

Visualising Evolution: Science, Art and Visual Culture at the Darwin Museum Moscow.

Pat Simpson, *Art & Science* conference, UH, October 2-3, 2010

INTRODUCTION [title SLIDE 1]

This paper looks at aspects of the relationships between art, science and the shifting interpretations of evolutionary theory within the history of the Darwin Museum, Moscow from 1907 to 2009. [SLIDE 2] The museum began in 1907, with a collection of stuffed birds belonging to the founder, Dr Aleksandr Kots.¹ Today it is the leading natural history museum in Russia.²

What the new museum explicitly shares with its previous incarnations is a commitment to the use of art - including graphics, painting, photography, sculpture, taxidermy, as well as the art of museum display - as means to engage the viewer with Darwin's evolutionary theory, and to emphasise the variety and variation in nature. Indeed, many of the current exhibits include art works and mounted specimens dating back to the earliest days of the museum's existence. Today, as in the past, the displays are designed by artists in conjunction with curatorial subject experts.

In narrating a partial history of the museum, I want to draw attention to the mesh of connections and contrasts with western approaches to Darwinian science and museological representations of evolution.³ I will begin by looking briefly at the role of taxidermy as a form of sculpture, leading on to consider the Museum's artistic engagement with representing, firstly micro-evolution, and secondly macro-evolution, particularly the evolution of humankind.

1. Foundation and Taxidermy

By the turn of the century there was enormous scientific and popular enthusiasm for Darwin's ideas in Russia. The museum was founded as a corollary to Aleksandr Kots' appointment to lecture on evolutionary theory at the Higher Women's Courses

¹ After the 1917 Revolution the building became the V.I. Lenin Moscow State Pedagogic Institute, and is now the Moscow Pedagogical University. the museum remained in a section of the original institute, which became increasingly decrepit until it was closed to the public in 1984 It was nationalised by the Bolsheviks in 1918 and opened to the general public in 1924. Soviet Decrees in 1926, 1946 and 1968 promised the construction of a dedicated building, which, however was only realised after the fall of the USSR, opening in 1995.

², designated the Scientific, Informational and Methodological Centre of the Russian Association of Natural History Museums, under the Russian National Committee of ICOM – the International Committee for Museums and Collections of Natural History.

³ Among the connections, are the use of taxidermy and art to provide an educational spectacle, particularly for the education of women; links with zoopsychology, early genetic science and discourse on eugenics; as well as reference to a 'progress' model of human evolution common in popular culture. The differences relate to how Darwinism was politically, and scientifically nuanced within shifting historical contexts: as intrinsically politically radical in the pre-revolutionary era; as the basis for understanding and prompting a new stage of human evolution in the Revolutionary 1920s-30s; and as diametrically opposed to genetic science in the Lysenkoist period between 1938 and the 1960s.

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Institute , Moscow, in September 1907. Specimens from his personal collection were used to illustrate the lectures.⁴

Kots had a keen interest in taxidermy, as illustrated by the paintings hung in the first hall of the current museum, dedicated to the museum's history. [SLIDE 3] One painting shows Kots as a boy, with a hawk skin, and the other , entitled *The First Lesson in Taxidermy* is a portrait of Kots with F.K. Lorens. [SLIDE 4] Lorens was the leading taxidermist in Moscow, with whom Kots studied in 1896. It was at Lorens' studio that he met Filipp Fedulov. Fedulov was to become a major partner in the creation of mounted specimens for the Darwin Museum, after his return from World War 1. He specialised in large animals. [SLIDE 5] Here is Filipp Fedulov stuffing a Tiger: skin half on model, and then with the skin nearly on. Here he is with a completed ostrich [SLIDE 6]. He also created two African elephants, the first of which was completed in 1927: [SLIDE 7] Here is the frame and finished specimen. [SLIDE 8] This is the frame and padding for the second one with the skull and tusks.

What is fascinating about these photographs is the revelation of the crude and basic sculptural materials, wood and hay, used to create the frames on which the skins were laid and stitched, and yet the contrastingly lifelike and dynamic appearance of the result. [SLIDE 9: elephants and tiger as if reacting to the viewers and aerial view of the contemporary 1st floor display with elephants and tiger]

These mounted specimens have survived and now inhabit the display of Savannah habitat in the permanent exhibition,⁵ where they still create an emotional impact.

2. Microevolution & Taxidermy. Variation/variability Usefulness of the Collection: Soviet fur trade

Exotic large scale specimens of taxidermy were, however, by no means the focal point of the collection as it grew in the immediate post-revolutionary period. [SLIDE 10] This photograph, of the installation of cabinets of stuffed creatures c.1924, relates

⁴ In relation to the use of taxidermy in the early Russian and Soviet Darwin Museum, stuffed specimens were in fact traditional and necessary elements of the study of natural history that went back before Darwin's time. Darwin himself had a large collection, some of which he commissioned from Alfred Wallace, the specimen hunter whose similar conclusions about evolution seem to have precipitated the publication of *The Origin of Species*. Taxidermy displays fell from grace in Western museum discourse of the 1970s-80s in relation to concerns over endangered species and potential adverse public reaction to encounters with taxidermised specimens of these, and other now extinct species. Recently, however, such displays, perceived as crowd-pulling spectacles, appear to be coming back into fashion, although there is an apparent dearth of high quality taxidermists capable of making an artistic display. This is something particularly lamented by Kiril Nasedkin - the Darwin Museum's current Deputy Director for Development. After the Revolution, thematic displays of elements of the Museum's collection continued to be used to provide support for lectures and conferences related to evolution, that were held in the building.

⁵ entitled 'The Diversity of Life on Earth' downstairs in the new museum.

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to one of the main interests that the new Bolshevik government had in natural history, Darwin's evolutionary theory, and biological sciences - what these could contribute to the improvement of the economy. There was, as a result encouragement to collect, study and represent variety and variation in domestic and fur-bearing animals.

Fedor Fedulov's nephew, Dmitri Fedulov, became the master of creating mounted specimens of such creatures for the Museum. **[SLIDE 11]** Here he is with a collection of small animals, and here, holding a stuffed dove with an array of rabbits, rats, hamsters, guinea pigs, and chickens. The creatures were set out in displays that emphasised variety and variation within and below the level of species, that is – variations that could be contemporarily observed in operation. The term for this – 'microevolution'⁶ – was invented by the Russian Darwinist biologist Yuri Filipchenko in 1927, and spread to the West by his student, Thomas Dobzhenko, who emigrated to the USA in the same year.

[SLIDE 12] The aspect of microevolution of crucial interest to the Soviet economy related to differences in colouration of fur-bearing animals.⁷ The Bolshevik Revolution of 1917 rendered the rouble worthless in the Western money market and the Soviets relied on selling artefacts and raw materials in order to gain foreign currency with which to trade with the rest of the world. Furs were an important, pre-established resource for this trade. Soviet fur auctions for western buyers began in 1921 in Leningrad. But even before this, the new Bolshevik fur trading organisation⁸ approached the Darwin Museum to collaborate in creating a collection of variability of colouration in fur-bearing animals, a collection which today is claimed to be unique in the world. At the same time the government also established experimental breeding stations and fur farms.⁹ The display of Dmitri Fedulov's art shown here, related to the variability in colouration of fur in foxes from a fox breeding farm.¹⁰

The expansion of the collection was located in a context of nascent genetic science. Important lines of theorisation were provided by the Leningrad-based geneticist and botanist Nikolai Vavilov^{11, 12}. Vavilov's theories emphasised the importance of environmental adaptation to the shifts in observable characteristics, but he was also a

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⁷ The Russian fur trade had been a major industry in the late 19th and early 20th century.

⁸ [which in 1930 became Soiuzpushnina – the All-Union Fur Trading Syndicate]

⁹ The production of furs was primarily based on hunting, virtually the only industry available to nomadic peoples of areas like Siberia.

¹⁰ In the 1920s-1930s, the collection relating to variability in fur-bearing animals – and indeed aspects of the Darwin Museum's ornithological collection that again stressed variation and variety within species –

¹¹ Nikolai Vavilov [1887-1943], Head of the Institute of Plant Industry 1921-1940 and Director of the All-Union Institute of Agricultural Sciences 1924-1935

¹² Vavilov's publications on the law of homologous series in hereditary variability (1920), and on the centres of origin of cultivated plants (1926), identified 'clines' - changes in particular features such as colouration within a species - as associated with geographical locations.

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supporter of Mendelian and Morganist ideas of genetics.¹³ Within Soviet bioscience, such ideas became increasingly politically dangerous, however, after Trofim Lysenko was elected to the Soviet Academy of Sciences in 1938. Vavilov was arrested in 1940 and died in Saratov prison of malnutrition in January 1943.¹⁴

Lysenko's 'Michurinism' was a Lamarckian-style theory that regarded all evolutionary change as related to genetically inheritable adaptations resulting from habit and environment. He suggested that plants, animals, and by extrapolation, humankind, could be rapidly 'evolutionised' by enforcing such changes through forms of 'training'. The theory had a particular appeal to the Soviet government, desperate to increase productivity on all levels, and was based on one instance of apparent success – Lysenko's 'vernalisation' of wheat in Ukraine in 1929. But in order to serve the desires of the political realm, Lysenko's theory took too literally the inclination of 19th and early 20th century Russian Darwinist scientists towards the Lamarckian ideas embedded in Darwin's own theories.¹⁵ Once Lysenko had risen to power, genetics research more or less ground to a halt, only to be resumed in the late 1960s.

Between the 1940s and late 1960s, the Darwin Museum's taxidermised, artistically arranged and supported collection would have been presented in relation to Lysenko's reinterpretation of Darwin's theories. Indeed, Kots' plan, written in 1952 for the permanent display in the building promised by the government Decree of 1946, had a special section devoted to 'Michurinist' biology.¹⁶ [SLIDE 13] Kots and his wife Nadezhda Ladygina - shown here in the late 1950s-early 1960s - died between 1963-4, before the burden of Lysenko was entirely shaken off. It was left to their successors to reintroduce genetic science into the interpretation of Darwin presented by the Museum.

3. Art & Taxidermy: Women's Education - Different Political Agendas West and Russia

The commitment of Kots and his wife to the idea of representing evolutionary theory by using artistically stuffed creatures in action poses contextualised by other artworks, engaged with new thinking within natural history museums in their rise to prominence in the late 19th and early 20th centuries. It had been pioneered between the 1880s-

¹³ and also notions of eugenic breeding programmes to improve the Soviet human population]

¹⁴ He was 'recovered' for Soviet science in the mid-1950s [after the death of Stalin in 1953] and a number of institutions were named after him. However the street on which the new Darwin museum stands, Vavilov Street, was named after his brother Sergei, an eminent nuclear physicist, Director of the Soviet Academy of Sciences at the end of WWII and overseer of the first stage of the Soviet nuclear bomb project.

¹⁵ For instance, Lysenko replaced the notions of 'struggle for existence' and 'natural selection' with ideas of 'cooperation', which, of course had immediate resonance within the Soviet socialist political agenda.

¹⁶ Igor Fadeev, currently Leading Researcher of the Repositories Department, has recently observed that this would have been 'drier' and 'more austere' than any other museum display elsewhere!

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1890s in America, most particularly by the American Museum of Natural History in New York,¹⁷ and was taken up by the British Museum Division of Natural History after it moved its collection to a separate site in South Kensington in 1881.

The new turn towards spectacle as adjunct to education about evolution was part of an impetus to encourage 'self-improvement' amongst working class males, in what Donna Harraway has implied was a Malthusian-inspired attempt to redirect their minds from sex.¹⁸ It also related to a new concern with the education of women.¹⁹ This was a prime feature of the education programmes of the American Museum of Natural History and the new British Natural History Museum in South Kensington,²⁰ and of the Darwin Museum's foundation and early existence.

In Russia, the connection between Darwinism and the education of women was implicitly linked to political radicalism, which was important for the Museum's survival after the Bolshevik Revolution of October 1917.²¹ A number of the leading nineteenth-century Russian Darwinist scientists were implicitly or explicitly connected with radical opposition, either to the Tsarist regime as a political structure, or at least to the antipathy of the regime to modernising the education system, particularly with regard to the sciences. Amongst their number were the behavioural psychologist Vladimir Bekhterev, the neurophysiologist Ivan Sechenov – who had been personally acquainted with Darwin, and Sechenov's disciple, the behavioural psychologist Ivan Pavlov – Darwinists who were particularly lauded by the Bolsheviks after 1917.

4. Macroevolution: Monkeybusiness - Nadezhda Ladygina Kots: Zoopsychology, Expression of the Emotions, Descent of Man

[SLIDE 14] In the early years, one aspect of the Darwin Museums' approach to macro-evolution – large-scale evolutionary change over geological time - was linked to the work of these three scientists and centred on the work of a graduate from the Womens' Higher Courses, the zoopsychologist, Nadezhda Ladygina - Kots' wife.

[SLIDE 15] No representation of Darwinian evolution is complete without some reference to 'monkey-business', and Ladygina gained international

¹⁷ Also the Field, and Peabody Museums.

¹⁸ Harraway,

¹⁹ Bennett/Harraway

²⁰ under the guidance of Henry Flower, after 1884 contradicting the previous policy of the natural history collection at the main British Museum site, which had positively discouraged the attendance of women!

²¹ Bennett, Tony Bennett has argued that in the West, this new connection between spectacular representations of Darwin's evolutionary theory and women's education seems to have been a move within liberal politics, to counteract revolutionary and suffragist tendencies by promoting a means for 'self improvement' that emphasised that major change happened over very long spans of time, and was moderated by the action of 'natural selection'.

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acknowledgement²² for a research project lasting from 1913-1916, that studied the emotional expressions and behaviour of a young chimpanzee, Ioni.²³ In 1925, after the birth of her son Rudolph, she embarked on a comparative study of chimp and infant child development, published in Russia in 1935.²⁴ [SLIDE 16 *Fedulov, Nadezhda Ladygina and display of monkeys late 1920s-early 1930s?*] From the Revolution to the mid-late 1930s, the project had a high profile in the Museum's representation of Darwin.

The project had its basis in the idea, fundamental to *Origin of Species* but explored more explicitly in Darwin's *Descent of Man* (1871) and *Expression of the Emotions* (1872), that humankind was not only descended from apes but also still shared some observable characteristics.²⁵ As with the work of Sechenov, Bekhterev and Pavlov, Ladygina's research into animal behaviour and psychology, was ostensibly intended to provide a basis for understanding the psychology and cognitive functions of the human brain, as an adjunct of physiology. She also used non-invasive forms of 'conditioning'²⁶ and training to try to 'evolutionise' the chimp, which located her work as similar to that of both the German experimental psychologist Walter Köhler²⁷, and the American zoopsychologist Robert Yerkes. [SLIDE 17] Yerkes, indeed, became acquainted with her work and visited her laboratory in 1929.²⁸

Her ultimate conclusions were that contemporary monkeys were an evolutionary dead-end, and that only humans had the ability to be 'evolutionised' by habit, training and 'conditioning'.²⁹ Unexceptionable at the time,³⁰ her conclusion was to fit

²² Ladygina's research was published in Russia in 1921 and 1923, and became internationally known, being published in French and German translation in 1928.

²³ which the taxidermist Fedor Fedulov helped her to buy from a Moscow animal trader, and subsequently stuffed for incorporation into the museum display.

²⁴ and not translated into English until 2002.

²⁵ Both of the latter books by Darwin had been published in Russia, in editions translated and edited by eminent, and politically radical Russian Darwinists, Ivan Sechenov (*Descent*, 1896)²⁵, and V.O. Kovalevskii (*Expression*, 1872), reprinted 1896. both reprinted in 1927.

²⁶ While related to their research concerning what has become known by the Pavlovian term of 'conditioned reflexes', and possibly linked also to Pavlov's experiments with chimpanzees' problem solving abilities, Ladygina's approach did not use invasive surgery but rather pure observation of behaviour within environments and attempts at training.

²⁷ Köhler, later one of the founders of Gestalt Psychology, worked at the Anthropoid Station set up in 1912 by the Prussian Academy of Sciences at Tenerife, in the Canary Islands. A book about his experiments, *The Mentality of Apes*, was published in 1917. Ladygina mentioned him in her acknowledgements.

²⁸, wrote about her research in the *American Journal of Comparative Psychology* in 1925. In the same year Yerkes published an outline of her research in a book co-authored with his wife, entitled *The Great Apes* (1929).

²⁹ NNLK, Preface, p.5. On paper, her conclusions appeared to be unexceptionable for the time and context. While acknowledging behavioural evidence of similarities in emotional expression and physical/oral responses, the study concluded by asserting the superiority of the human, in particular for its appetite for self-improvement, aspiration to overcome physical weakness or deficiency, its altruism, compassion and sense of humour. The chimp's world by comparison was to be seen as 'stagnant in his

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increasingly poorly with Soviet biological discourse, as the Lysenkoist belief that everything could be thus evolutionised, became more entrenched. Moreover, the research and outcomes were potentially tainted by association with eugenics discourse, not only in the USA – via her connection with Yerkes³¹ and Henry Fairfield Osborn of the American Museum of Natural History³² – but also in relation to Vavilov and Filipchenko, who were not only connected to Soviet eugenics discourse, but also tenuously connected to another, more ethically uncomfortable project to ‘evolutionise’ apes by hybridising them with humans through artificial insemination.³³ ‘Monkey business’ thereafter took a lower profile until the present displays. [SLIDE 18]³⁴

own narrow mindedness, regressive compared with the human, and a creature lacking the desire or ability to progress with his developments.’²⁹ In Ladygina’s introduction to the book she refers to the infinite possibilities and peaks of understanding to which the human might aspire, rising to utopian rhetoric in describing her own aspirations towards conquering peaks of knowledge: ‘May these peaks come up to the sun itself!’

³⁰ On the other hand, Ladygina’s views and particularly the emphasis on scientific research as an heroic endeavour, matched well with the Soviet context, which gave deep value to heroic struggle – indeed the vision of Stakhanovite man was just around the corner.

³¹ Rossiianov, pp.293 fn.23, 306 fn.36. Indeed as part of his trip to Russia in 1929 Yerkes visited the Primatology Nursery in Sukhumi on the Black Sea, that had been set up in relation to Ivanov’s project. Yerkes was deeply implicated in the American eugenics movement, in particular the project relating race and intelligence that was conducted on American army soldiers towards the end of WWI. He was also concerned with a notion of hierarchy of race, although he became more circumspect about this after 1930. In addition, there is evidence that Yerkes was aware of and interested in another, more ethically uncomfortable Russian zoopsychological project to ‘evolutionise’ apes – by using artificial insemination to hybridise them with humans, pursued by Professor I’lia Ivanov between 1926 and 1929.

³² Henry Fairfield Osborn, *Man Rises to Parnassus. Critical Epochs in the Prehistory of Man*, Princeton, New Jersey: Princeton University Press, 1927, p.136. See also, Alan Mann and Mark Weiss, ‘Hominid Phylogeny and Taxonomy. A Consideration of the Molecular and Fossil Evidence in an Historical Perspective’, *Molecular Phylogeny and Evolution*, vol.5, issue 1, February 1996, pp169-181 [p.173]. On the one hand, these views seem to echo those of Henry Fairfield Osborn President of the American Museum of Natural History 1908-1933, to whom she acknowledged gratitude in her book. Henry Fairfield Osborn, *Man Rises to Parnassus. Critical Epochs in the Prehistory of Man*, Princeton, New Jersey: Princeton University Press, 1927, pp. Osborn was profoundly racist, keen on racial purity and a supporter of negative eugenics. Harraway: In the USA, for example, the American Museum of Natural History, became the venue for conferences on eugenics in the 1920s

³³ The context of her comparative study encompassed a divergent and ethically uncomfortable, genetic approach to ‘evolutionising’ apes, through hybridising them with humans by means of artificial insemination. This was a project, with no direct connection to Ladygina’s, that was pursued by Professor I’lia Ivanov, under the auspices of the Academy of Sciences between 1926-7, and under the Communist Academy 1929-30, with the additional support of the Institute Pasteur in Paris and its ape collection station in Kindia, French Guinea. Ivanov was an eminent pre- Revolutionary zoologist, who had studied with Pavlov in 1898 and sponsored the early career progress of Yuri Filipchenko in 1913. He had first proposed the hybridisation project in Paris in 1910. After the Russian Revolution, he returned to the idea and by 1925 had managed to obtain Bolshevik support for the project. At a political level the justification for this experiment, was its potential to prove Darwin’s theory and, thus, also to provide a strong weapon in the Bolshevik anti-religious propaganda campaign. The latter was, indeed, a major motive behind Bolshevik espousal of Darwinism and the Darwin Museum. Ivanov’s scientific justification, was the potential of the research to offer useful data to a number of disciplines – ‘heredity, embryology, pathology; and also the field of Ladygina’s research, ‘comparative psychology’.

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[SLIDE 19] It is worth noting, however, that Soviet discourse on eugenics³⁵

There were other Europeans interested in the idea, for example Moens 1905-8, and Hermann Rohleder 1916, but Ivanov got the closest in the sense that he did try to implant human sperm into female chimpanzees at Kindia in 1926, and had a remit as well as at least one volunteer known as G., for a project to implant ape sperm into human females in 1929. These women would have been mere biological incubators with no rights to the hybrid progeny – something which accorded well with aspects of 1920s mechanistic Soviet views on women and motherhood. Unfortunately for Ivanov, the ape [a gorilla] died at the last minute and by the time more apes had been imported, Ivanov had been arrested – in December 1930, on charges of ‘sabotage’, ‘wrecking’ and conspiring with the international bourgeoisie, as a ‘bourgeois specialist’. The arrest and charges were standard for the period of so-called Cultural Revolution c1928-32. The charges against Ivanov, as against many other scientists, were dropped in 1932, following a publication by Stalin criticising the campaign against ‘bourgeois specialists’. But Ivanov died in March 1932 of a stroke – which effectively put a stop to the planned experiments.

What Ladygina’s and Ivanov’s ‘evolutionising’ projects shared was a shadowy taint of association with aspects of both Russian and American eugenics discourse. Ivanov’s hybridisation scheme was, for instance, encouraged by Vavilov in 1926. Ivanov’s idea for an Ape Station in Sukhumi, on the Black Sea, was supported and funded by the Institute for Experimental Endocrinology – which was part of the Eugenics Research Institute run by Nikolai Kol’tsov. Moreover, Ivanov’s ‘chief assistant’,³³ Dr Kagan was a member of this institute, and the support from the Communist Academy after 1927 came from pro-eugenics scientists such as Serebrovskii who in 1929 posited a plan for the artificial insemination of Soviet women from the sperm of selected ‘great Bolsheviks’. In addition, Ivanov was connected to Hermann Muller, an American geneticist and eugenicist, who was sponsored in the USSR by Vavilov between 1935 and 1936.³³ Muller wrote a book on ‘socialist eugenics’, pushing a very similar line to that of Serebrovskii, with whom he had worked, which he not only dedicated to Stalin, but foolishly sent a copy directly to the Soviet leader in 1936. Muller was fortunate to be able to leave the country, ostensibly to support the Spanish Civil War. His Russian colleagues, who were genetic scientists were not so fortunate. A number of them fell victims to the great purges of the late 1930s, including Vavilov.

³⁴ Nnlk 1935/2002 conclusion, p.398 The book, although pointing towards another future study/publication on chimpanzees’ abilities to distinguish shapes, size, quantity, and abilities to do counting, analysis and synthesis, proved to be the final word on her research and also, apparently, on comparative studies of ape and human in the USSR. In relation to this it is noteworthy that, while new editions of Darwin’s *Origin* continued to be published regularly in the USSR, *Descent* and *Expression* were only republished in the year that Stalin died, 1953.

³⁵ In the nascent Soviet Union, during the 1920s. In this period such research encompassed both eugenics and euthenics – that is to say, on the one hand concern with a set of ideas connected with notions of genetic breeding programmes, and on the other hand with a penumbra of ideas around the concern with ‘social hygiene’ stressing the need to change the people’s environment and habits. The main goal of both strands of discourse was the achievement of the ‘New Person’ – quite literally the evolution of a new species of humankind, that would be generated by the social revolution of October 1917. There were, moreover, complex connections within these discourses, particularly in relation to ‘social hygiene’, between the education of women and the ideal of an improved population, that related back to some very basic eugenic ideas, for example articulated by XXX, focusing on the education of women because they were the ‘natural selectors’ of the fathers of their progeny, the producers of the infants and thereafter, the initial educators thereof. There is a sense in which all of eugenics discourse, from its inception in 1862, was connected to notions of Darwinian evolution extended into the realms of humankind. After all, eugenics was invented by Darwin’s cousin, Francis Galton in response to *Origin of Species*.

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was not concerned with the ‘unfitness’ of the working classes – for obvious reasons – nor was it overtly concerned with racial superiority. The official political message was one of fraternity of nations and races. Thus the contemporary display of skulls relating to racial types, most probably accords with the interpretation of Darwinism that would have been current in the Soviet period.³⁶ By contrast with American and other dominant western capitalist theorisations, the Soviet view of contemporary tribal and nomadic societies was closer to that of Darwin himself, in that it was believed that members of such societies could be rapidly elevated to the cultural level of what was perceived to be more ‘civilised’ society, through education and training.³⁷

5. Macroevolution: Revolution & evolution, Soviet New Person, Ascent of Man

[SLIDE 20] The early Soviet period fostered a ‘progress’ model of human evolution. The October Revolution was widely regarded as the trigger to the next evolutionary stage, a new human species – *homo sovieticus*.³⁸ This linear progress model did not

The term ‘eugenics’, however, became anathema in the USSR between 1930 and 1932. This was perhaps because of its close association with the rise of Nazism in Germany [sterilisation laws introduced 1933], but almost certainly because of the racist and anti-working-class connotations with which it was imbued in the USA and elsewhere in the capitalist world in the late 1920s. The specifically named eugenics research institutes were closed down, the international Congress of Sexual Reform, scheduled for Moscow in 1932 and supported by such ‘old Bolsheviks’ as Nikolai Bukharin, was cancelled. As Mark B. Adams has noted, the research did continue during the 1930s under different names – for instance, genetics, biological research, and ‘experimental medicine’, but previous association with eugenics research was a significant factor in the purges of genetic scientists such as Vavilov in the late 1930s.

³⁶This is not to say that the Soviet regime did not contain prejudices against certain ethnic groups, which were regarded as being less advanced or civilised than those of central Russia. But these prejudices tended to be articulated implicitly through educational policies, for instance, in relation to propaganda on hygienic childbirth in the Asiatic states

³⁷In this respect these interpretations were and are closer to Darwin, who, in observing the differences between the Fuegians on the *Beagle* and those living in Tierra del Fuego, implied in his diary that education and environment had the power to change apparently ‘savage’ peoples into persons who could interact equally with the white colonisers. **[SLIDE 27]** Kots, wife, staff with a lot of predominantly young men in identical wrap-overdressing gowns and white trousers. In relation to the Lamarckian-style tendency within Russian 19th and early 20th century Darwinism that accepted the possibility of the inheritability of acquired characteristics, there was reason to believe that education and training to new habits within a new socio-economic environment, offered a potentially speedy means to evolutionary change, without recourse to the selective breeding programmes advocated by a few genetic researchers such as Serebrovskii. The study of Darwinism in itself was [and indeed apparently still is] perceived as one means to self-improvement – a sort of ‘evolution therapy’ – indicated by a photograph from the 1930s-1940s depicting invalids of some sort, in uniform pyjamas and dressing gowns within the Darwin museum, overseen by the beneficent paternal gaze of Stalin.

³⁸The Bolsheviks espoused Darwinism as the basis of all biological sciences and interpretation of human development because it was materialist and non-teleological – characteristics for which Darwin’s theory had been praised by Marx and Engels. In the first half of the 1920s there was emphasis on incorporating Darwinism into the education system, particularly for members of the Young Communist League –the *Komsomol*.

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derive from Darwin, who envisioned evolution as a branching tree, but from interpreters such as Thomas Huxley, who helped to embed it in popular culture.

These rigidly posed Red Army soldiers would have been encouraged to contemplate the distance between themselves and their primitive ancestors, not only by the lecturer,³⁹ but also by the array of paintings and sculptures imaginatively depicting the savage lifestyle of early hominids. The works were apparently all by Vasilii Vatagin⁴⁰ a zoologist, sculptor and painter who was closely associated with the Darwin Museum from 1908 to 1961.⁴¹

[**SLIDE 21**] This image of Vatagin in about 1921, posing with his work, gives a clearer sense of the exciting and imaginative painted scenes that he produced, largely depicting early man hunting or using primitive tools. These works again linked back to the recent new fashion in natural history museum displays in America and Europe.

There are some parallels in style and content with the drawings and paintings done by Charles R. Knight for Henry Osborn at the American Museum of Natural History, such as [**SLIDE 22**] ‘Neanderthal Man at Le Moustier overlooking the valley of the Vézère in the Dordogne’, 1916, and *Leaping Leopards* 1896.⁴² Both Vatagin and Knight produced action paintings that appeared naturalistic in a heightened way – using bright strong colours combined with quite a high level of finish and accurate drawing, particularly of vegetation, as well as seemingly anatomically convincing reconstructions of primitive man and now-extinct animals,.

[**SLIDE 23**] Vatagin, however, may also have taken his cue partly from the trend of ‘reconstructive’ paintings of prehistory that was evident particularly in France and Belgium from the 1870s onwards, exemplified here by Frederic Cormon’s painting, *La Chasse*, 1898.⁴³ In addition, Vatagin’s use of heightened colour combined with

³⁹ It is not totally clear whether this is Kots or Vatagin. The thinning hair on the left hand side suggests Kots but then the photo of Vagtagin with his work c 1921 has that side bleached out by the light.

⁴⁰ Vasilii Vatagin (20 Dec 1883-30 May 1969). There was a 150th birth centenary exhibition of his work at the Tretyakov Gallery Moscow in 2008: ‘Retrospektiv Vasiliia Vtagina v Tret’iakovskoi galeree’, ARTinvestment.ru – 20/12/2008. An illustrated catalogue was produced which includes archive photos. Vatagin also did illustrations for a Russian edition of Kiplings *Mowgli*, first published in 1926.

⁴¹ ARTinvestment.ru. Vatagin also did work for the Zoological Museum of Moscow Lomonosov University 1931-58. He was a member of the Moscow Brotherhood of Artists 1909-1924 and of the Society of Russian Sculptors 1926-1932: ARTinvestment.ru.

⁴² Knights images were much mediated through magazines and books. These particular images were among those that were illustrated and circulated in *McClure’s Magazine* and *The Century*.

⁴³ It is likely he was familiar at first hand with such work in Europe, since in the early 1900s Vatagin toured extensively in Europe going to zoos, museums and art galleries: ARTinvestment.ru, 20/12/2008. Vatagin’s paintings, however, seem to lack the penchant for faintly salacious female nudity or scenes of rape favoured by some of these artists, in particular Gustave Richond, Albert Anker, Angele Delasalle, Emmanuel Benner, Paul Jamin and Leon Maxime Faivre, all of whom also produced representations of odalisques, a favourite form of Salon soft porn that reached its apogee in the work of

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the level of finish and attention to drawing may derive from his pre-revolutionary studies at the atelier of Konstantin Iuon, a Russian Symbolist painter.⁴⁴ [SLIDE 24]

[SLIDE 25] Early twentieth century ‘reconstructions’ of different types of primitive hominids were based on limited fossil evidence, fragments of skulls found in the Neanderthal valley (1857),⁴⁵ Java (1890-91),⁴⁶ Heidelberg (1907),⁴⁷ and Piltdown in Sussex (1912, 1917).⁴⁸ Although created with the advice of paleontological and other experts – in this case Kots and his wife – other artists’ work provided important additional resources. [SLIDE 26] For instance, the vigorous, dynamic, and somewhat threateningly brutal poses and expressions of Vatagin’s sculptures, such as the Neanderthal that still lurks in the contemporary museum,⁴⁹ [SLIDE 27] seems to relate to the dramatic style of Emanuel Fremiet’s *Gorilla Carrying off a Woman*, 1887 located in the Jardin des Plantes, Paris.⁵⁰ The physiognomies of Vatagin’s sculptures, however, may relate to the work of Belgian sculptor Louis Mascré, who, with Aimé Rutot created the first portrait gallery of prehistoric man at the Institut Royale des Sciences Naturelles Belgique in Brussels between 1909 and 1914.⁵¹ [SLIDE 28] Here are Mascré & Rutot sculptures of Heidelberg Man with a boar, and Piltdown Man. [SLIDE 29] Similar sorts of busts, probably by Vatagin, can be seen in this photo of a current Darwin Museum display about primitive man the hunter.

Ingres. This may have been because of the context of female consumption for which the paintings were partially produced. A selection of these images can be seen in a recent catalogue: Helene Lafont-Couturier et al, *Venus et Cain: Figures de la Préhistoire 1830-1930*, exhib cat, Musée d’Aquitaine, Bordeaux, RMN (Reunion des Musées Nationaux, 22/02/2003).

⁴⁴ Vatagin studied with Iuon and also Ivan Dudin while he was studying natural history at Moscow University: ARTinvestment.ru

⁴⁵ [or 1864 re Homo Britanicus] While fragments of primitive human skulls had been recovered in the early 1800s, it was not until 1857 that Neanderthal Man was identified, classified, named, and defined as a hunter-gatherer that had used stone tools.

⁴⁶ The Darwinist scientist Ernst Haeckel produced imaginary sketches of a primitive hominid that he viewed as being ratified by the discovery of ‘Java Man’ by Eugene Dubois in 1890-91. This hominid was another hunter and user of stone tools.

⁴⁷ ‘Heidelberg Man’ was discovered in 1907, the year that the Darwin Museum was founded.

⁴⁸ In 1912 the discovery of a supposed ‘missing link’ between ape and human – Piltdown man – was announced and seemingly entrenched in 1917 by a further ‘discovery’. This was not to be identified as a forgery until the 1940s, and so held a place in the evolutionary pantheon of primitive humankind until then. ‘Nebraska Man’ was another random factor that was, however, quashed by 1927 by William King Gregory, but related to the project of identifying the evolution of civilised humankind as deriving from Europe.

⁴⁹ which the contemporary Russian photographer Alexei Ratinov presents as keeping a watchful and predatory eye on the spectators of a particular display, as they view a sculpture of a female hunter-gatherer child.

⁵⁰ Interestingly, the Darwin Museum’s historical photographs, particularly those associated with the current ‘official’ history of the Museum, indicate that unlike the French and Belgian artists, Vatagin made few, if any, female counterparts to his images of early men. The focus of the sculptures, and seemingly of the paintings also, was on male figures in violent action, and this emphasis seems to have carried through into the today’s museum layout.

⁵¹ *The Last Human*, p. 242

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This display⁵² also contains a large photographic reproduction of a 1st century AD copy of a 4th century BC Greek sculpture of the mythical hunter Meleäger⁵³. The presence of this image not only implicitly reinforces the sense of the brutality of primitive hominid life, by reference to the tale of Meleäger in Ovid's *Metamorphoses*, but also implicitly indicates continued engagement with a progress model of evolution, in the sense that the image indicates the superior stoneworking skills of modern humans. [SLIDE 30] A similar implication can be found in another display which uses a photograph of Michelangelo's marble, Renaissance sculpture of *David*, completed in 1504, amid graphic representations of a linear array of hominids, from *Australopithecus* on the right hand side to *Homo Habilis* on the left.⁵⁴ [SLIDES 31] Here, the progress paradigm seems more marked, by reference to what Stephen Jay Gould has called the 'canonical'⁵⁵ image provided by the illustrations of 'The March of Progress' published by the American Natural History Museum muralist, Rudolph Zallinger, in 1965.⁵⁶

[SLIDE 2] Photographs of the display, taken in November 2008 by the Novosti photographer, Sergei Piatkov, seem to offer a playful, if not ironic take on the Darwin Museum's enduring, relentlessly masculine presentation of the 'march of progress'. In parallel with the smugly backward-glancing image of male physical perfection symbolised by *David*, Piatkov has captured the image of a woman in high-heeled shoes rapidly moving forwards - a contemporary vision of the female body beautiful, which the *Australopithecus Boisei* seems to be eyeing up. Another shot has the speedy 'stiletto woman' apparently ahead of the evolutionary game, the latest evolutionary product of capitalist, post-Soviet Russia – the new, New Woman.....

CONCLUSION

On a more serious note, the photograph of the internationally popular progress model of evolution also underscores the fact that art has continually played a very significant

⁵² This display was designed, as was the entire 'Macroevolution' hall, by two 'artists' Sergei Litvinov and Liudmilla Litvinova, in collaboration with the 'author' of the narratives, Aleksandr Aliakrinskii, Head of the Division of Water Invertebrates in the Collections Department.

⁵³ 'Meleäger and the Calydonian Boar' Ovid, *Metamorphoses*, trans David Raeburn, Penguin, London, 2004, 8.260-545, pp.307-320. a plaster copy of which is held at the Pushkin Museum Moscow.

⁵⁴ The *David* image is placed to look back along the line of *Australopithecus*, either with curiosity or contempt depending on your interpretation. Meanwhile, the drawing of *Australopithecus Boisei* has its head turned towards the spectators, as if engaging them in a staring match.⁵⁴ [*Australopithecus Boisei* reconstruction from fossil bones discovered 1959 in Tanzania, by Mark Leakey and named for the funder of the expedition]

⁵⁵ Stephen Jay Gould in *Wonderful Life*, 1989, as noting this as 'the canonical image of evolution' but incorrect and un-Darwinian because it is linear, a progress model and not a multiply branching tree. <http://laelaps.wordpress.com/2007/08/11/homo-sapiens-the-evolution-of-what-we-think-about-who-we-are/> Also noted as 'the classic view of evolution' and reproduced in a slightly different form in Matthew Levy and Andrew D. Ellington, 'The descent of polymerisation', *Nature Structural Biology*, no.8, pp.580-582, 2001, fig.1, http://www.nature.com/nsmb/journal/v8/n7/fig_tab/nsb0701_580_F1.html .

⁵⁶ In F. Clark Howell's book, *Early Man*, first published by Time Life Publications in 1965

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role in projecting the museum's interpretations of Darwin throughout its existence. In this sense it has partaken in a new fashion for natural history displays, that began in the late 19th century in Europe and America, and was initially, particularly focused on the education of women. As in other countries, there were close links with developments in contemporary genetic science – in the Soviet case, through the ideas of Filipchenko and Vavilov on micro-evolution, and with broader macro-evolutionary experimental projects relating to ape research, through the work of Nadezhda Ladygina. Her work also connected tenuously with eugenics discourse, a theme taken up more explicitly elsewhere, not only within Russia, but particularly at the American Museum of Natural History.

What was different about the Darwin Museum's historical representations of Darwinism, in relation to those of Western natural history museums, were the political implications of the dominant tendency of interpretation.⁵⁷ Positioned with political radicalism before the Revolution, and closely aligned with Bolshevism after October 1917, Russian and early Soviet Darwinism tended to stress the Lamarckian elements of Darwin's theories, relating to the possibility of the inheritability of characteristics acquired through environmental adaptation, habit and conditioning. This encouraged a belief in the post-Revolutionary evolution of a new species of humanity. It also led to the imposition of Lysenko's 'Michurinist' biology. From 1938 onwards, and particularly between 1948 and the mid-1960s the artistic displays were used to support a version of Darwinism that was very different to the interpretations developed elsewhere in relation to changes in biological and genetic science. Today, a plaque in the Hall of Macroevolution commemorates scientists such as Vavilov who suffered or died in the Lysenkoist era. Meanwhile the artefacts and specimens from the past have been regrouped to support a contemporary, globalised approach to Darwinism that not only relates to the impact of the environment on living organisms, but also takes critical account of the impact of 'civilised' humankind on the environment - the cost of evolutionary 'progress'.

⁵⁷ Within this new environment, two major aspects of research associated with the museum, nevertheless maintained some connections with western scientific interpretations of aspects of Darwin's evolutionary theory during the 1920s- mid- 1930s. One of these linked with the emphasis on variety and variation in Darwin's *Origin of Species* – to use Filipchenko's term, an area of 'microevolutionary' study of fur-bearing animals that was of economic use to the Soviet state. The other aspect of research, Ladygina's comparative zoopsychological study of chimpanzee and human child, connected to Darwin's ideas on human 'macroevolution', implicit in *Origin* but more explicitly discussed in *Descent of Man* and *Expression of the Emotions*. Both of these areas of research appear to have been affected by the growing antipathy to genetic science and its taint of eugenics, associated with the rise to eminence of Trofim Lysenko between the mid to late 1930s.