explaining his apparent failure to find a suitable job or get married. Thompson hoped to obtain an accurate account of his albinism. Sachs rejected existing medical knowledge in favour of his own empirical investigations.

According to the 1881 census, James Thompson (1877-1929) lived in Tankersley in a house on Rockingham Row with his brother John (1884-?), and his parents Rebecca Wood (1852-1922) and George Thompson (1852-1902).[70] Rebecca and George got married in Sheffield in 1871, both at the age of 19. Rebecca may have died in Halifax, south of Sheffield, at the age of 70.[71] In 1881, George is listed as being employed as a colliery weigh clerk: a career, which James would take up after his school education in Chapletown. By 1901, a year before his demise, George worked as a commercial traveller, John William as a railway clerk, and James was a Colliery clerk.[72] At the time of writing to Pearson in 1909, Thompson lived with his widowed mother. James Thompson's brother, John, was still alive but did not live

[70] *Public Records Office*, 1881 Census, Reference: *RG11/4615*, folio: 22, p. 38.
[71] FreeBMD: *England & Wales, Death Index: 1837-1983*, Deaths registered in January, February and March, p. 532.
[72] *Public Records Office*, 1901 Census, Reference: *RG13/4314*, Folio 93, p. 30.

with the family. The single reference to John comes in Thompson's letters where he relays to Pearson that John is, 'a strong healthy young fellow'.[73] James died in Cockermouth at the age of 52.

The Thompson family were arguably members of the lower-middle classes, the petite bourgeoisie. Crossick's path finding *The Lower Middle Class in Britain* (1977) divides this section of society into two broad groups. The first is the 'classic petit bourgeoisie', composed of shopkeepers and small businessmen, while the second is made up of new white-collar occupations, particularly clerks, schoolteachers and commercial travellers. According to labour historian Gregory Anderson, the role of clerk made Thompson a member of the 'lower-middle-class groups who comprised a variety of service and white-collar occupations'.[74] This stratum of professionals included not only clerks and typists but also low-ranking civil servants, commercial travellers, draughtsmen, shop workers, telegraphists and telephonists, warehousemen and additionally the poorer members of the low professions, teachers and clergymen.[75] Lockwood argues:

> Victorian clerks were sometimes on the margin...socially they were definitely a part of the middle class...they were so regarded by the outside world, and they regarded themselves as such'.[76]

Women were increasingly employed as low-status clerks, typists and telephonists, particularly in large-scale offices, which grew alongside, though did not replace the

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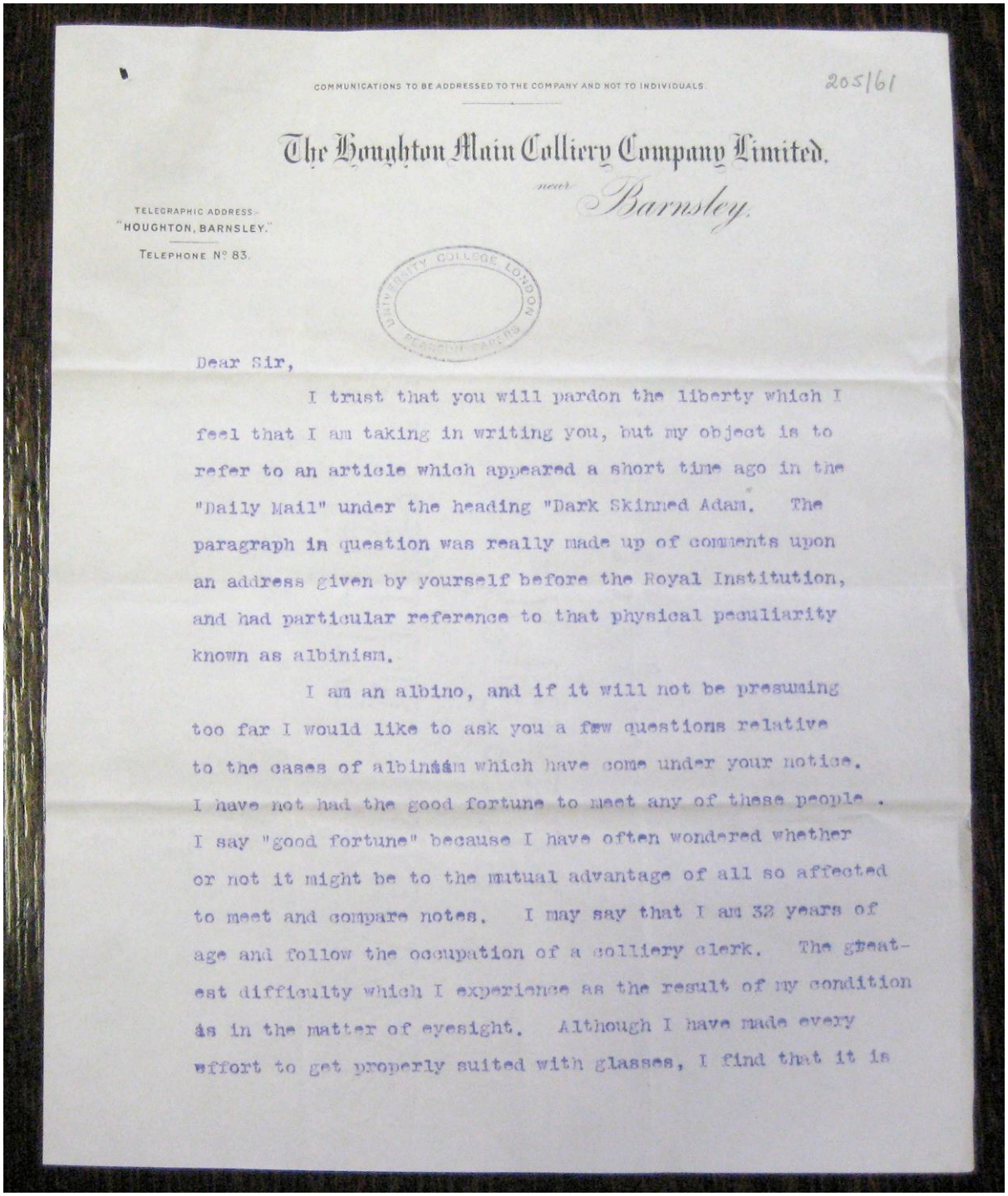
[73] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).
[74] Gregory Anderson, *Victorian Clerks*, Manchester: Manchester University Press (1976), p. 3.
[75] Anderson, *Victorian Clerks* (1976), p. 3.
[76] D. Lockwood, *The Blackcoated Worker* (1958), p. 35, cited in Anderson, *Victorian Clerks*, p. 5.

small counting houses of mid-Victorian commerce.[77] Thompson worked in such an office.

Thompson initially wrote to Pearson to find out more about his own situation as an 'albino'. The actual letter paper used to write on by Thompson is significant. Thompson either stole or was given permission to use Houghton Main colliery letter-headed paper (Fig. 24). His intention was to give his correspondence to Pearson a greater sense of formality, perhaps hoping that Pearson would take his concerns seriously. Indeed, Thompson reflects this earnestness in his writing. He apologises at the outset to Pearson hoping that he, 'will pardon the liberty which I feel that I am taking in writing you'.[78] Clearly, Thompson is not simply conforming to letter writing convention, but is consciously participating in a transgression of class boundaries. As a consequence, to avoid trying Pearson's patience, Thompson kept his first letter short. After stating his occupation as a colliery clerk, and emphasising the fact that he has never met any other 'albinos', Thompson posed a series of questions to Pearson about his condition. He wrote:

[77] Gregory Anderson, *Victorian Clerks*, Manchester; Manchester University Press (1976), p. 3.
[78] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 1st letter, c. March 11 (1909).



COMMUNICATIONS TO BE ADDRESSED TO THE COMPANY AND NOT TO INDIVIDUALS.

205/61

The Houghton Main Colliery Company Limited.

near Barnsley.

TELEGRAPHIC ADDRESS:-
"HOUGHTON, BARNSLEY."

TELEPHONE Nº 83.

Dear Sir,

I trust that you will pardon the liberty which I feel that I am taking in writing you, but my object is to refer to an article which appeared a short time ago in the "Daily Mail" under the heading "Dark Skinned Adam. The paragraph in question was really made up of comments upon an address given by yourself before the Royal Institution, and had particular reference to that physical peculiarity known as albinism.

I am an albino, and if it will not be presuming too far I would like to ask you a few questions relative to the cases of albinism which have come under your notice. I have not had the good fortune to meet any of these people. I say "good fortune" because I have often wondered whether or not it might be to the mutual advantage of all so affected to meet and compare notes. I may say that I am 32 years of age and follow the occupation of a colliery clerk. The greatest difficulty which I experience as the result of my condition is in the matter of eyesight. Although I have made every effort to get properly suited with glasses, I find that it is

Fig. 24: James A. Thompson's first letter to Karl Pearson sent c. March 1909 in University College London: *Pearson Papers*: 205/61.

> What I would like to know with regard to other albinos is,- Are they all affected with short-sight, and if so, have any of them been successful in procuring glasses quite suitable to them, and with the aid of which can they go about their daily work with a minimum of discomfort? Are they as a class physically strong, or are they to a greater or lesser extent weaklings, and in the latter event is that condition the natural outcome of their (sic) being albinos. Do they find their peculiarity a handicap to their advancement from a social and business standpoint?[79]

This passage is worth analysing carefully as it reveals a great deal about Thompson's own mentality towards being 'albino'. First, Thompson's eyesight, and his search for glasses that suit him, is related to difficulties he must have daily experienced as a clerk. For Thompson, he considered such work 'altogether unsatisfactory from a health standpoint'.[80] In the next question, Thompson desires to know if such health difficulties are unavoidable due to his being 'albino'. This anxiety about potentially being a member of a 'class' of 'weaklings' surely grew out of broader debates about right living and eugenics prevalent at the time.[81] Thompson defined such weakness as primarily exhibited in the competitive atmosphere of social and professional advancement.

Pearson's response to this first letter is lost. However, just as with the surveys he sent to medical men, it is likely Pearson requested details of Thompson's physical

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[79] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 1st letter, c. March 11 (1909).
[80] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 3rd letter, c. March 21 (1909).
[81] Daniel J Kevles, *In the Name of Eugenics*: *Genetics and the Uses of Human Heredity*, Harvard: Harvard University Press (1995); G.R. Searle, *Eugenics and Politics in Britain*, London: Noordhoff International Publishing (1976); Lyndsay Farrall, *The Origins and Growth of the English Eugenics Movement, 1865-1925*, Thesis: Ph.D., Indiana University (1969).

appearance and asked about other cases of albinism in his family. Thompson's second letter in response to these questions is even shorter than the first. He confirms Pearson's diagnosis for albinism by stating:

> There is not the slightest doubt as to my being a pure albino, as I possess the main characteristics named by you, in addition to which I have been told so time and again by medical men'.[82]

There is a sense that Thompson is relieved to have his identity confirmed as an 'albino', even though he had already been told 'time and again by medical men'.[83] On this subject, Thompson reasserted to Pearson his desire to, 'benefit by the experiences of others similarly placed, while on the other hand, if I can of the slightest service to another it will be a pleasure indeed'.[84] Thompson must have been thrilled to have made contact with someone who could finally answer questions which weighted heavily on him throughout his life; he delays replying with a more extensive letter in order to 'get my ideas into a useful form for you'.[85]

The third letter is Thompson's longest response to Pearson, including information organised under the following headings: parentage, physical, social, mental and marriage. Thompson does not waste the opportunity to include much more than was originally requested by Pearson in an attempt to justify his life. Under parentage, Thompson reveals his family, 'are unable to trace similar cases so

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[82] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 2nd letter, March 16 (1909).
[83] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 2nd letter, March 16 (1909).
[84] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 2nd letter, March 16 (1909).
[85] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 2nd letter, March 16 (1909).

far back as they are able to go'.[86] Perhaps the origin of Thompson's albinism had motivated his parents to investigate its origin before Pearson suggested looking into the family history. He states:

> My parents naturally tried to find someone in the family, either on one side or the other, but though they go back as far as possible, they have found nothing to lead them to the belief that there has been anyone like myself.[87]

Either way, by 1909, Thompson's father had died 'of an abscess', and his mother was a widow, looked after mainly by Thompson.

The next section involves Thompson assessing his own health throughout his life. He wrote: 'I am certainly weak physically. As a boy I ailed so much – inflammation of the lungs, bronchitis, asthma etc.'[88] This claim of physical weakness is expressed somewhat ambiguously by Thompson. He later states that: 'I have improved since I was, say, fourteen years of age, and during the last ten or twelve years I have had very little illness indeed'.[89] It is highly probable Thompson unconsciously placated Pearson's diagnosis of physical weakness linked to albinism, and therefore over emphasised his illnesses and weakness. Thompson links these childhood illnesses to limitations placed on his early education. He wrote that, 'I did not go to school until I was 7 years of age. I was excused by the school attendance office; my parents giving me some little tuition at home'.[90]

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[86] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 3rd letter, c. March 21 (1909).
[87] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).
[88] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).
[89] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).
[90] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 3rd letter, c. March 21 (1909).

Far from making excuses and providing further evidence of failings caused by his apparent physical weakness, Thompson proceeds to detail his achievements from an early age. He wrote:

> When I did go to school, however, I was considered very sharp notwithstanding my handicap as regards eyesight, and I got through all right, in fact I went so far as the elementary school could take me.[91]

Thompson was constantly wrestling with feelings of inadequacy that are lessened by his own emphasis on his intelligence and success at school. This point is made clearer still when Thompson reveals under the heading 'mental' that:

> I am not the one best able to judge, but I believe that even my most candid friends would concede the point that I am sharp and intelligent (so far as my eyesight etc. will allow). As I have intimated before I was really smart above the average at school, and ever since then I have always been of a more or less studious disposition.[92]

Thompson seems to be justifying his abilities both to himself and to Pearson. In his working life, Thompson tries to further prove his skills claiming to have 'mastered the study of shorthand and typing...(with) a good working knowledge of book-keeping and business routine generally'.[93]

Moving on to the 'social' heading, Thompson pursued a more introspective line of description about himself. He informs Pearson that his albinism has not

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[91] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).
[92] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 3rd letter, c. March 21 (1909).
[93] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).

resulted in a bleak outlook. Thompson wrote that, 'I am generally of a more or less cheerful disposition, fond of humour and do certainly make an effort to always look on the bright side of things'.[94] However, this is followed by a perhaps more truthful account of Thompson's present state of mind. Thompson admits that:

> Some two years ago I had a trouble in business (for which I was not at all responsible) and I don't think that I have been quite the same since. At times when I see others (very often no more clever than myself) advancing, I find myself brooding over the matter, and wondering to myself how much my albinism has to answer for.[95]

Thompson's sense of aspiration is shown to clash with his own internalised idea of albinism as a limiting factor on his ability to compete with his peers. His undoubted frustration at being potentially restrained from advancing does not, however, result in Thompson capitulating in the face of adversity. Thompson tells Pearson he does 'all possible to throw off this feeling'.[96] Though Thompson says 'fate' resulted in him being a clerk, he maintains the hope that one day he could undertake his ideal profession: 'if I had my choice I think I would have been a journalist'.[97]

Thompson's letters reveal the portrait of man struggling to understand his position in society. Desperately seeking approbation from Karl Pearson to confirm that he was not inherently weaker than his peers, that he was not fated to a life unsuited to his literary abilities by the restrictions of being born as an 'albino', the overriding image we receive of Thompson is of a genial, educated, hard-working

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[94] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).
[95] UCL: *Pearson Papers*: 205/61, J.A. Thompson, 3rd letter, c. March 21 (1909).
[96] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).
[97] UCL: *Pearson Papers*: 205/61, 3rd letter, c. March 21 (1909).

man, frustrated by his lack of opportunity to progress at work and the remote possibility of marriage. Thompson sought to understand the possibilities and limits present in having albinism. For Thompson, who, on account of his relatively static class position, the idea that he had a condition that might limit his potential was both a comfort and a point for active resistance. He educated himself and learned the practical skills necessary to perform his job as a clerk. Nevertheless, Thompson had little choice about the extent to which his medical identity as an 'albino' was internalised. He had no other point of reference for his condition, and lived in an area isolated from the resources to aid his quest to understand what living with albinism meant for others in Britain at the time.

Camouflaging the 'albino' self

This section analyses the autobiographical material of Robert Lowe, Viscount Sherbrooke (1811-1892) and William Archibald Spooner (1844-1930).[98] It centres on Spooner and Lowe's written reflections on having albinism.[99] Spooner and Lowe's recorded personal experiences and representations of their albinism offer a new perspective for the historiography of nineteenth-century autobiography, which concentrates on famous 'men of letters' and marginalised groups such as women,

[98] Lowe's typewritten memoir was undertaken after his retirement from political office in 1876. It was only half finished, owing to the second portion being lost in the post. The incomplete autobiography was published verbatim in a biography of Lowe written by Arthur Patchett Martin (1851-1902). Martin was an Australian journalist, and a close friend of Lowe's. Lowe and his wife commissioned Martin to write the biography. See: Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, 2 vols., London: Longman's, Green and co (1893). Spooner's writing is housed at New College, Oxford. It comprises of four type-written chapters of Spooner's unpublished autobiography: *Fifty Years in an Oxford College* (1912), two diaries written between 1881-1883 and 1890-1925 along with typed letters charting his three month-long travels around South Africa.

[99] Both men emerge in part from a fluid stream of values, expectations and constraints, which contributed to representations of themselves to their potential readers. See: Regina Gagnier, *Subjectivities: a history of self-representation in Britain, 1832-1920*, New York: Oxford University Press (1991), p. 3.

workers, and the colonised.[100] This section explores the formation of Spooner and Lowe's 'albino' identity in relation to their own bodies, and their family, friends and society. From their diary entries and autobiographical fragments, it evaluates Spooner and Lowe's responses to the physical effects of their albinism on their eyesight and their appearance.

It accompanies this analysis with an interrogation of the influence of social class on Lowe and Spooner's 'albino' identity. Lowe and Spooner shared comparable educational backgrounds; they were, in addition, comfortably wealthy members of a middle class in British society.[101] Unlike the socially restricted case presented by James Thompson, Spooner and Lowe were not only born into a degree of wealth and privilege, but they also were able to cement a place within the educated elite of Victorian society.

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[100] For analysis of the life writing of Victorian 'men of letters' see: Trevor Lynn Broughton, *Men of Letters, Writing Lives: masculinity and literary Auto/Biography in the late Victorian period*, London: Routledge (1999); V. Newey and P. Shaw (eds.), *Moral Pages, Literary Lives: studies in nineteenth-century autobiography*, Aldershot: Scholar (1996). For works on the life writing of marginalised people, workers, women and the colonised see: M.J. Corbett, *Representing Femininity: middle-class subjectivity in Victorian and Edwardian Women's autobiographies*, Oxford: Oxford University Press (1992); J. Swindells, *Victorian Writing and Working Women*, Cambridge: Polity Press (1985); David Vincent, *Bread, Knowledge and Freedom: a study of nineteenth-century working class autobiography*, London: Europa (1981).

[101] As an historical and sociological term 'class' and the origin of 'class consciousness' is fiercely contested. The literature on the question of class and its historical origins is vast. For more general historical studies on class in Britain see: David Cannadine, *The Rise and fall of Class in* Britain, New York: Columbia University Press (1999); Dror Wahrman, *Imagining the Middle Class: the political representation of class in Britain, c. 1780-1840,* Cambridge: Cambridge University Press (1995); Patrick Joyce, *Class: a reader*, Oxford: Oxford University Press (1995); *Visions of the People: industrial England and the question of class*, Cambridge: Cambridge University Press (1991); R.S. Neile, *History and Class: essential readings in theory and interpretation*, Oxford: Blackwell (1983). For major sociological interpretations of class see: Fiona Devine, Michael Savage, John Scott (eds.), *Rethinking class: culture, identity and lifestyle*, London: Palgrave (2005); Gary Day, *Class*, London: Routledge (2001); Rosemary Crompton, Fiona Devine, Michael Savage, John Scott (eds.), *Renewing Class Analysis*, Cambridge: Blackwell (2000); Jan Pakulski and Malcolm Waters, *The Death of Class*, London: Sage (1996); Pierre Bourdieu, 'What makes a social class? On the theoretical and practical existence of groups', *Berkeley Journal of Sociology*, vol. 32 (1987), pp. 1-8, Zygmunt Bauman, *Memories of Class*, London: Routledge (1982).

Being 'albino' provoked attempts by Spooner and Lowe to understand the nature and extent of this bodily condition. In Lowe's assessment, his albinism was 'one of those subjects about which it is impossible to deceive oneself'.[102] Being 'albino' required Lowe and Spooner to adopt certain camouflaging tactics to divert, or even entirely diminish, association with weakness – due in part to these pressures of cultural and social conformity.[103] This camouflaging of the self is analysed alongside their social class, gender, education and character. However, the focus is primarily on their experiences and representations of their albinism.

This section provides a comparative analysis of Spooner and Lowe's course through life, paying particular attention to their family, education and employment. Spooner has attracted scant attention from historians, with the exception of his inadvertent and alleged 'spoonerisms'.[104] John M. Potter suggests some of Spooner's supposed 'spoonerisms', eccentricities, and absentmindedness in recognising people

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[102] Arthur Patchett Martin, *Life and Letters of the right honourable Robert Lowe*, London; New York: Longman's, Green and Co. (1893), p. 3.

[103] Historical scholarship on disability and Victorian culture and society is quite extensive. For example see: Lillian E. Craton, *The Victorian Freak Show: the significance of disability and physical differences in nineteenth-century fiction*, Amherst, NY: Cambria Press (2009); Iain Hutchinson, *A History of Disability in Nineteenth-Century Scotland*, London: Edwin Mellen Press (2007); Anne Borsay, *Disability and Social Policy in Britain since 1750: a history of* exclusion, Basingstoke: Palgrave Macmillan (2005); Gordon Charles Cook, *Victorian Incurables: a history of the Royal Hospital for Neuro-Disability, Putney*, Spennymoor, Durham: Memoir Club (2004); Martha Stoddard Holmes, *Fictions of Affliction: physical disability in Victorian Culture*, Ann Arbor, Michigan: University of Michigan Press (2004); Mary Klages, *Woeful Afflictions: disability and sentimentality in Victorian America*, Philadelphia: University of Pennsylvania Press (1999); Iain Davidson, Gary Woodill, Elizabeth Bredberg (eds.), 'Images of disability in nineteenth-century children's literature', *Disability and Society*, vol. 9, no. 1 (1994), pp. 33-46.

[104] According to the OED, Spoonerism – 'the accidental transposition of the initial sounds, or other parts, of two or more words' – was in use from 1885 in Oxford. William Hayter is responsible for the only biography of Spooner's life. It gives a detailed, if historically narrow, portrait of Spooner from his childhood through to the major part of his life at Oxford University. See: William Hayter, *Spooner: a biography*, London: Allen (1977). Spooner has primarily attracted attention for his alleged 'spoonerisms'. See: John M. Potter, 'What was the matter with Dr. Spooner', in Victoria A. Fromkin (ed.), *Errors in Linguistic Performance: slips of the tongue, ear, pen and hand*, New York: Academic Press (1981).

could be due to his severely impaired vision.[105] As evidenced below, this was surely the case. In terms of character, Spooner's biographer William Hayter concluded that, 'Spooner was an essentially modest man, with a quite humble estimate of his own intellectual capacity'.[106] Hayter's assessment of Spooner is fair, and less tainted by exaggeration and caricature. Hayter does, however, neglect to comment on Spooner's undoubted physical and psychological strain caused by his impaired vision and unusual appearance, which Spooner had to overcome and camouflage in order to pursue a life as a successful university don.

Spooner was born on July 22, 1844.[107] The family home was at 17 Chapel Street, off Grovsner Place in London.[108] His father, William Spooner, a county court judge for North Staffordshire, was the son of another William Spooner, who was Archdeacon of Coventry.[109] In 1878, Spooner married Frances Wycliffe, the third daughter of Harvey Goodwin, Bishop of Carlisle.[110] William and Frances had seven children. The first two died in infancy, and the third was born with severe disabilities. Their only son to survive was named William Spooner.[111] The Spooners also had three daughters: Catherine, Rosemary and Ellen.[112] Unlike Lowe's apparent agnosticism, Spooner was an Anglican. He was consecrated Deacon in 1872 and priest in 1875. In 1899 Spooner was Appointed Honorary Canon of Christ Church.[113]

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[105] John M. Potter, 'What was the matter with Dr. Spooner', in Victoria A. Fromkin (ed.), *Errors in Linguistic Performance: slips of the tongue, ear, pen and hand*, New York: Academic Press (1981), p. 19.
[106] William Hayter, *Spooner: a biography*, London: Allen (1977), p. 62.
[107] Hayter, *Spooner: a biography* (1977), p. 18.
[108] Hayter (1977), p. 18.
[109] Hayter, p. 18.
[110] Hayter, p. 66.
[111] Hayter, p. 67.
[112] Hayter, p. 67.
[113] Hayter, p. 80.

Spooner's career as a scholar-churchman followed a recognised pattern in mid-century Victorian Britain: a sound educational schooling – in this case at Oswestry Grammar school – combined with a classics degree at New College, Oxford.[114] As with the majority of those elected to fellowships during this period, Spooner undertook a full-time career at New College that spanned over sixty years.[115] He was Fellow (1867), Lecturer (1868), Tutor (1869), Dean (1876–1889), and Warden (1903–1924).[116] Spooner lectured on ancient history, divinity and philosophy, and published two books: a well-received translation of Tacitus's *Histories,* and a biography of the now little known Bishop Butler.[117]

In contrast to Spooner's relative obscurity to posterity, the life and work of Robert Lowe has attracted considerable attention from historians of education, politics and Victorian Britain.[118] Lowe has also been subject to several comprehensive biographical and historical studies of his life, though none dealing

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[114] Michael Roper and John Tosh (eds.), *Manful Assertions: masculinities in Britain since 1800*, New York; London: Routledge (1991), p. 47. See also: David Newsome, *Godliness and Good Learning: four studies on a Victorian ideal*, London: John Murray (1961).
[115] H.S. Jones, *Intellect and Character in Victorian England: Mark Pattison and the invention of the Don*, Cambridge: Cambridge University Press (2007), pp. 2-3.
[116] William Hayter, *Spooner: a biography*, London: Allen (1977), p. 18.
[117] William Archibald Spooner, *The Histories of Tacitus*, London: Macmillan (1891); *Bishop Butler*, London: Methuen (1901); *Oxford in Arms: with an account of New College*, Oxford: Alden (1918). Spooner also contributed to the translation and annotation of Aristotle's moral philosophy. See: Edwin Hatch, Walter Mooney Hatch, William Archibald Spooner (eds.), *The Moral Philosophy of Aristotle: consisting of a translation of the Nicomachean ethics*, London: Murray (1879).
[118] For studies of Lowe and his politics see: Christopher John Ingham, *Liberalism Against Democracy: a study of the life, thought and work of Robert Lowe*, Thesis: Ph.D.: University of Leeds (2006); John Maloney, 'Robert Lowe, The Times and Political Economy', *Journal of the History of Economic Thought*, vol. 7, no. 1 March (2005), pp. 41-58; T.D.L. Morgan, *All For a Wise Despotism? Robert Lowe and the politics of meritocracy, 1852-1873*, Cambridge: Cambridge University Press (1983). For Lowe and his attempts at educational reform in Britain and Australia see: David William Sylvester, *Robert Lowe and Education*, London: Cambridge University Press (1974); C. Duke, 'Robert Lowe: a reappraisal', *British Journal of Educational Studies*, vol. 14, November (1965), pp. 19-35; Bertram Jeffrey Johnson, *The Development of English Education, 1856-1882, with special reference to the work of Robert Lowe*, Thesis: Ph.D.: Durham University (1956); J. Sullivan, *The Educational work and Thought of Robert Lowe*, Thesis: Ph.D.: Kings College London (1955). For Lowe and Victorian culture and society see: Asa Briggs, *Victorian People: some reassessments of people, ideas and institutions and events, 1851-1867*, London: Odham's Press (1954).

specifically with his albinism.[119] Lowe was born on December 4, 1811, in Bingham, a small town in the south of Nottinghamshire.[120] Lowe's father was Robert Lowe, Rector of Bingham and prebendary of Southwell.[121] His mother was Ellen Pyndar, the daughter of the Rev. Reginald Pyndar, Rector of Madresfield, Worcester.[122] Lowe recalls in the introductory remarks of his autobiography that, 'the living was a good one, and my father had some property of his own'.[123] He was the youngest of six children, which included an older sister who was also an 'albino'.[124]

In 1822, Lowe went to a school at Southwell for two years. He then spent a year at a school in Risley, Derbyshire.[125] In 1825, he enrolled as a commoner at Winchester: one of the most ancient and illustrious English public schools.[126] In fact, Lowe was fortunate to receive any education at all. His mother seemed sure he was not capable of attending school. Lowe recalled:

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[119] Martin and Hogan published biographical accounts of Lowe in his lifetime. Their work is more appreciation than well-balanced criticism, though Martin crucially includes an unfinished autobiography by Lowe. See: Arthur Patchett Martin, *Life and Letters of the right honourable Robert Lowe*, London; New York: Longman's, Green and Co. (1893); James Hogan, *Robert Lowe, Viscount Sherbrooke*, London: Ward and Downey (1893). For more balanced studies of Lowe's life and work see: Ruth Sear, *Robert Lowe and "Sherbrooke": the career and life of Robert Lowe*, Caterham-on-the-Hill: Bourne Society (1999); James Winter, *Robert Lowe*, Toronto, Buffalo: Toronto University Press (1976); Ruth Knight, *Illiberal liberal: Robert Lowe in New South Wales, 1842-1850*, Carlton: London (1966).
[120] Arthur Patchett Martin, *Life and Letters of the right honourable Robert Lowe*, London; New York: Longman's, Green and Co. (1893), p. 4.
[121] Martin, *Life and Letters of the right honourable Robert Lowe* (1893), p. 45.
[122] Ruth L. Knight, 'Lowe, Robert (1811-1892)', *Australian Dictionary of Biography*, Vol. 2, Melbourne University Press (1967), pp. 134-137.
[123] Martin (1893), p. 4.
[124] Martin, p. 4.
[125] Marin, p. 7.
[126]Lowe was a 'commoner' as he did not obtain a scholarship, nor was he of noble title or rank. For histories of Winchester College see: John Chandos, *Boys Together: English public schools, 1800-1864,* New Haven: Yale University Press (1984); Arthur Francis Leach, *A History of Winchester College*, London: Duckworth and Co. (1899).

> So great was the difficulty I found in the beginning of my career that my mother was of the opinion I was quite unfit to be sent to school, and that there was no chance for me in the open arena of life. Happily for me, my father formed a truer estimate of the case, and it was decided that the experiment should be tried.[127]

This was part of Lowe's father's 'experiment' to see if his son could succeed in this environment. Lowe remembers the anxieties he felt when first going to Winchester:

> A public school to a person laboring under such disabilities as I did was a crucial test under any circumstances, and Winchester, such as it was in my time, was an ordeal which a boy so singular in appearance, and so helpless in some respects as I was, might well have trembled to encounter.[128]

Nevertheless, academically he flourished at Winchester, and from 1829 he went to University College, Oxford, graduating in 1833 with a First Class in classics and a second class in mathematics.[129]

Lowe was a member of the House of Commons from 1852-1880, assuming the positions of Vice Chancellor from 1868-73, and Home Secretary under the premiership of William Gladstone.[130] In Robert Winter's assessment, Lowe was 'one

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[127] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's, Green and Co. (1893), p. 5.
[128] Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 (1893), p. 7.
[129] Martin (1893), p. 14.
[130] Lowe's rich and complex life as a politician is explored cogently by James Winter. Lowe entered politics through connections obtained through working for the *The Times.* He was made MP of Kidderminster in 1852. Lowe vehemently opposed the second reform bill of 1867, which called for the enfranchisement of all male property owners. For his speeches in the House of Commons see: Robert Lowe, *Speeches and Letters on Reform*, London (1867). For this era of British politics see: Paul Adelman, *Gladstone, Disraeli and later Victorian Politics*, London: Longman (1997); Jonathan Philip Parry, *Democracy and Religion: Gladstone and the religious party*, Cambridge: Cambridge University Press

of the most interesting and influential figures in the British parliament of his day'.[131] Before his career in politics, Lowe was Fellow at Magdalen College, Oxford, where he taught classics from 1835-1842.[132] He then shifted his focus to law; he was called to the bar in London in 1842 before emigrating to Australia, where he became a prominent advocate embroiled in calls for colonial reform.[133] Lowe returned to London, and in August 1850 until 1868 he accepted an offer to write leading articles, reviews and occasional pieces for the *Times* newspaper.[134]

There is substantial source material for historical analysis of Spooner. The richest source is the four typewritten chapters of Spooner's unpublished and incomplete autobiography, *Fifty Years in an Oxford College* (1912).[135] In the introduction, Spooner hoped his lengthy time at the university had given him:

> Considerable insight into College and University life as for more than forty-five out of the fifty (one) years, I have been Fellow or Warden of my college, conversant, therefore, with its concerns, and with the different phases of its relation to the University.[136]

Though Spooner's childhood is almost entirely ignored in his autobiographical portrait of himself, it does include his experiences of growing up with albinism at

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(1986); Maurice Cowling, *1867: Disraeli, Gladstone and Revolution: the passing of the second reform bill*, London: Cambridge University Press (1967).

[131] James Winter, *Robert Lowe*, Toronto; Buffalo: Toronto University Press (1976), p. i.

[132] Arthur Patchett Martin, *Life and Letters of the right honourable Robert Lowe*, London; New York: Longman's, Green and Co. (1893), p. 27.

[133] For Lowe and his time in Australia see: James Winter, *Robert Lowe*, Toronto; Buffalo: Toronto University Press (1976), pp. 17-56; Ruth Knight, *Illiberal Liberal: Robert Lowe in New South Wales, 1842-1850*, London; New York: Cambridge University Press (1966); F.R. Baker, *The Educational Efforts of Robert Lowe in New South Wales*, Sydney (1916); James Francis Hogan, *Robert Lowe, Viscount Sherbrooke*, London: Ward and Downey (1893).

[134] Lowe's former student at Oxford, John Thaddeus Delane, was instrumental in the appointment of Lowe at *The Times*. See: James Winter, *Robert Lowe*, Toronto (1976), p. 57.

[135] An unknown individual typed up Spooner's hand written original.

[136] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College* (1912), p. 1.

Oxford and beyond. Spooner also wrote two diaries between 1881-1883 and 1890-1925. According to Spooner he began his diaries:

> Because I forget many things which are interesting and which I should wish to remember and also because I think it may be a pleasure hereafter to myself and to others to look back upon things that I have done.[137]

Unfortunately, the diaries contain few reflections on personal matters; there still remain, however, a few vital illuminating passages.[138] In addition to the hand-written diaries, there are a series of typed letters that comprise a sort of journal charting his three-month long travels around South Africa in the summer of 1912.[139] In spite of Spooner's general reticence to share intimate details of his life, he does in all of these sources occasionally refer directly to his albinism, and the difficulties he faced with what he called his 'poor and defective eyesight'.[140]

Robert Lowe's writing, consisting of his autobiography only, is less varied in form, but richer in content. Lowe reflects at greater length than Spooner on his changing attitudes towards his albinism throughout a significant portion of his life. Lowe's experiences and representations of his albinism were recorded in this partially finished autobiography, which constitutes the first chapter of Martin's biography of Lowe.[141] The biography describes Lowe's writing as a 'rapid retrospect of his entire life' written out of pressure from 'many friends...to leave behind some

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[137] NCA PA/SPO 1/1: William Spooner, *Diaries*, 1881-1883, p. 1.
[138] William Hayter, *Spooner: a biography*, London: W.H. Allen (1977), p. 55.
[139] NCA 11336: W.A. Spooner, *Typed copy of Spooner's diary on a voyage to South Africa* (1912).
[140] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College*, p. 76.
[141] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 London; New York: Longman's, Green and Co. (1893), p. 3.

account of a life'.[142] Martin collaborated with Lowe on the biography while Lowe was still alive; he collected oral and written testimony from Lowe's family and friends, as Lowe did not preserve his own correspondence.[143]

Lowe's autobiography was planned to be significantly longer, and include his life as journalist and politician in Britain. But the second half of the typed manuscript was lost in the post when sent to Martin, and Lowe was apparently not interested or not capable of rewriting it for publication.[144] Lowe's autobiographical writing centres on three periods in his life. The first, and most detailed, is his childhood and early school days. The second section is concerned with his time at Oxford. The final third records a few details about his move to Australia, breaking off with brief reference to his political and journalistic endeavours in London. Each stage in Lowe's life is linked to 'the very great difficulties' he encountered with his 'defect of sight', which, '...those who have had no experience can form little idea'.[145] This idea that Lowe's difficulties with his eyesight were not fully appreciated by the people he met runs throughout his autobiography. For Lowe:

> Among all the difficulties with which it has been my lot to contend in a long and not uneventful life, the greatest, and the least appreciated by the public, was the defect of sight.[146]

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[142] Arthur Patchett Martin, *Life and Letters of the right honourable Robert Lowe*, London; New York: Longman's, Green and Co. (1893), p. 2.
[143] Martin, *Life and Letters of the right honourable Robert Lowe* (1893), p. 3.
[144] By this point Lowe had cataracts on both eyes, and his vision was rapidly deteriorating. Martin, p. 44.
[145] Martin (1893), p. 3.
[146] Martin, p. 42.

The tone of his writing seems to strike a chord of genuine remorse that he was not able to convey or reveal the daily challenges presented by his impaired vision during his working life.

These processes of 'albino' identity formation are composed of three broad overlapping stages. First, Spooner and Lowe comprehended their differences through the comments, reactions and expectations of their friends and family, especially at school and university. The second stage of learning to be 'albino' for Lowe and Spooner consisted of a period of deeper and sustained reflection about the ramifications of this condition within a wider social sphere. At this stage Spooner and Lowe explored possibilities for social camouflage in order to overcome the negative responses experienced during the first stage. The third and final stage involved the intervention of medical expertise, which added a further layer to Spooner and Lowe's 'albino' social identity and subjectivity. In this regard, Lowe was deeply affected by what turned out to be tragically false medical advice, fundamentally destabilizing his life for almost a decade. Spooner was less touched by any damaging medical advice, but he was still encouraged to take a potentially perilous journey abroad for health reasons.

Spooner and Lowe discovered their 'albino' social identity and unusual bodily condition at an early age. From Spooner's writing it is clear his childhood and schooling were difficult. He recalls in his diary that a visit to an Uncle's house in Leeds was, 'a place that brings back some of the few pleasant memories of my childhood'.[147] Though Spooner recalled these 'few pleasant memories' from visits to

[147] NCA PA/SPO 1/1: William Spooner, *Diaries*, 1881-1883.

his Uncle's, it seems home and elsewhere were likely a source of periodic unpleasantness, and possibly loneliness. Spooner was probably already acutely aware of his physical alterity, and compared himself unfavorably to his peers. The fact that Spooner does not assess his childhood in greater depth lends further credence to this line of argument that argues Spooner's life before Oxford was neither pleasant nor memorable. Beyond his pre-school years, however, there are more specific indications of Spooner's discontent with reactions by others to his unusual appearance. Of his peers at Oswestry grammar school, Spooner wrote that, 'the moral tone and gentle manly feeling of the boys was not always good; at times they became, when evil influences prevailed, deplorably bad'.[148] The 'evil influences' Spooner recalls reflects his theological interpretation for the source of his ill treatment at the hands of the other boys. The extent and reasons for this 'deplorably bad' behavior are not clear. However, it could be inferred from Lowe's experiences that Spooner was at least verbally taunted because of his unusual appearance and visual impairment.

Fortunately, Lowe wrote in far greater detail than Spooner about his adolescence, and the rapid development of his awareness of being 'albino'. Once at school at the age of thirteen, Lowe certainly was made starkly aware of his unusual appearance, and impaired vision. Lowe remembers he 'suffered so severely from torments of all kinds' at Winchester.[149] In his autobiography he wrote:

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[148] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College* (1912).
[149] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's, Green and Co. (1893), p. 3.

> The ordeal I had to go through was nevertheless really terrible...for the purposes of relieving the weary hours of enforced society I was invaluable. No one was so dull as to be unable to say something rather smart on my peculiarities, and my short sight offered almost complete immunity to my tormenters. This went on, as well as I can remember, for about a year and a half, and then, as even the most delightful amusements pall by repetition, it died out.[150]

In response to these provocations, rendered mostly invisible to his gaze by his impaired vision, Lowe apparently, 'never fought a battle...(and) never felt at the time or afterwards any ill-will towards my persecutors' because he claimed to never be 'deceived...as to my personal peculiarities'.[151] In short, though Lowe undoubtedly resented the harsh treatment he received from the other pupils, he understood and accepted that his 'peculiar' appearance inevitably attracted comment and scrutiny.

To compensate for his eyesight and 'peculiar' looks, Lowe focused his energies on developing the social camouflage required to be considered by his peers and his elders as a precocious scholar. Since Lowe could not read dictionaries, due to the text being too small, he trained his mind to remember Latin and Greek words and usages by memorizing and comparing passages that contained them. He received great encouragement and support from his tutor. Lowe wrote:

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[150] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1., London; New York: Longman's, Green and Co. (1893), p. 9.
[151] Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 (1893), pp. 9-10.

> I never shall forget the pleasure in the midst of all that I had to endure to find that there was some one, and that, a person placed so high above me, who did not despise me for being unlike other people, and who took a hearty interest in my success.[152]

Thus Lowe's voracious learning, spurred on by his tutor Mr. Wickham, helped Spooner to deflect, at least to a degree, associations his peers made with being 'albino' and being 'unlike other people'.

In spite of the evidence provided by Lowe's account, the extent of Spooner's abuse at school remains unclear, and therefore not necessarily analogous. Although any thoughts on his appearance at school are unavailable for analysis, Spooner's description of himself as an undergraduate is highly suggestive for understanding his attitudes towards his appearance as a teenager. He recalled that he was, 'small, and very boyish in appearance'.[153] Spooner was more concerned with his diminutive stature, and the possibility that he looked and acted 'young in his ways'.[154] Spooner wrote that one of his competitors for the scholarship at New College is said to have remarked: 'I do not mind who gets the scholarship, if that child does not'.[155] This anxiety about looking overly young subsided by the conclusion of his degree. Spooner wrote in his autobiography that, 'four years of undergraduate life...added to my age and the dignity of my appearance'.[156] In concurrence with Spooner, Lowe described his own appearance as being a 'very marked peculiarity of complexion,

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[152] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's, Green and Co. (1893), pp. 12-13.
[153] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College* (1912), p. 13.
[154] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College*, p. 13.
[155] NCA 11334: W.A. Spooner, p. 13.
[156] NCA 11334, p. 13.

amounting in early youth to something of effeminacy'.[157] But, just as with Spooner, Lowe found that this overly youthful and feminine appearance was removed with age, which was for Lowe, 'a sovereign cure'.[158]

For both men this absence of a manly exterior collided with prevailing attitudes in Victorian Britain, which prescribed the appearance and stature of a typical man. As a result, both men tried to camouflage associations with a feminine physique by deploying a willful, aspiring, and independent character. They both simultaneously hoped to avoid association with docility, domesticity and subservience: the hallmark of middle class Victorian femininity.[159] According to J.A. Mangan, such masculine ideals were a 'widely pervasive and inescapable feature of middle-class existence in Britain: in literature, education and politics.'[160] Lowe and Spooner had to live up to such Victorian ideals defining this 'cult of manliness'.[161] Interestingly, Lowe was not as profoundly affected by his albinism as his sister. He wrote that she was:

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[157] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's, Green and Co. (1893), p. 4.
[158] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 (1893), p. 4.
[159] James A. Mangan and James Walvin (eds.), *Manliness and Morality: middle-class masculinity in Britain and America*, 1800-1940, Manchester: Manchester University Press (1987), p. 4.
[160] Mangan and Walvin (eds.), *Manliness and Morality: middle-class masculinity in Britain and America* (1987), p. 2. See also: Martin A. Danahay, *Gender at Work in Victorian Culture: literature, art and masculinity*, Aldershot: Ashgate (2005); John Tosh, *A Man's Place: masculinity and the middle-class home in Victorian England*, New Haven, Conn.; London: Yale University press (1999); Herbert L. Sussman, *Victorian Masculinities: manhood and masculine poetics in early Victorian literature and art*, Cambridge: Cambridge University Press (1995); Norman Vance, *The Sinews of the Spirit: the ideal of Christian manliness in Victorian literature and religious thought*, Cambridge: Cambridge University Press (1985).
[161] Mangan and Walvin (eds.), p. 2.

> Very keenly alive to this misfortune...(and that) had I felt my peculiarities as she did, anything like public or even active life would have been to me an impossibility.[162]

This comparison with his sister suggests an 'albino' social identity was at this time profoundly altered by gender, though the evidence is unfortunately too scarce to draw any definitive conclusions. However, it is still worth considering the argument that Lowe's sister, who is not named in the autobiography, was perhaps less willing or able to relinquish fears of insufficiency associated with being 'albino'.

Spooner and Lowe found the transition to university a relief. However, this period also saw a decisive shift in their 'albino' social identity. Whereas at school there seemed a similar level of external animosity and unkindness from their students, at university this was not the case. Instead, both Spooner and Lowe became more acquainted with their own bodily condition, especially the possibilities and limitations presented by their eyesight. Spooner entered New College, Oxford in October 1862, after failing to enter Corpus Christi.[163] Spooner recalled certain lines of study were a struggle, such as mathematics, because of the barriers presented by his impaired vision. In the third chapter of his autobiography, Spooner recalled that:

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[162] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's, Green and Co. (1893), p. 4.
[163] William Hayter, *Spooner: a biography*, London: W.H. Allen (1977), p. 24.

> Professor Smith's Lectures were admirable; they represented a real advance in the subject; carried on lines, which he had himself devised and thought out. Unfortunately, the effect of them was a good deal marred for me by the formulae being written down on the blackboard. Lecturing of this kind, owing to my extremely defective sight, I have been always unable to follow.[164]

It seems Spooner was unable to raise this difficulty with Professor Smith, and thus suffered, to an extent, in silence. Spooner further compounds this line of argument when he wrote:

> In the matter of eyesight I am somewhat of an exception, yet I think teachers hardly realise how great an obstacle is put in the way of those who have poor and defective eyesight, by the use of blackboard and even lantern-slide illustrations.[165]

Spooner alludes here to a conundrum with revealing the 'great obstacle' he faced with his eyesight to his teachers. It seems he purposefully and reluctantly had to camouflage his inability to see demonstrations in lectures as he did not expect special treatment as an 'exception'. Nevertheless, though Spooner did not reveal his difficulties seeing the blackboard and lantern-slide illustrations during lectures, he did ensure his examiners were aware of his impaired vision. In the fourth chapter of his autobiography he wrote:

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[164] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College* (1912), p. 76.
[165] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College* (1912), p. 76.

> The examination still took place in the old schools under the Bodleian library, in dark and unwarmed rooms. Being short-sighted, I had to apply for a special place to be assigned to me near a window. This was kindly done; but the nearness to the window, while it gave me more light, brought also an access of cold, and on one or two days I suffered greatly.[166]

That Spooner had to 'apply for a special place' indicates any accommodations for his visual impairment by the university had to be made through his own entreaties for aid. Furthermore, that his request was 'kindly done' suggests Spooner saw the decision to allow him this seat near the window as a generous concession and not as a right or a matter of straightforward procedure.

Lowe encountered similar problems to Spooner with mathematics and impaired vision. In his autobiography he recalled:

> I had no decided aptitude for mathematics, and I could not have selected any study in which my defective sight told so heavily against me. Small diagrams and figures were to me a species of torture; they absorbed in the effort to see them the attention that was needed to understand them.[167]

Lowe's difficulties with mathematics stretched further than reading the material. He also found that when he came to write down his method, 'it was a great triumph if I could make my writing intelligible to myself and very improbably that I should make it intelligible to others'.[168]

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[166] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College*, p. 77.
[167] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's, Green and Co. (1893), p. 15.
[168] Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 (1893), p. 15.

Lowe and Spooner's attitudes about their appearance were no doubt shaped by responses from social encounters and representations at school and university. However, another source for their social identity came from increased exposure to the public in newspapers and magazines. Spooner's contemporaries tended to exaggerate and caricature his impaired vision and his unusually white complexion. For instance, in the opinion of William Hayter, biographer and contemporary to Spooner:

> All his life, Spooner looked like a white-haired baby. His appearance hardly changed. He was small, pink-faced and an albino, with a disproportionately large head and very short-sighted pale blue eyes.[169]

This description of Spooner as a 'baby' is impossible to verify with photographs or images of Spooner as a child or teenager as none survive for examination. But the earliest image of Spooner, taken when he was an undergraduate at Oxford in 1865, reveals a distinguished young man, who seems to differ much less from his peers than Hayter's description, or even Spooner's own feelings about his overly youthful appearance (Fig. 25).

Nevertheless, a number of caricatures of Spooner do exist, especially from his time at university. The first is an undated representation of Spooner literally and metaphorically dancing to the tune of two musicians for the apparent entertainment of Thomas Banks Strong (1861-1944) (Fig. 26). Strong was bishop at Oxford, and thus suggests Spooner was keen to influence him for a now lost reason, though it was perhaps due to Spooner's ambition to rise in the ranks of the

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[169] William Hayter, *Spooner: a biography*, London: W.H. Allen (1977), p. 18.

Fig. 25: William Archibald Spooner as an undergraduate at New College, Oxford, c. 1865 in William Hayter, *Spooner: a biography*, London: W.H. Allen (1977), p. 19.

Fig. 26: Cartoon 'Cakewalk Competition' showing William Spooner, Thomas Banks Strong, and other senior members of the university in New College, Oxford, Archives, *Spooner Papers*: 11755.

church.[170] It is likely, however, that the image does not mock Spooner for his albinism, as the disproportionately large head and reduction of height are a hallmark of such cartoons, especially in *Vanity Fair*, *Punch* and *Figaro*.[171]

Certain of the other caricatures of Spooner are less ambiguous in terms of what is being represented. For instance in 1898 *Vanity Fair* magazine published an image of Spooner stooping over a book on a slanted table (See. Fig. 27). His glasses are almost pressed to the page, showing the way Spooner used to read, possibly during his lectures. This was not an exaggeration, as Spooner's eyesight required getting very near whatever he was reading. Furthermore, it is likely Spooner's representation fitted into broader conventions deployed by *Vanity Fair* to depict public figures.

Even so, this does not refute the possibility that Spooner's impaired vision is derided for the amusement of readers. The notion that Spooner's albinism was secondary to a primary message seems the best explanation however. This sense that albinism was not being ridiculed outright is born out in a *Vanity Fair* caricature of Robert Lowe from 1869. In this image, Lowe is derided for opposing the full franchise as part of the second Bill of Rights whilst professing to be philosophically liberal (see Fig. 28). His albinism seems to be of little importance in this instance. However, in an edition of *Figaro* from December 3, 1873, Lowe is represented in a

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[170] Ellie Clewlow, 'Strong, Thomas Banks (1861-1944)', *Oxford Dictionary of National Biography*, September (2004).
[171] Martha Banta, *Barbaric Intercourse: caricature and the culture of conduct,1841-1936,* Chicago; London: University of Chicago Press (2003); Diana Donald, *The Age of Caricature*, New Haven; London: Yale University Press (1996); Michael Wynn Jones, *The Cartoon History of Britain*, London: Tom Stacey (1971).

Fig. 27: Cartoon by Leslie Ward (Spy) for *Vanity Fair (*1898).

Fig. 28: Cartoon of Viscount Robert Lowe as 'Statesmen No. 4' by Carlo Pellegrini in *Vanity Fair*, February 27 (1869).

similar fashion to Spooner, where he is shown to be reading some papers pressed up close to his eyes (Fig. 29).

Thus the representation of Spooner and Lowe's albinism in these caricatures seems to a great extent incidental to the intentions of the artists involved, even if there remains an element of unquestionable ambiguity about the underlying representation of their albinism. Beyond such representations and caricatures, Lowe certainly did not revel in his 'albino' social identify, and found his bodily condition increasingly challenging throughout his life. At the beginning of his autobiography he recounts, 'I had the misfortune...to be what is called an albino'.[172] Even addressing the subject at all left him with a 'feeling of reluctance, to discourse on (my) physical defects and infirmities'.[173] Lowe does refer also to the physical pain he did experience as a consequence of his sensitivity to bright light. He wrote:

> Of course this intolerance of light must be attended with something very closely approaching to pain. I cannot even conceive the state of a person to whom sight is a function free from all pain and distress, but as I have no standard to measure by I may perhaps exaggerate my own misfortune.[174]

Here Lowe highlights the extent to which he felt it was taxing to explain exactly what he could see and how this way of seeing should feel. He emphasizes the distance between his own perceptions of the world and the vision of a 'person to whom sight is a function free from all pain and distress'.

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[172] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's, Green and Co. (1893), p. 4.
[173] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York (1893), p. 4.
[174] Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 (1893), p. 5.

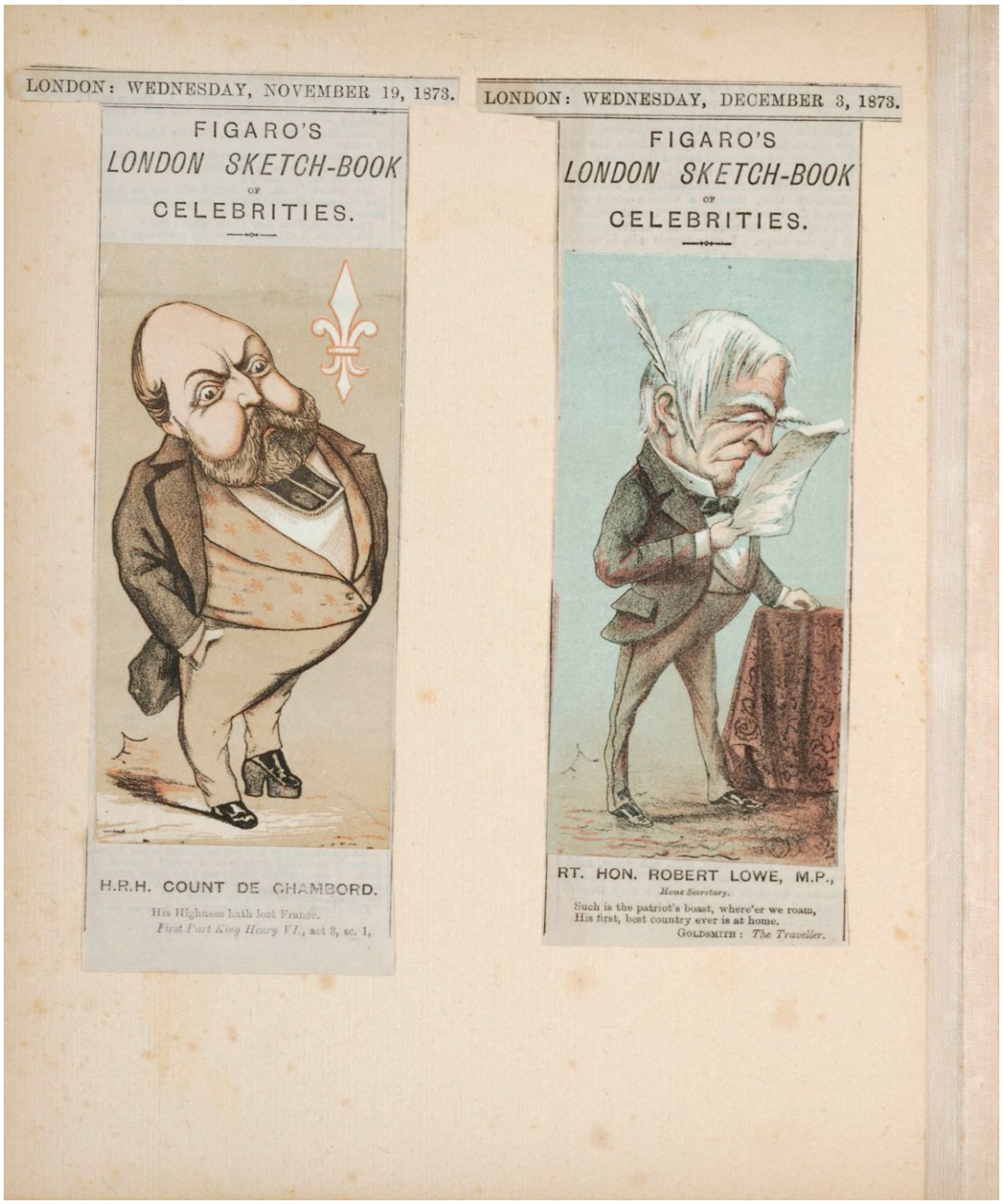

Fig. 29: Cartoon of Robert Lowe as part of a feature on 'Figaro's London Sketchbook of celebrities', *Figaro*, December 3 (1873).

Lowe reacted to his albinism, nevertheless, with a certain level of defiance, and made clear that he had 'some compensation for many deficiencies: excellent health, good spirits, an easy temper, and a heart, which has never failed me in all my trials and difficulties'.[175]

After university, around 1838, Lowe noticed his vision began to fail, and he was unable to read by candlelight. He recalled that, 'about this time my eyes gave me very distinct notice that I must give up all idea of reading by candlelight'.[176] For Lowe, this caused 'very great distress to me, as it cut me off from what has always been my greatest pleasure'.[177] This period marks the final stage in the evolution of Lowe's 'albino' subjectivity. The 'distress' Lowe experienced meant that he required reassurance of just how much his eyesight would diminish over the years. He therefore sought advice from the cream of London's ophthalmological expertise – Lawrence, Benjamin Travers, and Alexander – who emphasized his eyesight would fail in seven years if he did not move to Australia or New Zealand and take up work outdoors.[178] According to his autobiography, Lowe claims never to have been examined by a doctor or an ophthalmologist. He wrote:

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[175] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's , Green and Co. (1893), p. 6.
[176] Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 (1893), p. 33.
[177] Martin (1893), p. 33.
[178] Benjamin Travers was certainly at the cutting edge of British ophthalmological treatment at the time. He published a celebrated treatise entitled *A Synopsis of the Diseases of the Eye, and their Treatment: to which are prefixed, a short anatomical description and a sketch of the physiology of that organ*, London: E. Bliss and E. White (1825). Travers was surgeon to the East India Company, demonstrator of anatomy at Guy's Hospital, and surgeon to the London Infirmary for curing diseases of the eye. See: 'Mr Travers', *The Lancet,* vol. 24, issue 623, 8 August (1835), p. 615. For Lowe's account of this event see: Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 (1893), p. 36.

> Resolved to do that which, if it was to be of any use, I ought to have done long before, to take the best advice I could get as to the probability that if business came, I should be able to do it. I consulted Lawrence, Travers, and Alexander. They said that I should become blind in seven years, recommended out-of-doors employment, and spoke of Australia or New Zealand as suitable places for the purpose.[179]

James Winter questions Lowe's description of this medical advice, and argues his explanation is at best disingenuous, and at worst entirely fabricated. It is useful to quote his contention in full:

> Even allowing for the fact that early Victorian doctors often suggested eccentric remedies, the recommendation of bright sunlight for unpigmented eyes seems so bizarre that one is tempted to accuse Lowe of wanting to disguise the real reason for deciding to move to Australia. The reason was surely economic. Wealth and position were to be won at the English Bar, if at all, only by long apprenticeship; in a new community quick success was possible.[180]

Perhaps Lowe pondered the economic advantages offered by Australia, but there is absolutely no doubt from his autobiography that these recommendations made to him about his health were not used as a disguise. In fact, the advice Lowe received profoundly altered the course of his life. This is clear in the following passage:

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[179] Arthur Patchett Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1, London; New York: Longman's , Green and Co. (1893), p. 36.
[180] James Winter, *Robert Lowe*, Toronto; Buffalo: Toronto University Press (1976), p. 16.

> This strange advice, as I may now by the light of experience presume to call it, entirely subverted and demolished the whole plan of my life. It is not very difficult to imagine the bitterness of such a revelation: to be told at eight-and-twenty that I had only seven more years of sight, and to think of the long night that lay beyond it was bad enough; but the reflection that the object which I had struggled through a thousand difficulties with such intense labour to attain was lost to me, was almost as bitter.[181]

Thus, on June 28, 1839, Lowe and his wife set sail for New South Wales on a ship called the Aden.[182] Lowe trusted the diagnosis and treatment, since he never imagined 'such great authorities could possibly be entirely wrong in a matter on which they spoke with such confidence and (with) so much precision'.[183]

The idea that health could be restored or preserved through travel abroad is significant in medical research and individual life writing penned in nineteenth-century Britain. In many cases such accounts lauded the 'medicinal value of motion', though the medical community never reached complete consensus on this subject.[184] Nevertheless, both Lowe and Spooner were advised by medical men to travel abroad for the sake of their health. At the beginning of 1912, Spooner records in his autobiography that 'in the Summer Term of 1912, when I went for a voyage to South

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[181] Arthur Patchett Martin, *Life and Letters of the right honourable Robert Lowe*, vol. 1, London; New York: Longman's, Green and Co. (1893), p. 36.
[182] Martin, *Life and Letters of the Right Honourable Robert Lowe*, vol. 1 (1893), p. 37.
[183] Martin, p. 36.
[184] Maria H. Frawley, *Invalidism and Identity in Nineteenth-Century Britain*, Chicago; London: University of Chicago Press (2004), p. 114.

Africa on grounds of health'.[185] It is likely Spooner was diagnosed with a psychological ailment related to 'over exhaustion' or a 'mental 'anxiety' of some kind.[186] In Spooner's journal of the voyage he claims to have had 'a beautiful holiday, and I am all the better for it, though I do not think I was very ill when I started'.[187] He could not therefore have had tuberculosis or any other serious disease. Additionally, several months into his trip, Spooner records in his journal that, 'everyone tells me that I am looking a picture of health'.[188]

To be 'albino' provoked external and internal conflict for Lowe and Spooner with nineteenth-century British socio-cultural practices. British Victorian society set up particular criteria and expectations about what it meant to be a successful man, especially within formative institutions of education.[189] In this regard, Lowe and Spooner did not fit archetypes of Victorian manliness mapped out in the historiography of nineteenth-century Britain.[190] Lowe and Spooner's written selves offer a novel insight on an unconventional and mutable identity. Above all, their albinism seems to function as a nascent disability, a corporeal condition, internally

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[185] NCA 11334: W.A. Spooner, *Fifty Years in an Oxford College* (1912), p. 1.
[186] For instance, in the *Climate of Italy in Relation to Pulmonary Consumption: with remarks on the influence of Foreign Climates upon invalids* (1852) the physician Thomas Burgess argued: 'Change of scene may, and does, produce good effects in nervous and dyspeptic invalids, or upon those exhausted by overexertion, shock, or mental anxiety...but what benefits it can accomplish in patients with organic disease, like tubercular consumption in an advanced stage, I am at a loss to conceive'.
[187] NCA 11336: W.A. Spooner, *Typed copy of Spooner's diary on a voyage to South Africa* (1912).
[188] NCA 11336: W.A. Spooner, *Typed copy of Spooner's diary on a voyage to South Africa* (1912).
[189] For Norman Vance, the history of the 'ideal of manliness' is also the history of the Victorian age. See: Brian Simon and Ian Bradley (eds.), *The Victorian Public School: studies in the development of an educational institution*, Gill and Macmillan: Dublin (1975).
[190] The breadth of scholarship on the subject of manliness and education seems to bare this claim out. See: James Mangan and James Walvin (eds.), *Manliness and morality: middle-class masculinity in Britain and America*, Manchester: Manchester University Press (1987); John Chandos, *Boys Together: English public schools, 1800-1864*, London: Hutchinson (1984); James Mangan, *Athleticism in the Victorian and Edwardian Public School: the Emergence and Consolidation of an Educational Ideology*, Cambridge: Cambridge University Press (1981); George Macdonald Fraser, *The World of the Public School*, London: Weidenfeld and Nicholson (1977); Alicia Percival, *Very Superior Men: some early public school headmasters and their achievements*, London: C. Knight (1973).

experienced, and externally fashioned as a distinct, malleable and reflexive social identity.

Conclusion

In each case studied in this research, medicine and medical knowledge serve up a relationship with people with albinism fraught with ambiguity. Sachs for instance embraces and even enhances existing medical knowledge about his condition in order to situate his 'bodily condition' within prevailing ideas about disease and illness in early nineteenth-century Germany. For Thompson, a diagnosis from Pearson's potentially authoritative standpoint may have given him the reassurance he had searched for during his whole life. As for Spooner, he relates very few instances where his albinism was interpreted medically, whilst Lowe, as has been seen, claims to have had something close to an existential crisis due to what he later learnt was a mistaken prescription for his failing eyesight. Thus the idea that a process of 'medicalisation' involved a straightforward exertion of power from medical knowledge or medical practitioners onto patients or subjects is difficult to defend in light of this evidence.

In broader terms, this research highlights the importance of albinism and people with albinism for the historiographies of disability, race, class and gender throughout the nineteenth and early twentieth century. The fundamental reason for the relevance of the 'albino', as a case for historical study, lies in the question of evolving identity and subjectivity. The intermingling of albinism with class, gender and disability seems to result in some potentially insoluble questions about what constitutes notions of difference and distinction in particular socio-cultural spheres.

There is, nevertheless, strong evidence to suggest the process of social camouflage – of hiding or reducing associations with weakness – were vital to the success in life achieved by Lowe and Spooner. Perhaps, therefore, albinism is indeed a nascent disability, sitting at one end of a spectrum of physical and psychological impairments. It can be masked, but its effects – impairment of vision and an unusually white complexion – are never entirely erased, in spite of many successful attempts at camouflage in particular situations.

General Conclusion

The rise of modern medico-scientific discourses about albinism redefined this bodily condition along pathological lines. Pre-medical definitions for unusual whiteness in the seventeenth and eighteenth century shifted to a new nineteenth-century paradigm in medicine. Medical and ophthalmological practitioners located an absence of pigmentation and an impairment of vision in a raft of 'albino' patients. From the second half of the nineteenth century, biological thought and experimentation concerning heredity further tethered the rare instances of albinism to controversies about its transmission and value in national populations.

The three malleable ways of knowing people with albinism traced in this thesis – the monster, the medical patient, the experimental subject – clearly proved resilient and left indelible marks on the social identities of people with albinism. To a great extent each epistemological era concords with John V. Pickstone's three-pronged historical framework for the ways of classifying, analyzing and experimenting in western science, technology and medicine.[1] However, the intensity and penetration of these ideas fluctuated greatly in the face of individual resistance. The impact of pathological discourses on the lives and experiences of those living with this condition was variegated and contested. Albinism seems therefore to offer an alternative perspective for the history of medicine and disability identity formation. Whereas histories of medicine and disability chart the widespread segregation, struggle and exclusion of blind, deaf and mentally ill people in nineteenth-century society, this cannot be claimed for the cases presented by

[1] John V. Pickstone, *Ways of Knowing: a new history of science, technology, and medicine*, Manchester: Manchester University Press (2000), p. 2.

albinism.[2] As demonstrated by James Thompson and Robert Lowe, who sit at opposite ends of the social spectrum, the influence of albinism as pathological identity was at least partially dependent on social class and educational opportunities.

There are two important developments for the history of albinism that emerged out of the two centuries of this dialectic between medico-scientific knowledge about albinism and the making of 'albino' identities. First, Karl Pearson and Charles Davenport's eugenic research fed directly into German racial science studies of the 1920s. Pearson had tentatively argued for the quantification and evaluation of albinism in the British population, but he seems to have been reluctant to make his calls for eugenic action against people with albinism too explicit; he probably feared undermining his claims for his biometric method and his Ancestral theory of heredity. Researchers at the *Kaiser Wilhelm Institute for Anthropology, Heredity, and Eugenics* in Berlin, however, were less reluctant to associate albinism with hereditary 'defect'.[3] Erwin Bauer, Eugen Fischer and Fritz Lenz cited Pearson's research into albinism in their *Grundriss der Menschlichen Erblichkeitslehre und*

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[2] For histories of the exclusion of the deaf in nineteenth-century society: Jan Branson and Don Millar (eds.), *Damned for their Difference: the cultural construction of deaf people as disabled*, Washington: Gallaudet University Press (2002); John Vickery Van Cleve, *Deaf History Unveiled: interpretations from the new scholarship*, Washington: Gallaudet University Press (1993). The historiography on mental health and institutionalization in nineteenth-century Europe is vast. See: Andrew Scull, *The Insanity of Place, The Place of Insanity: essays on the history of psychiatry*, London; New York: Routledge (2006); Roy Porter and David Wright (eds.), *The Confinement of the Insane: international perspectives, 1800-1965*, Cambridge: Cambridge University Press (2003); William F. Bynum and Roy Porter (eds.), *The Anatomy of Madness: essays in the history of psychiatry*, London: Routledge (1985); Michel Foucault, *History of Madness*, London: Routledge (2009), first published as *Folie et déraison: histoire de la folie à l'âge classique*, Paris: Plon (1961).

[3] For the history of the Kaiser Wilhelm Institute see: Hans Walter Schmuhl, *The Kaiser Wilhelm Institute for Anthropology, Human Heredity and Eugenics*, Dordrecht: Springer (2008).

Rassenhygiene (1921).[4] The Nazi party eventually took up Bauer, Fischer and Lenz's racial hygiene manual in the late 1930s, and the three men obtained party membership in 1937.[5] It had already gone through several editions and been translated into English by 1931. Awareness of exploitative and forced experiments on humans by Nazi doctors and scientists has revealed similar practices took place in the past in Japan and the United States.[6] Whether this occurred with subjects with albinism is unclear at this state. It is apparent, nevertheless, that the early twentieth-century quest to solve the mysteries of heredity had profound and dark consequences for people with albinism, which requires further consideration and research at a later stage.

The second major development comprised the simultaneous rejection and expropriation of an 'albino' identity by individuals with the condition in the disability civil rights movements in the 1970s. In the case of Drummond Cameron, being 'albino' was not a problem, but it was the way medicine and society interpreted the boundaries of ability for people with this condition in British society. Cameron believed his 'experience' about his condition offered far greater insight into what it means to be 'albino'. In contrast to his pathological designation in medicine, Cameron argued his life was entirely 'normal'.[7] Cameron stressed he had, 'no idea

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[4] Erwin Bauer, Eugen Fischer and Fritz Lenz, *Grundriss der Menschlichen Erblichkeitslehre und Rassenhygiene*, Munich: J.F. Lehmann (1921). The reference to Pearson and his biometric study of albinism appears in the English edition of 1931: Erwin Bauer, Eugen Fischer and Fritz Lenz, *Human Heredity*, London; New York: George Allen and Unwin (1931), p. 224.
[5] Hans Walter Schmuhl, *The Kaiser Wilhelm Institute for Anthropology, Human Heredity and Eugenics*, Dordrecht: Springer (2008), p. 308.
[6] For the history of human experimentation in Japan, the United States and other nations see: William R., LaFleur, Gernot Böhme, Susumoo Shimazono (eds.), *Dark Medicine: rationalising unethical medical research*, Bloomington: Indiana University Press (2007).
[7] Drummond Cameron, 'On Being an Albino: a personal account', *British Medical Journal*, vol. 1 (1979), p. 28.

whatsoever what "normal" vision is like…(he therefore had) no basis for arguing that I could or couldn't do things that I have not had the inclination to try'.[8] Thus Cameron's concerns about 'albinos' being needlessly excluded from various areas of society came from his own experiences.

During his childhood, Cameron encountered occasional barriers, especially at school. Cameron recalls being told he 'could not do particular things…someone made that assumption for me'.[9] For instance, for many years an, 'intolerant games master precluded my participation in organized school sports'.[10] To challenge these 'assumptions', and to give greater agency to other 'albinos', Cameron wanted to, 'encourage contact between albinos', and give, 'advice and encouragement to young albinos and their families to ensure that their chance to follow pursuits that they are quite capable of is not denied to them'.[11] In essence, Cameron saw the need for an 'albino' community, a place to share experiences and knowledge about the complex corporeal reality of living as an 'albino'.

When Cameron met his ophthalmologist William Oswald Gibson Taylor (1912-1989) as a patient in 1979, his vision of a support network for 'albinos' became a reality. Taylor was interested in various ophthalmological aspects of albinism, but after discussions with Cameron, realized accurate information about living as an 'albino' was difficult to obtain both for professionals and for 'albinos' themselves.[12]

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[8] Cameron, 'On Being an Albino: a personal account' (1979), p. 28.
[9] Cameron (1979), p. 28.
[10] Cameron, p. 28.
[11] Cameron, p. 29.
[12] Taylor published several ophthalmological and medical papers on albinism. See: W.O.G. Taylor, 'Albinism and Colour Defects', *Modern Problems in Ophthalmology*, vol. 17 (1974), pp. 292-298; 'Visual Disabilities of Oculo-cutaneous Albinism and their alleviation', *Ophthalmological Society*, vol. 98 (1978), pp. 423-445.

Thus, Taylor founded the 'Albino Fellowship' on Wednesday June 27, 1979, on the premises of the Royal College of Physicians and Surgeons of Glasgow.[13] Taylor echoed Cameron's desire to use the fellowship to challenge 'erroneous assumptions' of 'over-protective parents, obstructive teachers and uninformed employers'.[14] Taylor also developed the fellowship to broaden ophthalmological knowledge about albinism.[15] The collaboration between Taylor and Cameron marks a point of confluence between medical consciousness-raising and disability identity politics.

With the foundation of the fellowship, Taylor and Cameron looked to transform existing social and medical perceptions of the abilities of 'albinos' through a network of mutual support. The 'Albino Fellowship' sparked the foundation of similar organizations across the world such as the 'National Organization for Albinism and Hypopigmentation' (NOAH) in the United States in 1982.[16] The 'Albino Fellowship' still exists today – run by people with albinism – and renamed the 'Albinism Fellowship'.[17] The fellowship sprang up within the rising radicalism of the global disability advocacy movements from the mid 1970s, which sought to redefine disability away from biological lack, and towards social and cultural inclusion.[18]

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[13] W.O.G. Taylor, 'Albino Fellowship: a new kind of welfare organization?', *Practitioner*, vol. 224 (1980), p. 1184.
[14] Taylor, 'Albino Fellowship: a new kind of welfare organization?'(1980), p. 1184.
[15] Along with the Fellowship's publicity of albinism, Taylor continued to publish articles advising on treatments for 'albinos'. See: W.O.G. Taylor, 'How the GP can Best Manage the Albino Patient in Practice', *Pulse*, vol. 42, March 13 (1982), pp. 64-65; 'Aiding the Vision in Albinism: optical and non-optical means considered', *Transactions of the Ophthalmological Society*, vol. 104 (1985), pp. 309-314.
[16] For the NOAH website see link: www.albinism.org
[17] See the Albinism Fellowship UK website see link: www.albinism.org.uk
[18] Diane Driedger, *The Last Civil Rights Movement: disabled peoples' international*, London: Hurst and Co. (1989), p. 1. For a global overview of disability rights see: James I. Charlton, *Nothing About Us Without Us: disability oppression and empowerment*, California, University of California Press (2000). For a history of disability rights in the Ukraine see: Sarah D. Phillips, *Disability and Mobile Citizenship in*

This thesis marks an important starting point for developing an even richer social and cultural history of albinism. There is much that could not be included. Albinism and the figure of the albino continue to endure in many areas of western culture. This unusually white appearance has provoked varied responses from writers and thinkers. For example, in the second half of the twentieth century, 'albino' characters featured prominently in Hollywood cinema. Scriptwriters and directors primarily depict the 'albino' as sinister or malevolent.[19] In literature, the representation of characters with albinism shares this tendency to associate it with evil and criminality.[20] However, in the novels of Michael Moorcock, the hero is 'albino', which subverts this otherwise prevalent practice of using albinism as a disturbing marker of difference.[21]

Beyond representations of albinism in western culture, there are many questions to explore about the place and status of people with albinism in societies across the world. For example, from May 2007 to July 2008 scores of civilian albinos were murdered and mutilated by gangs of men in parts of rural Tanzania, Burundi and the Congo. The western media report the increasingly widespread use of 'albino' body parts is attributable to an underground market where these rare

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Postsocialist Ukraine, Bloomington: Indiana University Press (2011). For comparative study of the history of disability rights in Canada and Britain see: Lisa Vanhala, *Making Rights a Reality disability rights activists and legal mobilization*, Cambridge; New York: Cambridge University Press (2011).

[19]For a selection of villainous or evil characters with Albinism see: *The Da Vinci Code* (2006), *The Matrix: Reloaded* (2003), *Cold Mountain* (2003), *The Time Machine* (2002), *End of Days* (1999), *Contact* (1997), *The Firm* (1993), *Lethal Weapon* (1987)

[20] For a selection of more prominent characters in western literature with Albinism, or characters described as having the symptoms of Albinism see: H.G. Wells, *The Invisible Man*, London (1897), Harper Lee, *To Kill A* Mockingbird (1960), Michael Moorcock, *The Twilight Man (1966); Elric of Melnibone* (1970), Cormac McCarthy, *Blood Meridian* (1985), Iain Lawrence, *Ghost* Boy (2000), Dan Brown, *The Da Vinci Code* (2003).

[21] Michael Moorcock, *The Twilight Man (1966); Elric of Melnibone* (1970),

ingredients are used by witch doctors in their medicine to bring luck to impoverished fishermen and miners.[22]

This study has provided a new perspective for the meanings of whiteness in occidental culture through the prism of unusually white people. This extreme or reversed whiteness is potentially analogous with blackness in that it poses many provocative questions about the way humans respond to visible chromatic difference in the body. As American author Herman Melville observed in his novel *Moby Dick* (1851) there is a potentially unsolvable riddle shrouding knowledge of exactly why people with albinism have attracted such sustained scrutiny in cultural forms and social circumstances. In a passage on 'the whiteness of the whale', Melville wrote:

> What is it that in the Albino man so peculiarly repels and often shocks the eye. Is it the whiteness that invests him, a thing expressed by the name he bares. The Albino is as well made as other men – has no substantive deformity…Is it that as an essence, whiteness is not so much a colour as the visible absence of colour, and, at the same time, the concrete of all colours; is it for these reasons that there is such a dumb blankness, full of meaning…a colourless, all-colour of atheism from which we shrink.[23]

This paradox outlined by Melville - haunting the way meaning is inscribed to the 'albino' – is perhaps an apt way to conclude this thesis. There is no stable definition

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[22] See: George Obulutsa, 'Albinos killed for their body parts', *The Scotsman*, November 4 (2008), 'Albinos, long shunned, face threat in Tanzania', *New York Times*, June 8 (2008), 'Living in Fear: Tanzania's Albinos', *BBC News*, July 21 (2008)
[23] Herman Melville, *Moby-Dick; or, The Whale*, London: Richard Bentley (1851), p. 186.

of albinism. As Melville rightly points out, its ubiquity and ambiguity arises from it being a sort of primordial whiteness, a complexion that redraws the boundaries of whiteness. This whiteness of albinism is so noticeably different from the majority. An historical understanding of albinism thus reveals just how significant this provocative difference was for the development of western medicine, science and culture. Whenever and wherever this difference is named, defined, classified and compared, it always mirrors back prevalent cultural and social ideas about beauty, disease, health, death and difference. To fully comprehend the forces governing this sustained fascination and repulsion with albinism and the 'albino' may be an attainable task. Nevertheless, it is hoped this research opens up many new questions and avenues for historians in the fields of medicine, race, disability and modernity.

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5. Online Archives and Resources

Albinism Fellowship: www.albinism.org.uk

Eighteenth Century Collection Online

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FreeBMD: *England & Wales, Death Index: 1837-1983.*

National Organisation of Albinism and Hypopigmentation (NOAH): www.albinism.org

The Life and Letters of Francis Galton: www.Galton.org