



I use this biographical note to describe how I succeeded in doing something no-one has done before me. I solved the problem Charles Darwin left behind him and found the long sought for logical proof for his theory of evolution.

The leap towards a new solution is rarely linear. My success came by taking a somewhat circuitous path. If I borrow a title from my old tutor, Peter Singer, one of the premier philosophers of our time, then it was the fruit of an exercise in a *Practical Ethics* that begins in 1737 with Jacobus Capitein who travelled all the way from the Gold Coast to study at the University of Leiden. It continues with the young German Pietist Johannes Zimmerman who arrived in the Gold Coast in the mid-nineteenth century as a missionary for the Basel Mission which had been requested, by the Danish government, to oversee the spiritual welfare of the many “mulatto”, or mixed race, children fathered by the officers and men stationed at Fort Christiansborg. Once there, Zimmerman married Catherine Mulgrave. Originally born as Gewe, in Portuguese held Angola, she had arrived in the Gold Coast by way of Jamaica, so pointing to an important West Indian dimension. My path then continued with my good fortune in studying, while an undergraduate at University College, Oxford, with Singer. I garnered success in resolving Darwin because I could combine what I learned from him with what I learned from both my studies in Sanskrit and Indian Philosophy at Oxford University’s Indian Institute, and from my parents.

I came upon my proof of Darwinian evolution through what began as a deliberate exercise in what is called “situation ethics”. It is not that I agree with situation ethics, but I came on my proof after rereading *A Theory of Moral Sentiments* by Adam Smith, and as a part of my efforts to



FIGURE 2: Married in 1851, Catherine Zimmerman (née Mulgrave) and Johannes Zimmermann, who are pictured here with their five children and Zimmerman's cousin, were members of the Basel Mission. By the end of the nineteenth century, publicly recognized church-sanctioned intermarriages of this kind were almost unheard of. “The Zimmerman-Mulgrave Family,” unknown studio, 1872–1873, Ref. no. QS-30.002.0237.02. Basel Mission Archives/Basel Mission Holdings.

Johannes and Catherine Zimmerman and children



Jacobus Capitein, 1717–1747

refute some of Singer's arguments by stepping carefully through the alternatives (some of which I summarize at the end of this biography). Smith provided an important alternative. My proof of Darwin arose from my efforts to understand why Singer's ideas fail—in the exercise in his *Practical Ethics* that I put them through—to adequately explain the real life circumstances that anthropologists call “the white wife problem”.

Singer is a bioethicist and moral philosopher. He is a “consequentialist” (explained at the end of this biography) who is well known for arguing, in his famous book *Animal Liberation*, that the preferences of animals should always be taken into account, and that they should therefore be granted full rights as fellow sentient beings. He has also argued that the mere knowledge that our fellow human beings are suffering, even when far away and out of sight, should be enough to spur us into action to alleviate that suffering. We owe them certain obligations because of their situation, and no matter where they might be located. We should all therefore emulate him and practise “effective altruism”, regularly giving away 20% of our incomes to assist the less fortunate. However, he has considerably more controversially argued that people who are unfortunate enough to bear severely disabled children should be permitted to euthanize those children as acts of kindness and mercy, because that would be the best way to reduce the total amount of suffering in the world.

Although the specific term ‘white wife problem’ was only first used by Ian MacLennan, of the Colonial Office, in 1933, the circumstances it references long predate that. As is clear from the mandate the Basel Mission received from the Danish government, European men could associate with native women more or less with impunity, forming a wide variety of relationships. These ranged across the social and sexual spectrum from the relatively rare marriages, such as the Zimmermans, through various degrees of concubinage, and on to the distinctly casual. However, the European women who sought to engage in similar unions were—of course—subject to much greater restrictions and prohibitions, both the social and the governmental.

The white wife problem—the foundation for my discoveries in the practical and scientific ethics that unlocked Darwinian evolution—has two linked aspects. A first was the treatment accorded, by white society, to the incoming native men who were invariably to be reprimanded, in many subtle and not-so-subtle ways, for daring to consider themselves worthy of entering that very situation of marrying in to the dominant white society. They were generally not considered either worthy or capable, a hostile dynamic aptly summarized by Colonel Frederick John Dealtry Lugard, 1st Baron Lugard, who said:

the typical African ... is a happy, thriftless, excitable person, lacking in self control, discipline and foresight, naturally courageous, and naturally courteous and polite, full of personal vanity, with little sense of veracity ... in brief, the virtues and defects of this race-type are those of attractive children (Gann & Duignan 1978).

residence in Europe is bad for Africans. He [the African] returns at best an insufferable prig; at worst a very objectionable person (Lugard 1915).

This dehumanizing of their men folk, by considering them to be lacking in appropriate virtues, ran a very close second to the white wife problem's other main aspect: the experiences white

wives went through as they were castigated for marrying out. Colonial governments of MacLennan's era had determined that in spite of the frequency of these unions—in 1920 Liverpool alone recorded twenty-one such marriages—white wives were undermining all semblance of imperial authority. They had “gone native”. They had blurred appropriate boundaries. They had made colonial policing problematic by consorting in too close an intimacy with the native population. The various authority figures therefore devised a range of impediments, both formal and informal. Disowning, by the wives' families, was a commonplace. The wives and children were even officially categorized as undesirable aliens. Deliberate policies were instituted to prevent the husbands participating in their children's upbringing. Court cases and appeals were legion. Such was the hostility that the governor of the Gold Coast Colony insisted that Annie Muller—whose husband had unfortunately died shortly after the couple had brought themselves into his jurisdiction, but who then started yet another relationship with yet another native—be deported back to a mental institution in the United Kingdom.

MacLennan coined ‘white wife problem’ in specific reference to the Colonial Office's policy towards Beatrice Spencer Roberts who had applied for a passport so she could accompany her husband, Oladele Adebayo Ajose, back to Nigeria. The two had met while he was studying medicine at the University of Glasgow. He went on to become the first President of the Nigerian branch of the British Medical Association, being appointed an OBE in 1961. MacLennan and the Colonial Office were in no doubt the problems Roberts was causing them.

My interest in these matters is of course familial. In 1901 my great-uncle on my mother's side of the family, Frederick Victor Nanka Bruce, travelled from Accra to Edinburgh University to study medicine, gaining his Bachelors in Medicine and Surgery. In 1902 he and six others signed a letter of protest to the Colonial Office objecting to the policy barring anyone not of “European parentage” from establishing a private medical practice in the Gold Coast, a policy the Colonial administrators felt forced to adopt in consequence of those pursued in the West Indies.

Once FVB, as he was generally known, had qualified as a doctor, he served in the tropical hospitals in London and Liverpool. In 1907 he was back at the Colonial Office, lodging yet another protest against the ongoing racist policies in Gold Coast recruiting practices. His problem was summed up by Lugard:

There are many men who, with a life long sympathy with the negro, would yet regard it as intolerable that their wives should be attended—say in child birth—by a negro practitioner. I myself am such a man (Lugard 1915).

FVB returned to Accra to practice, becoming a government adviser on public health. In 1918 he founded “The Gold Coast Independent”, a newspaper, which long campaigned for independence. In 1933 he cofounded the Gold Coast Medical Practitioners Union, becoming its first President. He was awarded an OBE, in 1935, for his services to medicine, being personally awarded a Cup by the Prince of Wales who visited the Gold Coast in 1936. Shortly before his death in 1951 he became the first President of the Ghana branch of the British Medical Association. This was not the only legacy he left me.

Singer's *Practical Ethics* intrigued me because he outlines a number of real life situations and then attempts to show how each person's interests must be weighed up as a part of the whole, using the particular form of "preference utilitarianism" he has developed. His utilitarian bent proposes that societies should maximize the sum of all the happinesses of all their individual members, while the specifically preference aspect means each person's ability to hold a set of preferences should be taken into account. The question then is how the social and the individual preferences should be allocated across the various situations, and which should take precedence and for what reasons.

I resolved Darwinian evolution because I realized that the difficulty with Singer's argument is the way he conflates finitary and infinitary objects and forms of reasoning. There is an issue with the way he glides so glibly from the individual conscious agent, and so from the potentially infinitesimally small, to the social, and so to the potentially infinitely large, in these situations.

It is always easier to understand the implications of the finitary and the infinitary by observing them at work in something rather more familiar. Every language, for example, has infinite possibilities and expressiveness, yet every language also has a finite and countable number of resources. Those finite resources are its words, its phonemes, its letters of the alphabet, and etc. And while every society may have a finite number of people, their numbers, wants, and utilities, at any one time, tend towards the infinite.

Moral theorists often use the term "supervenience" to describe such attributes, but the term is variously and inconsistently used. Analytic philosophers are fond of claiming that certain "upper-level" properties, such as moral or mental ones, 'come forth from' or supervene upon "lower-level", invariably physical, ones. The supporters of supervening properties then propose that objects can differ in certain respects, but without differing in others. Those subvening ones form the joint base for the supervening properties in which they differ. So there could be two people, Goodperson and Badhuman, who are physically identical in every way. They also enjoy a set of more amorphous properties such as kindness, bravery, pleasantness of demeanour and so forth. But the catalogue of subvening properties does not include the moral ones of goodness and badness. So the only difference is that somehow Goodperson manages to be morally upright and virtuous, whereas Badhuman fails. Singer's own tutor R. M. Hare was amongst those who argued that this is not possible. If, in his view, Goodperson and Badhuman indeed share all natural properties, then whichever moral state the one has, so also does the other. Goodness or badness are equally determined for both, and cannot differ. The moral properties concerned supervene on the more natural ones, which subvene them. Some, in the very extensive literature, support Hare's position, while others disagree with it.

Since I came on my proof of Darwin's theory through an exercise in *Practical Ethics*, we stick to the practical case of the white wife problem. As is clear from the fact that the Danish government invited the Basel Mission in to deal with the problem, colonial governments and administrations from time to time attempted to police interracial marriages, and to either staunch the number of concubinage arrangements, or else to make sure the children were cared for. The Danes, for example, decided that the mulatto ladies would make good wives, and provided them with an education to better learn European social graces. In 1907, the then Governor of the Gold Coast

Colony, Sir John Rodger, issued a “concubinage circular” expressing his concern with the “very undesirable relations being maintained by European government officers with Native Women” (Ray 2015). Four months later, one Marcus Clarke, a British customs supervisor, became the first—and the only—person ever to be punished for such a transgression. The question of why he was singled out is in large measure the reason why I eventually managed to resolve Darwin’s theory.

The relationship between moral and natural properties is very similar to that between Darwin’s “variations” and evolution. It is more accurate to say that the individual members in a society are “injective” into the various social groupings they form, through giving rise to them; with those groupings then being “surjective” over the members, by being potentially the more numerous. However, the individual members are also injective into their wants and desires, for any one member can have many wants and desires. Those wants and desires are then also surjective over the members. What is now left unclear is the precise relationship between the individuals and the wants attributed to them solely because they are members of given groups, and in so far as those specific wants would not exist if they were not members of those given groups. I resolved Darwinian evolution by identifying and articulating this very juxtaposition of the finitary and the infinitary in both ethics and biology.

I developed my approach because my mother and my father come from different tribes with very different cultures and histories, and I was raised in a political exile that led to me absorbing several others. The strategy I developed to attack the white wife problem; to question Singer’s conclusions; and ultimately to unlock evolution was based, in part, on my realization—garnered from my fluency in several languages and cultures—that any one language that contains the five signature words ‘not’, ‘word’, ‘vocabulary’, ‘language’, and ‘English’ (i.e. some self-referencing label that indicates ‘this language’) gets its expressive power because it can immediately form an “infinite cyclic group”.

Every coherent language is equivalent to a “complex projective plane”. The five words I have listed allow each one to generate, and/or to reproduce, anything sayable in any other using a process similar to the one that allows a countable number of genes to create an infinite and Darwinian set of possibilities. I realized that the evolution of individual desires, and also of whole groups of desires, is a problem on a par with that of the evolution of the biological beings, and of the whole groups of beings, that possess those desires.

The issues I confronted are seen most clearly in Sanskrit which surely has a far more extensive literature on zero, infinity, and existence than any other language. We can begin our journey by appreciating that क, the Sanskrit letter ‘k’, can be guaranteed true whenever it is true. This gives us the expression क = क.

Now we have established the state of something being true, we can next establish the state of something being false. We can suggest that this happens when anything emulates क ≠ क.

Now we have a rubric for something being false, the next step on our journey is a subtle one. Its implications are best appreciated by reverting to the modern and Western idea of “the empty set”, ‘∅’, which is our state of क ≠ क. We can use that to model the number ‘zero’. We simply consider

that empty set state to be its own set. This gives $0 = \emptyset$, which we can consider to be both $0 = \{\}$ and $0 = \{\emptyset\}$.

We have just achieved an important result. We have the singular existence we can call $1 = \{0\}$, for our empty set now contains exactly one member. The sum of all the elements in this empty set is zero. And since a “disarrangement” of any set is a permutation that leaves no element in the same position, then the empty set is a disarrangement of itself. It leaves no element in the original position for there are none to be rearranged. Since that leaves things the same, then its product is one. Also much like the Indian deities Brahma, Vishnu, and Siva, we have just birthed existence’s first element.

If we now put our latest set, 1, into a yet further set, then we can represent our current position, which is our set total, as $2 = \{0, 1\}$. And since we can repeat this set-creation process to give $3 = \{0, 1, 2\}$; and further since we can keep going indefinitely; then we are soon at infinity. We have just used something finite, \aleph_0 , to generate something infinite.

Similar issues arise if we consider the planet earth. We can imagine adding to it one extra molecule. It gets microscopically bigger, but without seemingly changing any of its essential characteristics. If, however, we keep on adding molecules, then the invariance collapses. We eventually end up with a body whose gravitational field is so intense it becomes a black hole. We can nevertheless tend, from our given start point, in the direction of the infinitely large, and then ask questions about that behaviour. It is clear that that pattern of behaviours does not remain unchanged.

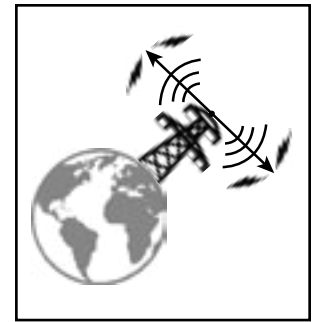
The physicist and meteorologist Lewis Fry Richardson showed how we can similarly tend towards the infinitesimally small. His “coastline paradox” points out that if we get a 100-kilometre long ruler and measure the length of Great Britain’s coastline, we will get a particular value. But if we get a ruler that is only 50 kilometres long, we will get a longer measure because we can go around, and incorporate, some previously inaccessible coves and inlets. The smaller our ruler becomes, the larger becomes our measure for the coastline, again tending to infinity. However, the process of infinite extension will always come to a stop due to some extraneous and limiting factor, even if at the quantum level. We can nevertheless tend, from our start point, in the direction of the infinitely small, and then ask questions about that behaviour, also. It is once again a pattern that does not remain unchanged.

We can now observe that Noam Chomsky’s linguistic theories do what Singer’s ethics singularly fail to do, which is to recognize these infinitary limits and their behaviours and permutations in each direction. But Chomsky’s approach to infinity nevertheless differs markedly from the complex plane based one I proposed above.

These differences are important for evolution. They affect supervenience issues. Chomsky views language as infinite because he sees no upper bound to either the number of sentences any one speaker can utter, or to the corpus of all possible sentences utterable by all possible speakers in any one language. He also suggests that language is infinite because it is invariably possible to connect sentences together using ‘or’, ‘and’, ‘but’, and other such connectives. We can therefore concatenate all possible sentences, in any one language, into a single and infinitely long one. There is again no

upper bound. It is not just that, but there is no capacity for change between the finitary and the infinitary.

Chomsky's ideas on the role infinity plays are certainly interesting and productive ones, but they do not help us unlock either ethics or evolution. Some linguists refute his proposed infinite corpus by pointing out that no one speaker or device can possibly check it to ensure that all its sentences are even in the target language, never mind that they are all well-formed. Others refute the similar infinitely-long-sentence proposal by pointing out that it cannot be a proper sentence. It is always, for example, waiting for its full stop, and so can never be assessed. Yet others point out that since it encompasses all possible sentences, then it cannot say anything coherent. It is impossible to comprehend.



Somewhat more usefully for our purposes, these same issues of the finitary and the infinitary come to a head in each of Guglielmo Marconi's and Max Planck's great discoveries. Theoretical physicists argued, in Marconi's case, that since radio waves moved in straight lines, then their intrinsic and infinite but tangential trajectories guaranteed that they would dissipate into space. His early successes, they insisted, were deceptive. The English Channel was not a great enough distance to allow the earth's curvature to pull his receiving antenna down out of the way fast enough as the earth looped equally infinitely, but circularly, about, and accelerate it away from the linearly tangential. But when Marconi succeeded in sending his signal around over 25% of the globe, it was clear that contemporary theories needed a considerable reappraisal. He—unusually—received his Nobel Prize for an experimental, rather than for a theoretical, breakthrough. The question is how things change towards and away from infinity, in either direction, and on the different paths.

Planck of course received his Nobel Prize for a theoretical quantum leap. He knew that every engine depends upon the circularly infinite because they all demand ever more material stuff to keep going. Once this has been provided, an engine can produce its linearly infinite quantities of energy.

Planck also believed that reality swept smoothly and continuously up and down between the infinitely large and the infinitely small. His quantum hypothesis was a deliberate fusion between the straight line and the circle; between the infinitesimally small and the infinitely large; and between the finitary and the infinitary logics. There are differences in moving in each direction.

The similarity in all these situations is that we are forced to consider a reasonable but finite number of cases so we can draw conclusions about the infinitely many. Yet neither Singer nor any one else is clear whether a human society, complete with its biology and its ethics, propagates circularly about the generations; linearly over time; neither; or both. Are their wants, preferences, and actions quantum; continuous; neither; both? And do the potentially infinitely many people, and their potentially infinitely many wants, reproduce themselves infinitely linearly; infinitely circularly; neither; both? It is hard to see how we can draw any valid conclusions with no clarity on these very basic questions.

Once I had realized the underlying difficulties, I turned to a technique mathematicians and scientists invariably use to resolve such issues. I also turned to the Greek word *anastrophé* meaning ‘conduct’, ‘behaviour’, ‘manner of life’.

“Anastrophy”, as I envisioned it, is quantitative. This is hardly a limitation, for so also is the panoply of expressive colourations around us also entirely quantitative. Anastrophy governs all human interactions in and with both situations and surroundings. It therefore governs human interactions both individually and in groups. It has a rough similarity to entropy.

As a first example of anastrophy, the Ancient Romans with their Roman Empire had a very distinctive anastrophic relationship with the surrounding material world. They believed that the entire cosmos was a gift, to them, from their gods. It waited only for them to confirm their willing service through right conduct. If they played their part correctly, in the eyes of those gods, then they would receive the cosmos as a reward, as their conquest, and as a possession in the name of Rome. This required both a social and an individual set of behaviours and obligations. That was their anastrophy.

Anastrophy is also manifested in the ideas spawned by the French economist and statesman Anne Robert Jacques Turgot, Baron de l’Aulne, and his compatriot and contemporary the nobleman, philosopher, mathematician and political scientist Marquis Nicolas de Condorcet. Living in the French Enlightenment they concocted the philosophy that French civilization demonstrated its superiority over all others through its inestimable understanding of, and control over, all surrounding materiality. Human beings, they concluded, brought out the best in themselves through “progress”. This anastrophy demanded an ever-increasing use of rationality and intelligence in bending situations and surroundings in service of human wants and aspirations again both socially and individually.

The current debate on climate change—with its possible need for a reevaluation of human behaviours in regard to the environment—is also anastrophic. It is centred upon the advisability, or otherwise, of a moral reassessment—both individually and socially—with respect to the surroundings. Proponents argue that this reallocation of rights, wants, rewards and responsibilities must happen in all situations involving all humans, again individually, socially, and globally.

Once I had the concept of anastrophy, I could construct a scenario that allowed me to isolate the bare essentials. Anastrophy is to entropy as projective geometry is to the ordinary Euclidean variety. Anastrophy, like entropy, increases quantitatively with increasing numbers of either objects or persons. But it also changes its configuration and patterning with those numbers. It highlights differences in configurations and patterns, both corporately and separately.

Once I had that perspective, I could borrow the biological idea of semelparous or one-time reproduction (*semel*- = Latin for ‘once’). I could ponder a civilization of highly intelligent and exceptionally long-lived but semelparous beings. They are born; live; and grow. They constantly interact both with each other and with the surroundings. But as soon as they all reach reproductive age and breed, they all die. They all do so simultaneously. Their descendants must then begin the entire process anew.

I could now ask myself what anastrophic principles the citizens in my semelparous society could embed in the surroundings so they could—should they so desire—guide their descendants’

conduct and behaviour. What objects and artefacts could they leave behind them to achieve such effects?

This semelparous and anastrophic approach has the advantage of highlighting the nub of the entrenched objections to evolution. It also lays bare the difficulties with Singer's arguments as between the social and the individual. It is how I approached the white wife problem, which then got me to my resolution of Darwin's theory.

I got to the idea for anastrophy by remembering something my father once said to me. When—a generation before me—he arrived to study as an undergraduate at Oxford University, he needed to open a bank account. The closest was Barclays on the High Street. But it had a policy, at that time, of refusing Africans as customers. Dissatisfied with their anastrophic configuration, he walked on to the National Westminster Bank which would accept him.

My father also told me about reading the philosophers David Hume and Immanuel Kant. A generation later, when I followed him, I read them for myself. Hume said:

I am apt to suspect the negroes, and in general all the other species of men (for there are four or five different kinds) to be naturally inferior to the whites. David Hume, "Of National Characters", *Essays and Treatises on Several Subjects*, 1753-1754.

and Kant said:

The Negroes of Africa have by nature no feeling that rises above the trifling. ... So fundamental is the difference between these two races of man, and it appears to be as great in regard to mental capacities as in color ... but in short, this fellow was quite black from head to foot, a clear proof that what he said was stupid. *Observations on the Feeling of the Beautiful and Sublime*, 1764.

I developed the concept of anastrophy because I wanted to understand what made otherwise intelligent people come to such conclusions ... ones implying given and necessary potentialities and behaviours they immediately assume govern others in all possible situations involving both themselves and those others.

The issues rest on these situations. Like many others in my father's generation, who had been born into the British Gold Coast Colony, he had been educated by missionaries. His own father had died when he was but a few months old, and his mother had remarried. When his mother and his new step-father went to work out in the fields, they would leave him in the care of a young relative who used to hang around outside Wenchi Methodist Church.

The missionaries whom our whole family came to know, with much affection, as "Mummy and Daddy Whittle" had but recently arrived. They realized that my father, playing around outside



Donald & Hilda Whittle

with my parents

their Mission School, was picking up the lessons far faster than any of the children who had officially enrolled. They therefore wanted him to join in and learn properly, but our family could not afford their fees. When my father's mother also died my father's welfare became the responsibility of his uncle, the local chief, Nana Kwaku Manu. The Whittles came to an arrangement with him to take my father in to work for them as their houseboy, in lieu of payment. He became the first literate member of our family and thereafter won a slew of prizes, firsts, honours, distinctions and scholarships. He often heard Mummy and Daddy Whittle speak about a mythical place of learning called "Oxford University", and he decided that one day, he too would go there to study. He achieved that ambition, becoming the first African to attend University College, Oxford. He was also the first out of only two to be appointed District Commissioners by the British Colonial Service; the first African to be appointed professor at the University of Ghana; and he eventually rose to become the Prime Minister of Ghana.



LATE NANA KWAKU MANU
Wenchikwa 1913-1923
(Uncle of the Buias)

I in particular recall my father telling me how he one day asked his tutor, G. D. H. Cole: "What is the difference between sociology and anthropology"? After G. D. H. had explained, my father smiled and said: "I understand now. Sociology is when the people you are writing about can read what you have written about them, and anthropology is when they can't". The significance of that distinction—with anthropology being more concerned with human evolutionary origins—was the spur I used to unlock the infinitary and the noninfinitary logics in both ethics and biology, and so to arrive at the concept of anastrophy. It is the way to understand the human and the biological imperatives and behaviours that intersect both with each other and with the surroundings. The ensuing reconfigurations are of course a critical aspect of Darwinian evolution.

I put anastrophy to the test in my studies of situations and consequences in a *Practical Ethics*. I reviewed the changes in European contacts brought to first the Gold Coast Colony, and then to the independent Ghana that followed it, both socially and individually. Anastrophy is again like entropy in being both cumulative and quantitative. It addresses supervenience issues because two entities of the same type can initially sum their separate anastrophies, which are initially also shared equally between them. However, the behaviours eventually manifested depend upon how their interactions, and their configurations, affect both each other and the surroundings, again as situations and consequences, and both individually and in groups.

My particular interest in these issues—and the study that led me to resolving Darwin—was the treatment meted out to those groups of Gold Coast men who not only married white women, and so who became husbands and fathers, but who also fought for Britain in the First and Second World Wars ... and whose mistreatment—suffered only because they were exemplars of the white wife

problem—served to forge them into the nucleus of the discontent that ultimately culminated in the campaign for our independence. This is situations, groups, and consequences.

It often surprises people to learn the historicity of such issues. It indeed surprises them that someone like Capitein could indeed have gone all the way from the Gold Coast to study at the University of Leiden, in 1737. But there have in fact been extensive historical contacts between the Gold Coast and such European countries as Holland. While true that none of the other Gold Coast citizens who travelled there got doctorates, about fifty or sixty went with various masters and parents, to get educations and trainings of various kinds. And in 1746 Nana Opoku Ware, the Asantehene or Chief of the Ashantis, sent a letter and a delegation from Kumasi, the Ashanti capital, to J. Baron De Petersen, head of the main Dutch settlement at Elmina, on the coast, asking that the twelve boys and two girls that accompanied that delegation be sent on to the Netherlands to learn reading, writing, and music. He also sent ten elephant tusks, hoping it would cover all expenses.

I myself lived in Holland, with some of my siblings, for a couple of years while we were all children. My father had been invited there to take up joint professorships at the Institute of Social Studies in Rotterdam's Erasmus University, and at Leiden, so becoming the first Gold Coaster to return there, in an academic capacity, since Capitein.

It also often surprises people to learn that in spite of my appearance I have, through my mother's side of the family, a line of Swedish, Danish, German, and Scottish ancestors. She was a member of the Ga or Ga-Adangme tribe which formed from the remnants of some previously powerful kingdoms that coalesced around Accra, which became their centre of commerce and learning. Being located upon the coast, the Ga had extensive contacts with the arriving Europeans. The aspect of immediate interest, and that became the focus of my studies, is that there were far more native women marrying out and having relations with white men than there were white women marrying in and having relations with native men. It was in understanding the reasons that I came upon my proof of Darwin's theory. This matter is, after all, an essentially biological one.

My interest is again familial. I am a product of these unions. Denmark swallowed up Sweden's Gold Coast possessions in 1746, but my direct maternal ancestor, Augustus Frederick Hackenberg, and a Swede, nevertheless became Governor of what had just become the Danish Gold Coast Colony. It was centred around Fort Christiansborg. He married a local woman named Ashiokai, one of Ajovi Adjei's daughters.

In 1751 a junior officer named Johan Frederick Reindorf arrived to serve in Fort Christiansborg. Against the wishes of all her relatives he married another of Adjei's daughters. The entire Reindorf family, from which my mother came, is descended from him.

In 1760 Reindorf returned to Denmark alone. The son from his marriage, Frederick, grew up with Governor Hackenberg's family. He married Okaikor, a native Ga woman from Accra. They bore a son who took the name Carl Hackenburg Reindorf. He then married another local woman, from Accra, named Anowah Cudjoe. They settled in Accra's Osu area, surrounding Fort Christiansborg.

As for the white wife problem, Catherine Blunt, who lived in that same era, became one of the earliest examples of a Gold Coast white wife. She married Philip Quaake (pronounced 'Kwaku'),

so becoming one of the very first white wives to also travel to the Gold Coast to live permanently.

Blunt's story is that the Rev. Thomas Thompson had arrived in Cape Coast in 1752 as the first missionary sent by the Society for the Propagation of the Gospel. He opened a school in Cape Coast Castle, but failed to evangelize extensively enough. He sickened and was forced to return to England. However, he had trained three students whom he took with him for further education. One was Philip Quaque. Born in 1741 he was a son of Birempon Cudjoe, a chief based in the Cape Coast area. The other two who accompanied him were Thomas Cobbers and William Cudjoe. Cobbers died four years later of consumption. Quaque and Cudjoe were both baptized in 1759 in Islington Parish Church although Cudjoe suffered a mental breakdown and died shortly thereafter.

Quaque moved to live with Rev. John Moore in Charterhouse Square in Islington. He stayed there for the next seven years; studied in Oxford; and was ordained in the Anglican Church by the Bishop of London in April 1765. He married Catherine Blunt in May. She could also read and write, had been trained, and so could assist him in continuing Rev. Thompson's abandoned mission for the Society for the Propagation of the Gospel, and spread Anglican doctrine back in the Gold Coast.

Quaque, his British wife, and her unnamed companion, more of a personal servant, arrived in the Gold Coast in February 1766. They were given two rooms in Cape Coast Castle. His efforts were not particularly successful. He could no longer speak his own language and so always needed an interpreter. This alienated him from his fellow countrymen who identified him, adversely, with his thoroughly British accent, wife, and ways. The Europeans, for their part, undermined his work because the more natives he converted to Christianity, then the less they could enslave. He, for his part, objected, very strongly, to the concubinage relations almost all the men in Cape Coast Castle formed. Those, of course, helped them procure resources, companionship and status in the local community. Quaque eventually used one of the two rooms allocated to him as a small private school for the mulatto children that resulted from these liaisons. He never had more than twenty parishioners at any one time, most of whom were Europeans.

Unfortunately for Catherine Quaque, she died only seven months after reaching the Gold Coast. Two years later Philip married her companion. Her name is not recorded, but they had a daughter and a son. When she died in 1772 he married a native woman whose name is also not recorded. He died, survived by his third wife, at 75 years old, having had little success in spreading Anglicanism.

My biography and my studies in anastrophy, in groups, in situations, and in consequences, all ranging across the finitary and the infinitary, begin with the Portuguese who were the first to arrive upon our coasts. They came in 1471 and immediately had contact with the Ga, Benin, Sosso, Songhai, Ashanti and various others. One immediate change was in our names. Many Ghanaians still bear the name "da Costa". Some date this all the way back to this initial Portuguese contact, but most have it due to a wave of Brazilian immigrations in the late nineteenth and early twentieth centuries. Other common names amongst us are Bruce, Hesse, Quist, Read, de Graft, Johnson, Bannerman, Sackey, Maxwell, Cochrane, Lutterodt, van der Puy, Zimmerman, and many others.

The Portuguese were primarily interested in trade. They realized very quickly that the Ashanti, to the north, had substantial gold deposits. They therefore called our entire coasts “da Costa da el mina de ouro” meaning “the coast of the gold mine”. They built their first trading post in 1482, calling it “São Jorge da Mina”, or “St. George of the Mine”. This was soon shortened to “Mina” or mine, with the fortress they built becoming “Elmina”, which then gave its name to the entire area. That fortress’ original storerooms were soon converted into slave dungeons. Hundreds of thousands of souls passed through its infamous ‘Door of No Return’. It is now preserved as a National Museum, with UNESCO designating it a World Heritage Monument.



Elmina Castle



Fort Christiansborg / Osu Castle

The Portuguese profits and success did not go unnoticed. The British, Dutch, Danish, Prussians and Swedes soon followed, building forts along our coastlines to protect their various interests, ushering in further material changes that had a most profound anastrophic and social impact.

In 1650 Hendrik Carloff, a German, and Isaac Coymans and Nicolaes Pancras, Dutchmen, formed a trading company. It was effectively the Swedish Gold Coast. It morphed into the Danish West India Company and had a mandate to trade between present-day Ghana and the Caribbean as a part of the famous triangular trade that passed through the West Indies.

The Danish West India Company administered Denmark’s colonies, building three trading stations and a variety of forts such as Fort Frederiksborg, Fort Prinsensten, Fort Augustaborg, Fort Friedensborg, and Fort Kongensten. None are left.

In 1652 the Ga Mantse, chief of the Gas, gave Caerlof permission to build a fortified lodge, Fort Christiansborg, in an area that was then still under Sweden’s control. My mother’s side of the family hails from that Osu area which remains the centre of Ghana’s Dutch-Swedish-Danish heritage.

The Ga Mantse hoped that the Danes would use Fort Christiansborg to help stave off the increasing Swedish depredations. His foreign policy initiative was initially successful, and the Fort became the centre of a trade in gold and ivory. Now called Osu Castle it is still standing. It is the President of Ghana’s official residence.

In 1660, and much to the Ga Mantse's chagrin, his foreign policy fell apart. Control of Fort Christiansborg passed to the Dutch; who promptly lost it back to the Danes; who then adopted a much more aggressive policy. In April 1663 they seized all remaining Swedish possessions, incorporating them into the Danish Gold Coast.

The Ashanti in their turn then led a rebellion against the European trade in slaves. This, however, established a pattern because the West African peoples were no credible contest. They could put up little resistance to the arriving Europeans. None had standing armies. Their forces were only *ad hoc* groupings of men and arms, mostly with spears, who could fight only in time of immediate need. A favourite European tactic, and one eventually used to great advantage by the later "African Company of Merchants", was to disrupt prevailing social balances. They would choose one side to support in some ongoing struggle between African groupings. If such a quarrel did not exist then one was easy enough to foment. Favoured trading relations would soon raise some previously outgroup's status or wealth. That favoured group was then supplied with the guns and other artifices needed to prevail. That prevailing side would then use its guns to round up war captives and sell them to the Europeans who took them for slaves ... and in exchange for yet more guns given and received. But the captive people would hold grudges of their own. If given more guns they could easily be persuaded to engage in retaliatory raids ... which then yielded yet more captives, although by 1808 the British had decided to desist in that particular trade.

The relinquishing of the Slave Trade brought little or no respite. Given their far superior machinery of war, European powers could impose bonds and demand reparations. The ensuing switch to the exploitation of land and resources instead of slaves was smooth, continuous, and unruffled. The last quarter of the nineteenth century saw the Scramble for Africa as various European countries rushed to seize as much territory as they could.

When the Ashanti succeeded in forcing the Danes to retreat to their coastal enclave, the Danish government and traders were forced to abandon almost all their inland possessions. Fort Christiansborg continued as the centre for Danish operations although the Danish West India Company was liquidated. The Danish government of course made sure to retain control of all remaining forts, remaining active, from their base on the coast, for another two centuries. But they gradually surrendered their hegemony to the Dutch.

My father's illustrious predecessor, the young boy who became Jacobus Elisa Johannes Capitein (Dutch for "captain"), was born in 1717 in the then Dutch-controlled Gold Coast. Neither Capitein's original name nor those of his parents are recorded. He was the result of a liaison between a Dutch seaman and a native woman from the Fante, a tribe mainly to the east of Accra.

When Capitein was about eight years old Arnold Steenhart, a Dutch sea captain, bought him as a slave and gave him, as a gift, to Jacobus van Goch, a trader in the Dutch West India Company. Van Goch gave him the name by which he is now known, treating him as his son, and taking him to Middleburg, in the Zeeland province in the Netherlands, when he was eleven years old. Van Goch eventually freed him and made sure he got the best possible education. He spent thirteen years in Holland, excelling in Greek, Latin, and mathematics in particular. He was baptized into the

Dutch Reformed Church in 1735. In 1737 Van Goch and a small group of burghers paid for him to attend the University of Leiden, where he studied theology, saying he wanted to return to his native Gold Coast as a missionary.

Capitein's doctoral thesis, his subsequent return to the Gold Coast, and his attempts to marry exemplified the white wife problem and the contradictions of his life. He earned his doctorate from the University of Leiden, in 1742, studying under Professor Jan van den Honert, one of the most celebrated theologians of that era. Slavery was already being widely questioned but Capitein's *Dissertation on the Politics and Theology of Slavery, which is not Contrary to Christian Liberty* somewhat surprisingly defended the institution. His readings of Seneca, Horace, Justinian and others led him to disagree with Aristotle that there was some kind of "natural slavery". He instead argued that it violated the canons of natural freedom and equality. However, his experiences with Van Goch had been entirely positive. His reading of the Bible thus led him to a more ambivalent conclusion. He argued that nothing in the Gospels condemned slavery. Genesis might demonstrate that slavery had entered the world as an affront, and an injustice, to all peoples, but overall, the Bible promised neither freedom from slavery nor any kind of political emancipation. It promised only a more spiritual form of freedom. Slavery might therefore appear unjust temporally, but it had no everlasting repercussions. Nothing in the Bible showed slavery to be intrinsically contrary to Christian freedoms. The Gospels forswore all Christians from being cruel to their slaves, so the Christian injunction to love meant that slaves ought rightly to be freed after a suitable period of time. Therefore the best that slaves could, and should, hope for was to have a good Christian master who would treat them with kindness and compassion, and who might even ultimately free them. But as alluring as the prospect of political and corporeal freedom might be, spiritual freedom through Christ was very much more important. It was permanent and real, all other freedoms being but transient and illusory. Slave holders should therefore baptize their slaves and give them every opportunity to gain the spiritual freedom Christ offered, but were not obligated to free them.

Capitein's arguments in favour of slavery, delivered from the unusual perspective of someone who had experienced it, of course endeared him to the Dutch Reformed Church. He was ordained on May 17, 1742, the first African to receive that distinction. He preached to overflowing churches all across the Netherlands as crowds flocked to hear him defend their practices.

When Capitein was twenty-five the Dutch West India Company requested his return to the Gold Coast to evangelize his fellow natives. He resuscitated the Elmina Castle School which had become defunct some eighty years before. He sent three pupils to the Netherlands for further education and opened two more schools in Elmina, one for mulattos like himself, the other for Gold Coast natives.

Capitein observed that the Swedish, Danish, Dutch, and British traders, soldiers, and administrators around him were fathering increasingly large numbers of illegitimate and mulatto children, like himself. He had the same response as Quaque would do after him. He, also, seems to have shown rather too much enthusiasm for bettering and educating them. And as also happened with Quaque, his policies put him at odds with his ecclesiastical and political overlords, in his case

both the Dutch Reformed Church and the Dutch West Africa Company. This does not seem, however, to have stopped him becoming increasingly vocal in his objections. In his eyes, the children lacked only the opportunity that he had had to flourish, and he saw it as his duty to intercede for them. He even built an orphanage and opened various hostels. They, however, had vested interests in the status quo and worked to undermine his efforts.

Capitein's difficulties were thrown into sharp relief when he wanted to marry. He fell in love with a young Gold Coast native woman and wanted her to receive a properly Christian education so she could help him in his ministry. He was reluctant to educate her himself because it might expose him, as he put it, to "the temptations of the devil". But since she was a native woman, none of the Dutch ladies in the local community was minded to assist. Neither he nor her parents were willing to send her to Holland unchaperoned, and he could not meet the costs involved. And given the various concubinage arrangements that so many of the local Dutch traders already had in place, and through which they produced the large number of illegitimate and mulatto children, he was not prepared to entrust her welfare to any of them.



Carl Christian Reindorf

Capitein came under pressure from de Peterson who, as head of the Dutch West Africa Company, had shortly before received the Asantehene's delegation. He also came under pressure from Andrianus von Waghem, head of the School Board. They thought it unseemly that their local pastor wished to marry a native woman. But they at the same time, and for all other matters, regarded him as a native. He became increasingly disillusioned, gradually turning to becoming a merchant trader. De Peterson and von Waghem sent for Antonia Ginderdros who came out from The Hague for a properly Dutch and Christian marriage. He died shortly afterwards in 1747.

The British wanted a more peaceful situation because—within the overall sociologies of interactions—it was better for trade. Their long-term ambition was to turn the entire Gold Coast area into a "protectorate". The first record of this British political directive, within the southern parts of what eventually became the Gold Coast Colony, was a bond signed by a group of chiefs, featuring many of the Fante and the Ga, on March 6, 1844. Those chiefs formally linked themselves to the British crown and agreed to follow British laws in return for British protection from the Ashanti to the north, who continued to resist the British in every possible way they could.

After my ancestor Frederick Hackenberg Reindorf married Ashiokai Wondo, they bore Carl Hackenburg Reindorf who married Anowah Cudjoe. They then begot the illustrious Carl Christian Reindorf who translated the Bible into our native language.

The British presence was increasing when Reindorf first arrived, in 1842, at the Christiansborg Castle School. He was baptized in 1844, shortly after the signing of the above bond.

Reindorf started studying at the Basel Mission in 1846. In 1850, when he was about 18 years old, the Danes sold all their Gold Coast possessions, including Fort Christiansborg, to the United Kingdom, for £10,000, which incorporated them into the British Gold Coast. The Dutch, Swiss, Swedes, Danes and a sprinkling of other Europeans all still had a presence, but Fort Christiansborg was now primarily British. Reindorf eventually studied under Zimmerman.

In 1852 the British organized levies amongst the coastal peoples and formed the Gold Coast Corps. In 1854 there were riots against a poll tax that the British tried to impose, and HMS Scourge bombarded Fort Christiansborg. Reindorf fought for the British, against the Ashanti, taking part in several expeditions. He was commended for his heroism.

In 1865 the British established a Corps of “Houssa” or Hausas. It was originally based in Nigeria under the command of Sir John Hawley Glover, R.N. Although the Hausa language was admittedly something of a *lingua franca*, untangling details of this era can be difficult because the British thought of all their troops monolithically as Hausas, irrespective of origin. In a developing pattern, native troops fought alongside British ones. They were deployed in the Gold Coast territories to help deal with continuing uprisings, mainly fomented by the Ashanti, to the north.

The British Gold Coast proper was formed in 1867 when the British government abolished the African Company of Merchants and seized all privately held lands along the coast. They also took over the remaining interests of other European countries. They got the Dutch Gold Coast, including Fort Elmina, in 1872.

Reindorf was ordained as the British acquired Elmina. They adopted an altogether more aggressive policy towards the Ashanti to the north. In 1873, Captain Arthur Rait and Lieutenant Eardley Wilmot organised a number of their native Hausa levies and drilled them as gunners. They had the new Gatling guns and rockets and were known as “Rait’s Artillery”. This Corps of Hausas formed the nucleus for forces that Sir Garnet Wolseley used to lead the “Sagrenti War”—a corruption and mispronunciation of “Sir Garnet”—which was the Ashanti campaign of 1873–74.

In 1874 the Corps of Hausas played a significant role in the campaign against the Ashanti. After one particular burst of fire, one of the Ashanti chiefs apparently saw the hopelessness of any further action against the British. He advised his comrades not to fight further but they would not listen. He went back into his tent; and shot himself. The British prevailed. They learned the lessons from this singular demonstration, and Rait was promoted to Brevet-Major.

The British then laid full claim, as a part of the spoils of war, to the southern region of the Gold Coast. The two parties signed a peace bond on July 24, 1874, giving the British the rights to those regions. The Ashanti felt pressured and sought to differ over the meanings of the terms. The two of course continued to quarrel over the upper regions.

The new Gatling guns were rapidly incorporated into British military doctrine. They were first deployed, in full in action, on Wednesday 22nd January, 1879, far away from the Gold Coast Colony and over at iNyezane, in the Anglo-Zulu Wars. This was a battle held on the same day as the far more famous battle of iSandlwana, which the Zulus won, and which was made famous in the film *Zulu Dawn* starring Burt Lancaster and Peter O’Toole. And that was itself a precursor to a yet more

famous action at the Battle of Rorke's Drift, which the Zulus very nearly won but ultimately lost, and which formed the story for the even more famous film *Zulu*, starring Michael Caine, Stanley Baker, Jack Hawkins and Ulla Jacobsson and narrated by Richard Burton.

Since resistance, particularly from the Ashanti, continued, the British eventually sent in Sir George Dashwood Taubman Goldie who some have called "the Cecil Rhodes of West Africa". He played a major role in the founding of modern Nigeria. Goldie's idea was to add the lower and middle Niger to the British Empire. But somewhat controversially, he was determined to do so using chartered companies along the lines of the much discredited British East India Company. In 1879 he successfully combined all British commercial interests into his United African Company. He procured a charter from Gladstone's government in 1881. But due to the scale of the objections, he was forced to increase his company's capitalization from £250,000 to £1,000,000. He established the Royal Niger Company which Governor Sir Charles MacCarthy then organized into the Royal African Colonial Corps of Light Infantry. Its primary purpose was to stop the Ashanti raiding into what Goldie and his investors regarded as "their" domains.

In 1883, Reindorf started a branch of the Basel Mission in Accra. He wrote the famous *The History of the Gold Coast and Ashanti* in Ga, completing it in 1889. The Basel Mission translated it into English in 1895. He started his own school with only twelve boys, paying all clothing, and lodgings himself. He gradually turned it into a success. It was located just outside Accra for ten years, transferring to Christiansborg for another ten. In 1914 one of his sons emigrated to the United Kingdom and married an Emma Clara Evans. He died in 1917. Numerous parks, monuments, and public buildings in Ghana are named after him.

The Basel Mission, which played such a prominent role in Gold Coast and West African history, was an offshoot of the German Society for Christianity. It was founded in 1815 by a group of wealthy and aristocratic Lutheran businessmen as a means to express their commitment to their religious ideals. It immediately removed to Basel, Switzerland, changing its name to the Basel Evangelical Missionary Society, building its first school to train Dutch and British missionaries in 1816. It developed the first full school system in the Gold Coast.

Fort Christiansborg, still at that point Danish, received its first group of four Basel missionaries in 1828. But the entire West Coast of Africa was often called the White Man's Graveyard. Malaria, yellow fever, sleeping sickness, river blindness, dengue fever and many others would strike without warning and missionaries societies and colonial governments struggled to find a solution. Only one was still alive when a second group of four missionaries arrived in 1832.

Once the Slave Trade had been abolished, the theory developed that Africans who had been relocated to the West Indies would be more naturally resistant to the diseases that plagued West Africa. This made the island complex fruitful grounds for recruiting. The Basel Mission and the Moravian Church sought catechists and missionaries from there.

Johannes Zimmermann was born in 1825 in Gerlingen, near Stuttgart, in Germany, and decided that he wanted to be a missionary. He went to Basel to train in 1844.

From the descriptions that Catherine Mulgrave-Zimmerman, born as Gewe, gave of her early life she was born in or around 1825 somewhere in Luanda, a Portuguese port on the coast of Angola. She is one of the very few women, removed from Africa into the Slave Trade, whose name and story are known, although her precise place and date of birth remain uncertain. She was descended from a chief's family on her father's side, while on her mother's side she came from a prominent mulatto family. She had already learned to read and write when she was captured, and so must have attended a Mission School before passing through Jamaica.

When Gewe was around eight years old, she, another girl, her older sister, also a mulatto, and a young boy were all fishing on the beach after school. The captain of the Portuguese registered slave ship "Heroína" had a few more empty berths. Slavery had been only recently abolished throughout the British territories, but was still practised in both Portugal and Cuba. The captain sailed close to the beach and called invitingly to the children. The older boy was immediately suspicious and ran away, but Gewe and her friends were deceived by the captain's inducements and promises of fish, sweets, and fine things to eat. As soon as they had been caught the Heroína set sail for Cuba.

The Heroína ran into storms just off the coast of Jamaica, foundered, and began to sink. Gewe, her sister, her friend, and a young man were lashed to a broken mast and were fortunate to reach the shore. Since Jamaica was British soil, they were immediately free. They came to the attention of the Honourable Maria Phipps, Countess of Mulgrave, wife to the Earl of Mulgrave, then Governor of Jamaica, who gave her the name Catherine Mulgrave.

When the Earl and Countess of Mulgrave left Jamaica in 1834, they left Catherine and her sister behind but took the boy. Catherine apprenticed as a catechist and teacher with the Female Refuge School run by the Moravian Mission. She hoped to become a missionary. She was exceptionally capable as both an administrator and a teacher and was soon put in charge of the School.

George Peter Thompson, who also ended up in Jamaica, was born on the Kru Coast, now in Liberia, and was educated in the Basel Mission located there. When it was forced to close the missionaries took him to Switzerland where he continued his education. He then formed a part of their delegation to the Moravian Mission in Jamaica to recruit missionaries to go to the Gold Coast to evangelize. While there, he met Mulgrave. They married in 1843 and were sent, as a couple, to Fort Christiansborg. They bore two children. Thompson unfortunately turned out to be a drunkard and a womanizer. In 1847 the Basel Mission granted Mulgrave permission to divorce him.

Zimmerman arrived at Fort Christiansborg in 1850. Mulgrave was already a central feature. She was teaching at the girls' school. She initially declined his proposal of marriage. The Mission was also opposed, citing the ordinance that missionaries should keep themselves separated from the native Africans. Zimmerman, for his part, pointed out that she was not a Gold Coast native. This was not, in his mind, a mere legal distinction.

Zimmerman and Mulgrave married, without the Basel Mission's knowledge or approval, in 1851. When the Governing Committee found out it informed him that he was no longer to consider himself a European citizen and that neither she nor any children they bore should expect to travel to Europe. She was not allowed to accompany him when he was summoned back to Basel in 1862

for “re-training” on account of his “unconventional views”. He returned to the Gold Coast in 1863. His brother Gistoph had by then also married a Gold Coast woman, as eventually did their various children. Many people living in Ghana today are descended directly from them, and the Church and congregation Zimmerman founded carries his name, and is still active.

Zimmerman remained in the Gold Coast until 1872 when he had a further bout of ill health. He returned to Switzerland to recuperate. Since the travel ban against Catherine and his children had by then been lifted, they could accompany him. They returned to the Gold Coast in 1873. His health failed yet again in 1876, and they went back to Switzerland, where he died. She returned to the Gold Coast in 1877, dying of pneumonia in Osu in 1891.

Their West Indies possessions and the difficulties of maintaining themselves in West Africa, meant that the British gradually instituted a more general policy. They encouraged West Indians, such as Thompson and Mulgrave, who had removed there from Africa, to go to West Africa in various official and administrative capacities. The West India Regiment maintained a detachment in the Gold Coast from 1843 until 1852, at which point the remnants became a Gold Coast Regiment, a local force that in its turn became the more local Gold Coast Corps. This was 300 strong and was trained as an artillery unit. It was composed mainly of redeemed slaves, as well as tribesmen from the Northern Territories. In 1857, the Gold Coast Corps was renamed the Gold Coast Artillery Corps, then was disbanded in 1863 when a further detachment of the West India Regiment arrived. They were then replaced, in 1865, by the Corps of Hausas. This was in its turn replaced, in 1873, by the Gold Coast Rifle Corps of Volunteers, which fought against the Ashantis under Captain Glover. At the end of that War 350 formed the nucleus of the Gold Coast Constabulary. This contained 16 British officers and 1,203 natives, and also fought in the Ashanti wars.

The ongoing problem for the British was that the Ashanti had controlled much of the territory before the Europeans had arrived. There was therefore often conflict. The native Hausa and Gold Coast forces that fought in the Sagrenti War were largely disbanded. A small nucleus was later used, in 1879, to establish the Gold Coast Constabulary to help maintain “internal security”. The Constabulary was certainly needed. Not all acquiesced meekly to these new arrangements.

French expansionism in northern Nigeria became a major concern in British strategic doctrine. The military forces that Goldie and MacCarthy had raised merged with the remaining components of the Gold Coast Constabulary to become the West African Frontier Force, established in 1897. The force was of course manned by British officers. The task of raising and maintaining a suitable force to deal with the French was entrusted to Lugard. He reorganized the West African Frontier Force, and commanded it until the end of December 1899. The following year all existing British colonial and military forces in West Africa were designated the West African Field Force. All these various military forces, and their associated cadres and civilian staff became avenues of social advancement. The issue was whom they could, and could not, marry.

The last part of the nineteenth century saw several British incursions into Ashanti territory. My own family’s links to these events and to Jamaica come through Sir James Bruce whose Scottish ancestry dates back to Robert the Bruce’s grandnephew, Sir Thomas De Bruys, 1st Baron of

Clackmannan, who received land from his uncle, King Robert II, for the part he played in a rebellion against the English. A long line of Bruces then held that baronetcy. Robert's daughter, Princess Elisabeth Stewart married Sir John Edmonstone; with their great grand daughter then marrying Sir Patrick Blackadder, whose daughter Jane married Sir David Bruce. Their great grand son Alexander's grandson Sir James Bruce eventually emigrated to Barbados, becoming Chief Justice.

Sir James Bruce's son Robert used his connections to become a successful trader, and eventually immigrated to the British Gold Coast. He settled in Accra's Jamestown area and married Lankai of the Lante Dzan We. They bore Robert William Wallace Bruce. But much like Capitein, it was his African mother who determined his treatment and ethnicity, and he took the name Nii Nanka. He had a son Alexander, who married Awura Christiana Reindorf, a great grand-daughter of Governor Augustus Frederick Hackenberg. They bore Frederick Victor, who called himself Nanka Bruce in his grandfather's honour. My mother came from the Bruce family. FVB was my maternal grandfather's cousin once removed, and he was alive for the unfolding of these events. Indeed, by a strange twist of fate he was in Kumasi, with Governor Hodgson's Kumasi Expedition, when the Ashanti were finally defeated.

The British several times offered the last free Ashanti chief, Otumfuo Nana Prempeh I, the "benefits" of a protectorate ... but he could not see those benefits and refused every time:

The suggestion that Asante in its present state should come and enjoy the protection of Her Majesty the Queen and Empress of India I may say is a matter of serious consideration, and which I am happy to say we have arrived at this conclusion, that my kingdom of Asante will never commit to any such policy. Asante must remain as of old at the same time to remain friendly with all white men. I do not write this in a boastful spirit but in the clear sense of its meaning ... the cause of Asante is progressing and there is no reason for any Asante man to feel alarm at the prospects or to believe for a single instant that our cause has been driven back by the events of the past hostilities (Boahen, 2011).

Prempeh was under no delusions and was very well aware that the main British interest was the gold the Ashanti had. It had been the foundation of their trade and prior predominance in the region. The British were not to be thwarted and upon a pretext eventually marched into Kumasi. Facing far superior forces, Prempeh refused to fight. The British forces thus defeated him. But he also refused to pay the demanded indemnity. He and his family were therefore arrested. Fearing that his people would try to rescue him, in 1897 the British deported him and drove him into exile. He was sent first to Sierra Leone, then to the Seychelles.

When Prempeh was defeated, Yaa Asantewaa became paramount chief in her area. She signed the treaty of protection, in 1896, but did not like its conditions. She was particularly aggrieved at the expressed right to demand forced labour, and she could see no difference between that and slavery. Partly because of her, 1897 saw the West African Frontier Force established.

The fate of the Ashanti Empire was sealed on March 28th, 1900, when Yaa Asantewaa was thrust into a leadership position. With typically British bulldog bluster and a lack of comprehension

for the possible consequences, the then Governor Fredrick Hodgson demanded that the Ashanti bring to him, immediately, their famous golden stool. No one had ever sat upon it, but it symbolically encapsulated the Ashanti soul. Hodgson nevertheless wanted it to sit on to prove his authority. He also made it clear that Prempeh would not be returning any time soon ... and that the Ashanti still had not finished paying for the war efforts of 1874 and 1896 that had been waged to subjugate them. He finished by saying that the British Resident in Kumasi was from that point on to be taken as their chief, and that the Resident had the right to use any Ashanti native he desired for forced labour.

Yaa Asantewaa was under no delusions what Governor Hodgson had meant. So that night, she challenged all the men around her to commit themselves to the fight for Ashanti freedom:

I shall not pay an ounce (predwan) to a British.... How can a proud and brave people like Asante sit back and look while the whitemen take away their king and chiefs, and humiliated them with a demand for the Golden Stool... if you the chiefs of Asante are going to behave like cowards and not fight, you should exchange your loincloths for my undergarments (Boahen , 2011, p. 118)

She then seized a gun and fired into the air. All the chiefs took an oath to fight to rid the Ashanti of British rule under her leadership.

It took the British military some time to realize that the sixty year old woman before them really was the leader. This was a very minor nonmaterial military and tactical advantage that Yaa Asantewaa exploited for as long as she could. Amongst other ruses the Ashanti deployed under her leadership was to manufacture a false golden stool which they then pretended to defend staunchly, so allowing the British to make much claim to a notable but completely false victory.

The Ashanti stood no chance of defeating the might of the entire British Empire. It only took the firepower of 1400 Gatling guns to win the day. On June 24th, under cover of the Gatlings, the Governor and his party, including FVB, managed to break out of Kumasi and reached the coast. Yaa Asantewaa surrendered on 3rd March 1901. Later that same year he went to Edinburgh to study medicine. The Gold Coast became a British colony, with all its kingdoms and tribes forming a single political unit. Yaa Asantewaa was exiled to join Prempeh in the Seychelles. When she died there in October 1921, my father was but eight years old.

The Gold Coast Constabulary was renamed the Gold Coast Regiment. It was merged with the West African Frontier Force and placed under the direction of the Colonial Office. During World War I the Regiment provided five battalions for service in the East Africa campaign, as well as in Palestine. It remained active until 1918, when it was demobilized. And all throughout this service, the Colonial Office made promises about pay, conditions, and above all pensions. None of them materialized. More significantly, several of them married British women.

The Ashanti agitated constantly for Prempeh's return. He was eventually permitted to return in 1924, but only as a private citizen. A mass petition followed, and he was reinstated in 1926, but as a British-mandated "king" of a Kumasi state, rather than as a traditional chief. He occupied the position previously held by the British Resident. He died in 1931.

In 1933, during the slow build-up to the Second World War, the Gold Coast Regiment and the West African Frontier Force were resuscitated. In or around 1938 a new light battery was formed under the initial command of four British officers. The Gold Coast itself played a significant role in the Allied war effort when, in 1942, General Shepler Fitzgerald located the headquarters of the Air Transport Command in Accra, and organized the Africa-Middle East Wing from there. And approximately 65,000 souls from the Colony saw service in the East African Campaign, and in Burma. The white wife problem was increasingly exacerbated, for of course several of them contracted marriages to British women.

And when the Second World War ended in 1945, history began to repeat itself. Many of the soldiers who had contributed to the global war effort had had fathers who had served in the First World War and who had never been properly recompensed. They were resolved that the same was not going to happen to them. Those disgruntled and demobilized soldiers who had fought for democracy and freedom for others in a World War were the nucleus around which the Gold Coast Colony's campaign for independence cohered. The ex-servicemen's union held a march in February 1948 to go to the Governor to present a petition requesting independence. The police killed two demonstrators and wounded several others. Unrest spread rapidly. I was born just over three years later.

The Gold Coasters and other West Africans who returned to Europe as a part of the white wife problem—which became the focus of my studies and was the way I resolved Darwin—faced a particularly acute situation.

The Colonial Office's West Indian recruitment policy had created a situation in which white British citizens, coming to the Gold Coast from Great Britain, could find themselves serving underneath British but West Indian citizens, and so originally of African descent. But in many white British eyes, they were indistinguishable from the native West Africans. This caused resentment.

We now get to the situation of Marcus Clarke, the British customs supervisor based in Sekondi, and whose case brought matters to a head. He contracted a marriage with Abba Saraku, a young native woman, and daughter of Quasie Yarn, a prominent local healer. When he backed out Yarn took Clarke to court for breach of promise.

Such situations were usually dismissed out of hand. Natives such as Yarn, and particularly their daughters, were invariably in the losing position. However, Governor Rodger had issued his concubinage circular—one of the many such that had from time to time been issued by a long succession of Portuguese, Swedes, Danes, Dutch, and other British governors prior to him. But on this occasion, Clarke's immediate superior brought the matter directly to Rodger's attention. Rodger then deemed Clarke's conduct prejudicial and demoralizing to the entire colonial administration.

Clarke now had the dubious honour of becoming the first—and the only—British officer or administrator ever to be punished for such a "transgression". Rodger's official determination was that Clarke and the other West Indian and native Gold Coasters in his administration were "wanting in tact and difficult for the [White] Supervisors to get on with" (Ray 2015). Clarke's career was destroyed, and all hopes of advancement for native administrators was closed off. The British had drawn the lines of the colour bar very firmly. The European men from then on simply had to show greater

discretion. This meant maintaining good links within their communities and with their immediate supervisors on a “nod and a wink” basis. The white wives, however, became a problem ... as also did the children they bore, the men they consorted with, and the husbands they married, in that rough order of inconvenience.

The British had recruited West Indians not just into the police, the military, and the administration, but also into the medical services. Health was a particular problem for European doctors due to their own high rates of deaths and sickness. However, those doctors who did serve could establish lucrative private practices tending to the European merchants, teachers, missionaries and so forth domiciled in the Gold Coast.

The Colonial administration had initially been prepared to both import West Indian doctors, and to use trained local ones. However, due to their high rates of sickness, British and European doctors would not come to serve in the colonies without suitable guarantees of extended leaves—invariably to recuperate—and prospects of good pay. That good pay meant exclusive rights to service the local white and European community. The ordinances barring native Gold Coast doctors from treating the British and other Europeans were the ones to which my great-uncle FVB objected, on his contacts with the Colonial Office, and that Lugard supported. Allied to those ordinances were the social mechanisms to underline their unsuitability that Rodger outlined, and at which the British were expert at deploying, of a social exclusion based on his and Lugard’s clearly understood and catch-all phrase “not getting on with”.

The fears, anxieties, and ignorances that the husbands of the white wives were confronted with were exemplified in the treatment they received, mainly as black military personnel, when they arrived to settle principally in Britain’s port cities during and after the First World War. Liverpool, for example, had 188 West African residents. Of the twenty-one who were married, eighteen were married to white British women. Several more were engaged. Yet the *Liverpool Echo* described them as living in “distinct foreign colonies ... partly a check against the pollution of a healthy community by undesirables”.

Such was the scale of the “black peril” these servicemen represented that in June 1919, 2,000 Liverpudlians took to the streets in violent protests against them, accusing them of stealing women and jobs. There were race riots. There were particularly severe disturbances in Hull, London, and Barry, just south of Cardiff. Following these race riots eleven of the couples living in Liverpool were willing to be repatriated. However, the Colonial Office insisted that they could not emigrate with their wives. The social stigmatizing accelerated notably. The wives and children were officially classified as ‘undesirable non-natives’.

John ‘Akoko’ Parker, from the Gold Coast, was torpedoed in 1917 aboard the *Foleymore*, but in 1933 he and his wife Ena were denied repatriation under this exact policy. Ismail Noor and his wife Edith even paid their own passage to Somaliland, but within the week, the Protectorate’s governor had enacted legislation specifically to deny her and their children entry.

The case of Alfred Annan was even more striking. He arrived in Germany in 1901 as a personal servant to Robert Larsen, who died. He remained in Germany and became a merchant

seaman, serving in World War I. He married his Jewish wife Frieda Meyer in September 1927, and they settled in Hamburg. But by the mere act of marrying a foreign national she had, under German law, renounced her citizenship.

Since Frieda Annan was Jewish and—worse—had betrayed the master race doctrine by contracting an interracial marriage, then it was entirely unsurprising that in 1932, the Nazi Government would look to deport them. The British Consulate in Berlin initially denied them and their then two children all assistance. When the Foreign Office eventually ameliorated its position, it stated that the British Government was willing to repatriate Alfred to the Gold Coast ... but only if he would agree to go without his wife and children. The Annans refused to be separated.

When the German government eventually deported the Annan family, the Gold Coast still refused to accept them. The British had no choice but to allow them to go to Hull. They then met with endless obstructions and prevarications. Their situation only improved when Alfred relocated them to Cardiff to be closer to others in the British Gold Coast community. Family friends of Frieda's, from Leipzig, then helped them procure a large property they could use as a guest house.

Alfred never did get permission to return to his natal country with his wife and children, but he nevertheless volunteered for military service. He died in action, torpedoed by a German U-boat, in May 1942 on board SS Cape Corso. Frieda's home became a haven for African American servicemen stationed in Cardiff, where she lived until her death in 1974.

We have now got to the events that happened in my lifetime; that directly affected me; and that led to my interest in the white wife problem, and my subsequent discovery of anastrophy and associated proof of Darwin's theory of evolution. Noone had taken a harder line on the white wife problem than Dr. Daniel Malan, Prime Minister of South Africa, and a Minister in the Dutch Reform Church.

The South African government was utterly opposed to the marriage that eventually took place, on Wednesday 29th September 1948, between the British citizen Ruth Williams, and Sir Seretse Goitsebeng Maphiri Khama, KBE, then a dispossessed paramount chief of the Bamangwato in the then British Protectorate of Bechuanaland. Dr. Malan instructed Douglas Forsyth, his Secretary for External Affairs, to telegram Leif Egeland, South Africa's High Commissioner in London, to advise the British Government that it should withhold its recognition from Seretse Khama. The Khama's marriage thus made headlines all around the world, becoming a matter of national policy and debate. Even Sir Winston Churchill spoke in the House of Commons to question the British Government's response, and its continuing treatment of the Khamas. They gradually garnered support for their cause and a "Fighting Fund" was formed which soon acquired funds. In the face of much entrenched opposition amongst the British and the South Africans, Seretse Khama went on to become the first president of Botswana. I remember him being a frequent topic of conversation. He died in 1980, his wife Lady Khama dying in 2002.

The Khamas case came very close to my own home because amongst those who befriended him was Joseph Emmanuel Appiah, an Ashanti from Kumasi and one of my father's political colleagues in our campaign for independence. He was a student at the Middle Temple

who was also offered a place at Cambridge University which he declined so he could engage in his political activities with the West African Students Union. He was at that time a close friend of Kwame Nkrumah, who became the first President of an independent Ghana, although their friendship was later destroyed. Appiah left to join the National Liberation Movement, which later joined up with the United Party, which my father later led. Both were opposed to Nkrumah's Convention People's Party. Appiah was a noted cosmopolitan and became Ghana's representative at the United Nations.

Shortly after I had been born, Appiah married Enid Margaret "Peggy" Cripps, daughter of Sir Stafford Cripps, former Chancellor of the Exchequer. This marriage, which took place in June 1953, also made front page news all around the world.

The above two marriages, between the Khamas and the Appiahs, were considered so remarkable they became the inspiration for the movie *Guess Who's Coming to Dinner* starring Sidney Poitier, Spencer Tracy and Katharine Hepburn. Their son Kwame Anthony Appiah went to study at Clare College Cambridge, and is an internationally known and respected university lecturer and author, who has considerably developed his father's philosophy.

I was still just a boy when, on August 3, 1956, the Legislative Assembly of the Gold Coast passed a motion authorizing a request for full independence within the British Commonwealth. Then on March 6, 1957—113 years to the very day after a group of chiefs just south of the Ashanti had ceded that very same independence to the British crown by signing the bond of 1844—the new nation of Ghana was born. The word is taken from the ancient Ghana Empire of between 830 and 1235 CE located around what is now southeastern Mauritania and western Mali and means "warrior king".

My father was elected Leader of the Opposition ... and ... it proved to be for but the first time ... my parents and their four children were very soon in exile ... although I confess that I do not remember very much of anything from that first time. I do remember my father suddenly leaving home one day. I did not realize at the time it was an escape from danger. But I do remember ... that the next day the secret police came asking for him. I also remember speaking to them. But I was just a small boy and I of course did not know they were secret policemen. Everything I remember from that time is based upon how my mother conducted herself. And ... she was completely calm. I certainly did not know that there was an international hue and cry, and that people all over the world were campaigning for us to be released from what I did not know was our house arrest. I do remember that one day a little boy left the older brother—his mother's first child—who lived with him behind with their grandfather, as he and his three younger siblings—a brother and two sisters—excitedly packed a few belongings and then got ready for a big adventure on a big ocean liner owned by the Elder Dempster Line. It was an adventure like nothing they had ever been on before. I remember we eventually met up with our father again in Sierra Leone, but that was also not particularly unusual, for we had often met up with him in strange and different places. It was to be well over a decade before we returned.

We went first to Holland, then to England, where I became a keen bird-watcher and for some strange reason befriended, and became unofficial chief protector of, the Dartford warblers who were decimated by the very severe winter of 1962–63. In 2008 they were still of low abundance being

classified as a 'near threatened' species. I remember my Mama spoke to me so kindly about them to ease my concerns as I worried that there were now only ten pairs throughout the entirety of her Britannic Majesty's United Kingdoms.

From all I have come to understand, I might have got my deep love of, and interest in, biology from my great grand-uncle FVB ... but I certainly got it from my most wonderful Mama who had such a love for growing things. I did not understand, at the time, what a refuge to her those gardens must have been, when so far away from home. She was out for hour upon endless hour, digging in the hard freezing ground of the coldest of British winters as she nurtured both me and her plants. She would sow; she would prune; she would gather. She would make the unlikely of plants blossom in those gardens of hers which others, who tried, quite failed to grow in theirs. So they would come to our house to see how it was done. And their hearts would be lifted by her, as all of ours always were, when in her presence. It never once occurred to me that my childhood with its long periods of exile—and in the second of which my beloved father died—might be in any way unusual. I thank her and I salute her and I say to her, as is the custom amongst us on such occasions: *Damirifa. Damirifa Due. Due Due Due. Damirifa. Damirifa Due.*

I cannot even begin to speak of the sheer love, kindness, and constant encouragement I received from my father. And nor can I think what more to say about him, except to thank the universe at large for having blessed me with not just one, but two such wonderful parents. So I salute him, in the same way. And I again say: *Damirifa. Damirifa Due. Due Due Due. Damirifa. Damirifa Due.*

I always knew that my father was not only kind, but an immensely intelligent, talented, and accomplished man. So when I was a child at school, and was given a problem like $2 + 2 = 4$, that I could do instantly in my head, then I was happy to give an answer. But when I was given something a little more complicated, then I generally felt it better not to try. I knew that in a similar situation, he would certainly have got the right answer. I did not want to provide a wrong one. I can see, now, that this must have been a source of frustration to my teachers. It meant that I invariably would not even try, when clearly I could do it if I would only put my mind to it. This continued until I met Kenneth Wilson, the School Chaplain, and Alan Gent, my mathematics master, at Kingswood School in Bath. But none were equal to Mrs. Ida M. Prins-Buttle, my much-loved piano teacher. She held the key to the whole of creation. The highlight of my young life was playing a double Bach piano concerto with her in Bristol's Colston Hall. To this day, my heart fills with gratitude that she thought me worthy of that honour. It was thanks to the light that she lit that I became a student who was diligent enough to follow my father to University College, Oxford; and eventually to solve the puzzle that Darwin left behind him, and that nobody before me had solved.

And it was while I was still a student that, for the second time in my life, soldiers went marching to our home as my father was overthrown, in 1972, by a coup d'état. We were once again driven into political exile.

I was, of course, very much more affected by that second time. My father and my younger brother and sister and I left my mother with her other two children at our home in Accra one Monday. My father needed medical treatment in the UK, my younger two siblings were due back at school, and

I was due back at University. We had no idea we would not be returning. I knew very well it was not at all useful, but I would have given anything to have been there instead of my mother and the other two siblings. It was what I wished fervently. They were eventually released. Papa died at our home just outside Oxford, in his second political exile, in 1978.

Then we get to what motivated my study of the white wife problem, and what led to my discovery of anastrophy, and to my solution to Darwin's theory of evolution. Since ethics is not generally regarded as scientific, it regrettably proceeds by demonstration and counter-demonstration, argument and counter-argument. It can be mind-numbing trying to work through them all. I eventually settled on the white wife problem as a way of deciding amongst them because in one way or another, they can all come to the fore in the *Practical Ethics* that is both the enforcing and the discussing of the white wife problem.

Anastrophy can perhaps be looked on as an exercise in "pragmatic ethics". Pragmatic ethics is the attempt to treat moral and ethical issues in a more scientific fashion. But to better understand its motivation, then in May 2015, when staunchly Catholic Ireland voted to legalize same-sex marriages, Archbishop Diarmuid Martin said that even though most Irish were Catholics who had been through the school's educational system, there had clearly been major changes in Irish society that needed to be understood. This is quite a concession for someone who is an "ethical absolutist", and an "ethical supernaturalist". An ethical absolutist believes that moral rules are discoverable; always true; and applicable to all, irrespective of time, circumstance, and etc. An ethical supernaturalist points to the source of those rules. Of course, Archbishop Martin also did only say that he felt it important to try to understand why the Roman Catholic Church had lost that particular political battle, so as to better understand how to proceed with its mission of saving souls. But the desire to understand nods to the pragmatics approach. Supporters of pragmatic ethics view moral rules as social, rather than individual, concerns. They believe that moral principles are subject to revision in the light of both individual and social experience. The pragmatics approach says that "truth" in ethical behaviour is determined through constant ethical inquiry, and by contrasting one hypothesis with another to draw appropriate conclusions. However, pragmatics is not the same as "ethical relativism". Even though what was regarded as 'right' and 'good' in one era is not the same as what is so regarded in another, this does not necessarily mean, in the pragmatist's eyes, that 'everything is relative', nor that everything is mere convention. It does not mean that there are no real and underlying social rules. Just as a physical object that constantly changes its velocity still allows us to discern certain constancies such as mass, force, and acceleration, then so does a pragmatically based study of social behaviour allow us to discern certain objective factors, such as moral codes and ethical rules. These go beyond mere convention and changing fads. They are deep-seated principles that transcend each individual involved in any one situation. The pragmatic ethicist then has to determine what underlying principles might apply, yea or nay, to the white wife problem, and in respect of the wife, the husband, and society at large.

"Situation ethics" was at work in November 2015 when the terrorist group the Islamic State claimed responsibility for a series of attacks throughout Paris. ISIS justified the attacks by

saying “the targets included the Bataclan theatre for exhibitions, where hundreds of pagans gathered for a concert of prostitution and vice”. This is an example of “situationism” in ethics for the implication is that Paris was such a den of iniquity that it was impossible for anyone living there to be virtuous. Paris indeed threatened to contaminate the virtuous, simply by existing. Or ... there was an interesting moral-ethical experiment on generosity which discovered that a beggar will do better standing outside a bakery store, because the smell of fresh bread makes people, in that situation, more inclined to be generous (Appiah 2008). Standing outside a dry goods convenience store is a bad idea for it does the opposite. Many situationists therefore reject rules of all kinds, arguing that individual ethical decisions should be made according to each unique situation, for one never knows the full extent of parameters. Each actor should instead keep himself or herself free from rules because none can apply to every possible situation. Since each is unique, each may demand a unique solution. But there are other kinds of situationism. Prime Minister Malan of South Africa held situationist views in reference to the white wife problem. Others hold it more subtly by insisting that the word “problem” should always, and automatically, be attached to “white wife”, as also to “half-coloured” in respect of their children, who both are and will have problems. One part of the problem lies with the white wives who are perhaps best considered—as was done with Annie Mullen—at least temporarily deranged. The other part lies with the intending husbands who are then best handled with the approach recommended by Lugard. This is to recognize that those incoming and native husbands are necessarily childlike. They are incapable of assessing situations correctly. It should be made clear to them at the outset that they are, necessarily, moving beyond their competences and above their station. The best outcome, on this situationist approach, is as happened with Prison Inspector Samuels, who had the temerity to return to the Gold Coast with his Irish wife, who then had to be repatriated because he suddenly died. Situationism therefore recommends that both parties be discouraged, for their sakes, from undertaking these marriages.

Since Singer is a utilitarian, he is a “consequentialist”. He would argue, against the above pragmatic and situationist views, that it is always the overall consequences in any moral situation that matter. Utilitarianism is specifically concerned with happiness as the sum total of moral “goodness”. A morally right act produces that maximum of a good outcome or consequence. There are, however, other kinds of consequentialism. A more political form would be concerned with freedoms. Should white wives be permitted to contract these marriages? A more Darwinian form of consequentialism would concern itself with some combination of the survival either of an action or its agent, and the replication of one or the other, or both. Thus the more white wives there are, then the more likely it is there will be others, and this must therefore be proving the rightness of that action, for it proves itself by fitness and survival. And where traditional or classical utilitarianism is about maximizing pleasure and minimizing pain, a preference utilitarian promotes whatever actions will fulfil the maximum interests, and so preferences, of those concerned. The problem, of course, is ranking them. What priority should be given to the wishes and desires of those white wives who wish to cause “problems” by marrying black men; and what scale and ranking should be accorded to the preferences of the black men who wish to marry them?

“Virtue ethics” concentrates not on pragmatics assessments, situations, or outcomes, but on the character of the moral agents. It suggests that virtuous people are known by their innate association with actions and circumstances of virtue. They are immediately moral because they are virtuous. They are virtuous almost irrespective of all other criteria, and because they study and then embody the nature of virtuous traits. But there is of course a corollary. It is just as easy to point to the non-virtuous. They are the originators of non-virtuous actions and situations ... such as with the black husbands who presume to marry white women, which by definition makes them non-virtuous, for they should surely have known better. They are intrinsically non-virtuous no matter what situation they might be involved in, and no matter what they might actually be doing. Their non-virtuous traits simply await discovery, such as with Rodger’s phrase “not getting on with”, which always identifies these types. In contrast to that, the virtuous types are always known by being righteous overall, even through any situations in which they are temporarily forced to engage in what might otherwise be considered non-virtuous behaviours. Their virtuous character excuses them by providing a deeper reason, especially when preserving virtue against the non-virtuous, who invariably cannot see that the virtuous are indeed being virtuous.

A “deontological ethics” looks more deeply at these behaviours and situations, and is concerned with the moral duties they evoke. It is a Kantian-based approach to morality and ethics. This is therefore concerned with the behaviour itself. It is not with concerned with outcomes; nor with the moral agent’s character; nor with intrinsic happiness or pain; nor with any other criterion. This approach proposes a discussion of rules, of ‘oughts’, and of obligations, however those might be derived. Thus given the need to maintain social order, if such a need exists; and given the evident criteria of what is ‘natural’; then “ought” white wives to be marrying black men in the first place, and “ought” black men to be desiring to marry white wives, for are these not a dereliction of their duties to be moral?

An “ethical intuitionist” differs from all these yet again by pointing out that all discussions of moral and ethical behaviour invariably proceed by setting up some form of moral dilemma, or else by asking us to have some form of immediate insight into some factor. We are asked to “see” what is being discussed, or what is appropriate. That insight is then only latterly justified by some form of arcane explanation, or some appeal to whatever is the current propagandist’s preferred explicandum.

It is close to impossible to work your way through these ideas. But the dynamics of the white wife situation are nicely characterized by the Ghanaian scholar the late Reverend Dr. Abraham Ako Akrong who coined the terms ‘survivalist’ and ‘colonialist’.

The white wives are invariably survivalists. They eat local food, wear local dress, learn the local language, and form extensive links with, and liaise with, the local community. Akrong’s colonialists are best characterized by James Tuttleton’s book *Arrogance and the canons of historical scholarship*. Colonialists are eternally concerned with perceived “contamination”. They discourage the use of native language and customs even by locals; and even when those locals are in their own homes. They prefer to keep everything smacking of ‘local’ at arm’s length and accuse the survivalists of ‘going native’.

The process that led to me to the discovery of anastrophy, and so to resolving Darwin's theory of evolution, began when I myself started a relationship with a potential white wife. Her mother was intransigently opposed. Her first words to me were "Have you ever thought, your children are going to be half-coloured?". That was followed, immediately, by an injunction to relay to my mother: that she kindly refrain from speaking Ga in her own home. Three times, after bearing a son, I was then forced to go to the Royal High Courts of Justice, on the Strand in London, seeking to gain contact ... only to be told, as had others before me, that he did not need me as his father in his life; and that he also did not need the companionship of the brother and the sister that I was later able to provide for him when, a couple of years later, I got married and had two more children.

I of course knew very well, from my life experience, that people like this existed. I also of course knew very well, again from my life experience, that others before me had been through such things, and had had such things said to them, also, in this 'white wife problem' situation.

I was saved by my mother. *Damirifa. Damirifa Due*. I had at that point also been studying yoga and Indian philosophy for some time. I also remembered my dead father. *Damirifa. Damirifa Due*. I realized he would not want to see me remaining in that condition. When I followed them and turned my my mind to what my guru, Sri B. K. S. Iyengar, had taught me, I saw the way.

All these kind people had taught me that you should always fix the ignorance you can see in yourself. You can do nothing about that in others.

So I thought of all the fine books my father had read before me, some of which I had then read myself. But there were many others I had neglected, over the years, to read. I therefore determined to go back, and to read all those books, because I dearly wanted to understand ... what could make people have such fears, based entirely on the colours of people's skins, and as had now—and so adversely—affected my life?

The books, however, were many. I had to decide how to proceed. Since it had always intrigued me that nobody had ever been able to prove Darwin's theory for him, then I organized all my reading around resolving that. I knew that one of two things would happen. Either I would die still reading and trying. Or else I would resolve it.

Once I had formed my plan of attack, it took me two years to read through the many books I had decided upon. And when I started reading Sadi Carnot, Émile Clapeyron, and James Maxwell, I became convinced I was on the right path. I knew that what I wanted to do could be done. I diverted to Adam Smith's *The Theory of Moral Sentiments* to check that I was on the right path. That confirmed that I was.

And ... when I eventually settled down to the problem of evolution, it took me about three weeks to devise the three constraints of constant propagation, constant size, and constant equivalence that govern both the anastrophies and the behaviours of all living organisms. Although I now had those in mathematical form, I did not yet have a version I could state in words. It then took me another three months to get both the mathematical form and the words for my four laws of biology, and my four maxims of ecology.

Even though I had now achieved what I set out to achieve, I carried on reading. I did not get the verbal version for my three constraints until some ten years later, when I reread the history of the discovery of spectroscopy and suddenly resaw Kirchhoff's three laws in a new light. Once I saw that, I had the words in just a few hours.

I have also proved my laws, maxims, and constraints in several different ways. The version on this web site uses algebraic and geometric topology.

I shall write about my other discoveries at another time. For now ... I write on biology, and on Darwin's theory of evolution, for which I was fortunate enough to find a logical proof that what he said is true.