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#### Chapter 10

### The Genetics of Morality: Policing Science in Dudintsev's White Robes

#### Yvonne Howell

Over the entire course of human existence, the study of only two animate objects – man and the fruit fly – has ever been prohibited; man during the Inquisition, and the fruit fly in Stalin's time. (Berg 1988, 28)

The men and women in White Robes (Belye odezhdy), Vladimir Dudinstev's fictional account of the banning of genetics in the Soviet Union, are acutely aware that in the 20<sup>th</sup> century, the study of the fruit fly is the study of man. The key to unraveling the mystery of human nature lies in the easily observed chromosomes of the forbidden fly (drosophila melanogaster). Under Stalin, the banned geneticists were branded "Morganists" after their hero Thomas Hunt Morgan, the Columbia University researcher who pioneered the technique of mapping locations on drosophila chromosomes to specific traits in the flies. To find the material location (identified as "genes") that determine traits inspired many intellectuals in the interwar years, not in the least Soviet researchers who were also at the forefront of international advances in genetics during in the first three decades of the 20<sup>th</sup> century. In her memoirs, Raisa Berg expresses both the urgency of the problems "fly work" might solve — how much difference among individuals is heritable? what forces preserve the balance between mutant change and stability of type in a given population? — as well as the typical ardor of early Soviet drosophilists:

Fruit flies are marvelous. Looking at them through a binocular microscope is sheer pleasure. Their red, faceted eyes look like burning, pomegranate colored bonfires, their translucent wings shimmer like a rainbow, and the bristles that cover their bodies seem to be made of nylon [...] the color of honey or bright aged bronze. (Berg 1988, 40)

Only later in the century would American scientists (Morgan's former students) pick up the trail that seemed to link genes to more abstract traits, like individual sluggishness, drive, cooperation and aggression. Today, most people accept as commonplace the notion that human behavior including behavior encompassed in our constructions of morality (e.g., altruism, loyalty, courage) — is shaped by a combination of both biological and social factors. In this article I discuss Soviet modes of disciplining and the transformation of the literary hero from a socially conditioned "new Soviet man" to the instinctively individualist protagonist of late Soviet prose.

From the moment of Bolshevik Revolution in 1917, it was understood that all stability — personal, social, moral, political, practical — had been lost. Countless eyewitnesses at the time recalled that there was no "[e]stablished order of things left" after the Revolution. (Oushakine 2004, 394) What could remain of the stable "I" when in almost every constituent category of selfhood (gender, ethnicity, class, religion) traditional meanings had been inverted or tossed out? Literature from the 1920s is almost completely preoccupied with the sense of profound disorientation that arose out of sweeping and sudden changes in social order. Was one a woman or a commissar? An illiterate peasant or the embodiment of righteousness destined to exterminate bourgeois scum from the face of the earth? A private person or a public persona? A

dog-man, or a man-dog?<sup>3</sup> As Oushakine points out, the loss of norms and values implied a complete "[r]eplaceability of the self, or rather, selves." (Oushakine 2004, 393) The most significant repercussion of this profound loss of order and predictability would prove to be a deeply ingrained cultural anxiety about the origins of stability as such. Oushakine identifies the early 1930s as a moment when "[t]he uncertainty of social norms [...] became equated with an instability of environment in general and nature in particular." (Oushakine 2004, 394)

Indeed, the radical disjuncture with previous norms and the improvisation of new ones meant that the mechanisms for controlling and disciplining society developed distinct features. Foucault connects the rise of modern disciplinary practices to the rise of new production technologies and capitalism, whereas in Bolshevik Russia, both of these conditions were lacking or destroyed. Evgeny Dobrenko (Dobrenko 2007) points out a crucial difference in the rise of disciplinary society in the West (as it has been illuminated by Foucault) and in Russia. In Russia, industrialization and capitalism were notoriously weak. Therefore, the rise of disciplinary practices must have been tied to some other force – not historical, economic ones. On the other hand, the Bolsheviks certainly adopted the *rhetoric* of Western historical and economic forces — as Marxist discourse — onto Russian soil, so that it would appear on the surface that we are talking about the same things: surveillance, discipline, punishment, imprisonment. As Dobrenko would have it, disciplinary society "was not so much the product of a historical and economic process as the result of discursive operations for the transplantation of Marxism onto Russian soil by the Bolsheviks; accordingly, in Russia, it [disciplinary society] had primarily a political dimension [...]" (Dobrenko 2007 124). In this way, the Soviet discourse of "unmasking" and "reforging" and so forth has other roots and functions than it does in the West. It moves from the plain of (adopted, imitative) discourse *into* the plain of reality, rather than vice versa. For example, when Stalinist discourse emphasized the political importance of "wresting Nature's secrets from her" and "reforging Nature to suit our needs," the act of disciplining "nature" (including what is "natural" in human behavior) became quite literally the technique of interrogating people until their "secrets" were released, and "reforging" plants until they produced fruit outside of the proper biological temperature zone.

In the realm of biosocial discourse, anxiety about the (in)stability of living, organic forms in the context of a relentlessly changing, future-projected environment penetrated the remarkable rise and fall of Lysenko's "alternative" theories of inheritance. From the perspective of cultural anthropology, the tenacity of Lysenko's patently unscientific notion that plants can be "trained" to act like different species had to do with the broader appeal of a theory that liberates living organisms from the molecular logic of hereditary processes. Instead of fixed laws established by the blind forces of nature, Lysenko suggested "[t]he heredity established by preceding generations [can] be destroyed [...] [allowing] the plant to deviate more and more in the direction intended [by man] in a few generations." (Oushakine 2004, 409) In this sense, Lysenkoism countered the fixed laws of Gregor Mendel (e.g., a recessive trait reappears in exactly a 1:3 ratio in the next generation of peas) with an amalgam of pseudo-theory and ad-hoc horticultural practice that was in keeping with the disciplinary mode of Stalinist civilization; namely, in the absence of organically fixed forms and boundaries, the State could urge newly scripted, ad-hoc boundaries and identities upon its citizens.

By now, the outlines of the story about Soviet genetics are fairly well known. On August 11, 1948, Trofim Lysenko, President of the Lenin All-Union Academy of Agricultural Sciences, announced to a tense auditorium of nearly 700 participants that "the Central Committee of the Communist Party has examined my report and approved it." (Krementsov 1997, 172) At this moment, two decades of debate and negotiation over the proper methods and aims of Soviet research in genetics were resolved into a clear mandate backed by Stalin himself – the study of genetics was banned. The officially approved Soviet alternative to genetics was called Lysenkoism, after the politically wily agronomist who managed to turn his methods of plant "conditioning" into a quasi-science he called agrobiology, or Michurinism. <sup>4</sup>Dissenting scientists

were forced to abdicate their research and teaching agendas. As long as Lysenkoism enjoyed the support of Party leaders, Soviet geneticists were effectively barred from participating in international efforts to unravel the empirical, molecular mechanisms of biological inheritance. Many Soviet geneticists were arrested and disappeared into the gulag; others lost their jobs, or spent years in internal exile. The story of Lysenkoism has been the subject of countless historical analyses, but only one significant novel.

The novel White Robes (<u>Belye odezhdy</u>, completed in 1965 but not published until 1987) is a fictionalized account of the battle over genetics in the crucial years between 1948 and 1954. The novel appeared in 1987, during the highpoint of glasnost revelations about systemic failures in the Soviet system. Most readers did not realize that the novel was written almost thirty years earlier — Dudintsev began work on <u>Belye odezhdy</u> in the late 1950s, in close consultation with anti-Lysenkoist biologists who had resurfaced in Moscow intellectual circles. Some had returned from the gulag in the wave of amnesties after Stalin's death. Those who had retained their civilian positions throughout the worst period of repression felt emboldened to speak more openly in the early 1950s. Dudintsev himself was a seminal figure in the cultural shift that allowed for the first open discussion of previously taboo topics. His 1956 novel Not by Bread Alone (Ne khlebom edinnym) undoubtedly signaled a highpoint of de-Stalinization. In retrospect, we can see that Not by Bread Alone closely anticipates the 'biologically determined' view of human nature that explicitly emerges in White Robes.

We should recall that *Not by Bread Alone* tells about a brilliant engineer (Lopatkin), whose design for a new machine for casting sewer pipes will not be implemented. The inertia of the system (another design has already been approved) and banal cynicism of politically entrenched bureaucrats (why risk a comfortable job to promote an outsider's invention?) can be overcome only by Lopatkin's heroic effort and self-sacrifice. Not by Bread Alone went further in its critique of inflexible bureaucracy and corrupt careerism than any other work of reformist literature, even as it adhered to the basic plot structure of the classic socialist realist novel. It also implied that something in human nature itself - not just the degraded system - tends to divide humanity into those who sacrifice themselves and those that serve themselves. Therefore, the antidote it offered to Soviet society's ills was not increased transparency and democratic structures, but an exceptional protagonist capable of heroic truth-telling and defiant spiritual transcendence. In 1956, somewhat to Dudintsev's dismay, university students greeted the novel with wild enthusiasm as a "call to battle," (Annensky 2008) and Western critics celebrated it as the most significant harbinger of a new cultural liberalism. Predictably, Party officials showered Dudintsev with searing denunciations, and by the end of the 1950s, Dudinstev was no longer able to publish anything at all.<sup>5</sup>

The furor over *Not by Bread Alone* had another outcome: Dudintsev began to receive letters from a subset of Soviet readers who interpreted the Stalinist policing of society as not only a breach of human rights, but also as a distortion of scientific knowledge about the parameters of human nature. This subset was the community of repressed geneticists, who in 1956 were still chaffing under the hegemony of Lysenkoism. Dudintsev later recalled that "[a]fter *Not by Bread Alone* appeared, I began to get letters from geneticists and biologists who wanted to tell me their story." (Minutes 1987, 30) One of them, the geneticist V.P. Efroimson, affirmed that "[i]n 1956, I met with Vladimir Dmitrievich and answered his questions. We had long discussions; I told him everything I knew." (Minutes 1987, 31). During the late fifties, Dudintsev reworked the material he received from Efroimson and other biologists into a complex fictional account of repressed geneticists in the Soviet Union. *White Robes* remained unpublished for almost thirty years. When it was released in 1987, it was an immediate glasnost sensation.

For the most part, glasnost criticism treated the novel as a typical glasnost production. Matthias Schwartz noted that Dudintsev's book was interpreted by readers and critics almost

exclusively from a political point of view. (Schwartz 2003) It was praised for its "unflinching depiction of the truth" about the repression of geneticists during the Lysenko years. In various unsurprising ways, it was interpreted as a moral drama about the importance of following one's conscience. The novel's thickly scattered religious allusions also caught the attention of glasnost readers. (Ziolkowski 1993) The title refers to a passage in the *Book of Revelation*, in which an army of martyrs "arrayed in white robes" appears before God. The overt meaning of the allusion is that Russia's repressed scientists, like the biblical martyrs, have "come out of great tribulation" (Rev: 7:14). They have reached a place of justice and peace only after having suffered physical hardship, persecution, and loss of life. This heavy-handed moral is lifted by the questions that bracket it – "Who are these people wearing white robes, and where did they come from?" (Rev: 7:13). Dudintsev introduces an entirely new angle to the questions of who and from where do they come?, as he (re)introduces the discourse of genetics to larger discussions about Soviet society. Put another way, he introduces a biological dimension to considerations of Soviet selfhood. In White Robes, even minor characters convey this point:

We all used to think that class origins determine everything. But class struggle also has to take into account the peculiarities of human nature. [...]. What lies within the deepest recesses of the personality does not come from capitalism or from socialism. [...] It only comes from within. (Dudintsev 1987, 300)

White Robes does not simply confirm that scientists on the wrong side of the ideological divide suffered. The novel is much more concerned with elaborating a theory of who (what kind of people) choose tribulation over comfort, and "from where" does the capacity for moral action come? For many 20<sup>th</sup>-century writers, and particularly those adhering to the prescriptions of socialist realism, the answer to that question was clear: the protagonist's moral qualities emerge as the sum total of his class, upbringing, social and/or religious influences. In its most formulaic form, socialist realism promulgated the notion that positive heroes come from the right class background. They are originally workers (or sometimes peasants). They may initially waver from the path of righteousness (where communist ethics and human decency converge) because they are still ignorant, or confused, or influenced by devious people. Yet when they inevitably find the right path, their "coming to consciousness" is represented as a fulfillment of social (class) destiny.

The formal structural features of socialist realism as a literary genre coalesced around a deep cultural imperative to move from instability and unpredictability towards a higher state of discipline and control. This movement has often been described as the transformation described above, i.e. from spontaneity to (class) consciousness. As Katrina Clark has shown, there was no need for policy makers to mandate the six steps of the formulaic Soviet production novel. Rather, a standard plot sequence arose organically out of the nature of the task -- by definition, writers of socialist realism had to show reality "in its revolutionary development." (Clark 1981) To show development in the path that was inaugurated by the 1917 Revolution, one had to show movement from the people's latent stage of revolutionary zeal and desire for worker's justice (spontaneous understanding of the direction of history) to the people's more mature, politically endorsed and controlled consciousness of their place in the end game of history (achieving Communism). In White Robes, the basic parameters of this movement are preserved. The crucial "crossing-over" of meaning and interpretation has to do with the values linked to spontaneity and consciousness. The geneticists ultimately gave a scientific validation to Dudintsev's artistic impulse to link spontaneity to creativity, adaptability and social stability.

One of the mantras of the repressed community of anti-Lysenkoist geneticists was that the inherent plasticity of the gene pool and the so-called "spontaneity" of genetic recombination is precisely what ensures the stability of populations as a whole. The genetic load of human populations is very high — our ability to change our environment allows us to carry an enormous load of genetic variability, none of which is harmful by definition, since we are able to invalidate many of the usual pressures of natural selection. In other words, all kinds of potentially harmful alleles (for instance, for short-sightedness, crooked teeth, fair skin, lactose intolerance, etc.) are in fact not harmful at all, even when they are expressed. For the geneticists with whom Dudintsev consulted, the fact of high genetic load in human populations engendered two key sets of metaphor. The first had to do with individual difference; the second, with community stability.

A number of prominent geneticists emphasized what they called the enormous "plasticity" of human gene pools. They pointed out that our populations are genetically more diverse than those of most wild species (because of our ability to maintain recessive variants). As a whole, our species has a uniquely resilient and diverse genetic composition. At the level of individuals, this is manifested in the fact that no two human beings carry identical genetic blueprints (DNA). They used these scientific findings to naturalize a discourse of diversity, pluralism, and individual uniqueness in the social sphere as well. Efroimson, Malinovsky, and Berg all attempted at some point to popularize the idea that the plasticity and heterogeneity of our genetic make-up implies an inherent plasticity and heterogeneity of intellectual and moral behaviors at the phenotypic level. In other words, if internally we are all unique, it stands to reason that our innate diversity should be expressed externally as well.

The second set of metaphors focuses on stability, eternity, and timelessness. Nikolai Dubinin, the Brezhnev era's ascendant geneticist, used politically charged language to wrest the discourse of instability/stability away from Lysenkoism and back into the camp of evolutionary and population biology. A series of programmatic articles published in *Questions of Philosophy* (*Voprosy filosofii*) from 1971-1977 signaled the shift in discourse. Dubinin's writing is peppered with phrases like "infinite plasticity" and "infinite present" and "eternal stability" (of the genome). He emphasizes that the almost infinite capacity of our species to accommodate genetic diversity (by adjusting our environment) implies an extraordinary stability, literally unprecedented in the animal world. Whereas pockets of genetic variation in combination with environmental pressures might lead to either speciation or extinction in other animals, *homo sapiens* will preserve its essential species identity "into the unfathomable future. (Dubinin 1972, 22)" It looks as though the discourse of genetics could rhetorically yoke individual diversity, heterogeneity and spontaneity to a vision of community stability that transcends time.

Dudintsev presented his readers with a paradoxical novel that has long resisted critical interpretation after its initial political impact became passé. He embroiled his geneticistprotagonists in a tense cat-and-mouse game of wits and subterfuge with the Party police, who have sent an agent to infiltrate the provincial agricultural station where they work. The Party ideologues that are responsible for maintaining the ban on "Morganist" genetics are intent on hunting down and arresting the scientists suspected of doing chromosomal research under the cover of the institute's compliant façade. They send their agent - an intelligent young agronomist named Derzhkin - to gather information that will lead to the arrest and removal of the chromosome geneticists. In the course of the novel, Derzhkin goes even further undercover. switching his allegiance to the scientists and working to save the frost-resistant hybrids created by their banned (non-Lysenkoist) methods. In short, the novel inverts the usual relationship of Party wisdom to rebellious creativity, siding quite obviously with the latter. Nevertheless, the entire plot neatly follows the paradigmatic six stages of the classical socialist realist novel. (See Clark 1981) In other words, Dudintsev launches his main protagonist into (1) a site of socialist production that is in a state of crisis; (2) the protagonist determines a plan to solve the problem; (3) his plan is unveiled at public meeting, at which he attempts to win detractors to his side; (4) there are numerous obstacles to overcome; (5) after a near-catastrophic failure, help

from the center arrives; (6) and in the end, a higher level of social order and consciousness has been re-established.

Rather than go into a detailed account of the changes of content introduced into each of these formal stages, I will conclude with some considerations of how the tension between radical content and conservative form highlights the problem of policing and disciplining. On the one hand, the novel depicts a society in which the strenuous efforts to police the breaches in ideological discipline creates an atmosphere of unrelenting suspicion and duplicity. This is manifest in the proliferation of "doubles" – characters that lead mirrored or parallel lives. On the other hand, in a society where everyone looks alike and presumably belongs to the same social class ("the Soviet worker"), how is one to spot the enemy? Dudintsev's novel is remarkable for its evocation of complex networks of surveillance and the kind of superstitious or quasireligious thinking that is ignited by an atmosphere of uncertainty and personal anxiety.

In White Robes, Fyodor Derzhkin has been sent to investigate rumors of a cabal of unrepentant Weismannist-Morganists who continue to investigate the mechanisms of chromosomal genetics under the cover of normal activity at the institute. As all heroes in the formulaic plot of socialist realist novel, he enters a microcosm of socialist production where "all is not well,"7 and his suspicions are soon confirmed. It is not hard to recognize the leader of the cabal in the tall, stooped, emaciated figure of a former gulag prisoner named Ivan Ilych Strigalov. Strigalov's younger disciples worship him as a genius; his older co-conspirators hold him in the highest respect. Under his tutelage, the institute's geneticists conduct subterfuge investigations of the laws of chromosomal inheritance. The novel gives a lot of detail about the techniques of hiding, deceiving, and covering up one's plant experiments. They watch their genetic hybrids grow in the same flats that display the foliage of seedlings prepared according to (non-genetic) cultivation techniques prescribed by Lysenko. In far corners of unnoticed fields, they isolate experimental strains of wheat by putting paper hoods over their heads to prevent inadvertent cross-pollination. They even keep colonies of fruit flies (drosophila) hidden in closets at home. They meet regularly to discuss advances in theory (will hybridity produce a frostresistant vet nutritious, creamy potato?) and practical methodology (will a bit of colchicine lead to seeds with double the usual number of chromosomes, the prerequisite for engineering a vigorous hybrid?). In other words, in the extremity and dedication of their actions, they resemble the out-sized positive heroes of Revolutionary socialist realism. At the same time, the novel's detailed realism conveys an atmosphere of surreptitious activity and suspense. The two modes coexist uneasily on the stylistic register.

Strigalov's physical tribulations are significant in this regard. The legacy of his first stint in Stalin's penal system is steel teeth and stomach ulcers so severe that he must carry a flask of cream with him to provide digestible calories during his endless days at work. Nevertheless, Strigalov is completely dedicated to the cause of producing new genetic hybrid potato. In many canonical texts of the 1940s, the Soviet hero's ideological purity is symbolically intertwined with the virtual disappearance of the ravished bodily self. (Kaganovsky 2004) As the novel progresses, his physical state becomes more and more precarious — he does not have the health or stamina to stay on the run from authorities for long. Finally, he dies in prison camp. Yet the fruit (well, vegetable) of his experience lives on, and is passed into a new, presumably happier generation. Strigalov's magnificent genetic hybrid will help Soviet agriculture and Soviet scientific prestige all over the world.

Thus, Strigalov functions like a classic hero of socialist realism, but the context is inverted: this hero will go to his death defying the explicit wisdom of the Party in matters having to do with the biology of heredity. The inversion introduces a new dimension to our understanding of the type. We have seen that the bodiless heroes of High Stalinism represent a total submission of the self to higher authority in a manner that inflects a devotion to Stalin and Party with sacrificial, religious overtones. In the context of Dudintsev's novel, the ravished and disappearing body can be symbolic in a different way: it literalizes the metaphor of human

nature that rests at the heart of Soviet doctrine. That doctrine insisted that humans are primarily socially constructed beings. As late as 1983, official Soviet philosophy confidently described *homo sapiens* as the only animal to have "stepped off the path of biological evolution." (Dubinin 1971, 37) In this view, the human subject exists despite his biological essence, and beyond it. He is a Man, not a fruit fly! In Stalinist socialist realism, a man can exist as a significant and even heroic subject without a biological body. Paradoxically, Strigalov loses his body and his life in this novel in order to defend the opposite point of view, namely, that biological inheritance plays a paramount role in the expression of individual personhood.

In White Robes, the (re)biologizing of human nature — and of the Soviet literary protagonist — begins with Strigalov's words, but is only fully incorporated in the figure of his double. Strigalov himself still disappears bodily in the name of an idea. Once his body is gone, his central idea remains as an abstraction, one that is repeated in the lectures his peers and supporters tell each other. One of the characters recalls what criminologists have long known—no two fingerprints are identical. Strigalov taught that biological uniqueness is more than fingertip deep. Chromosomal genetics reveal the law of infinite genetic heterogeneity, which ensures no two individuals can have identical genomes or identical biochemical expression of what is coded into the genome. We are all different — so much so, that any hegemonic ideology aimed at "engineering human souls" is eventually doomed to failure. In the context of Soviet debates that pitted a version of (Marxist) social constructionism against artificially suppressed inquiry into human genetics, the latter acquired a moral and political valence that still seems counter-intuitive to most Western readers. The consequence of biological difference (in the West, the same idea tends to be understood as "biological determinism") is instantiated as a surprising challenge to disciplinary practices in the voices (and bodies) of Dudintsev's heroes.

Thus, the policing novel generates double agents. Derzhkin soon emerges as a viable double to Strigalov's martyr. Derzhkin is charged with coming up with a plan to expose and destroy the conspiracy of geneticists, without destroying or losing the potentially precious strains of potato and wheat they produce. Derzhkin's powerful Party mentor is the Academician Riadno, In Riadno, Dudintsey created a composite figure that combines the manipulative folksy charisma and raw ambition of Trofim Lysenko with the ideological acumen of Lysenko's ghost intellect Isaak Prezent, a Party philosopher who helped Lysenko craft his message. Derzhkin formulates a plan to shield the geneticists and their new hybrids from Riadno's grasp for as long as possible. In particular, Derzhkin must stand between Riadno and the Strigalov, who faces imminent arrest.8 Derzhkin's plan requires him to take on the unfinished research of the persecuted master. It is tempting to use the novel's didactic lessons on the mechanism of doubling chromosomes as a source of metaphor for what has happened to the identity of the main protagonist: Derzhkin-Strigalov is now a hybrid character. The Strigalov half is a geniusmartyr who will eventually die for the cause. The Derzhkin half is physically tough and willing to dissemble rather than sacrifice. By introducing the Derzhkin variant, Dudintsev reinvigorates the possibilities of the formulaic plot.

As one would expect, much of the novel (stage three) is about the obstacles Derzhkin encounters as he tries to execute his plan without betraying himself or those he is trying to save. Even the generic distribution of obstacles — there will be personal matters, a natural disaster, and a trip outside the microcosm to procure help — is faithfully recreated in Dudintsev's anti-Lysenkoist socialist realist work. First of all, Derzhkin's personal life complicates the execution of his plan, because he has fallen deeply in love with a young woman who belongs to the Weismannist-Morganist's inner circle. She is an ardent and uncompromising supporter of their cause, and any mistake or misstep on Derzhkin's part would mean that his Lena will be arrested and deported along with the rest of the "cabal." Secondly, a natural disaster threatens to wipe out everything the geneticists have accomplished when an unseasonal frost strikes in early June. Derzhkin wakes up shivering with cold at three o'clock in the morning, and runs horrified through the pre-dawn light to assess the damage to a field of

potatoes in which the most precious hybrid plants are hidden. The frost has instantaneously blackened and killed every plant in a field of the most common Russian varietal. The unexpected, unavoidable destruction of an entire year's harvest is an unmitigated catastrophe for the people and for the government (who tries to deny reports of famine, or of the shameful need to purchase staple food crops from abroad).

In this case, the disaster is also a scientific triumph that provides Derzhkin with the clue he needs to complete his mission. In every third and seventh row of the field, nine plants stand strong and green even after the frost begins to evaporate under the rays of the rising sun. Derzhkin has found Strigalov's hidden hybrids in a stroke of luck that also evokes a powerful literary allusion. Derzhkin mutters 'three, seven, three, seven' all the way home, in order to firmly recall the rows in which the tubers of the hybrid potatoes lay buried, waiting for harvest in the fall (the upper part of the plant is no longer visible). For the Russian reader, Derzhkin's obsession evokes Pushkin's The Queen of Spades (Pikovaia dama 1834), in which the unlucky hero bets on the three, the seven, and then miss-bets on the final card, pulling a queen instead of an ace. The allusion to Pushkin's famous story invokes the role of chance in human fortune, but Derzhkin's fortune will be complete. Unlike Pushkin's Hermann, he does not pull a third, unlucky number. It is hard to tell whether we are to read this scene as a vindication of superstition in the face of snooping government agents, or if we are meant to see it as a vindication of the classical genetics, which "throws everything up to random chance." In the context of Dudintsev's new story, those who respect the role of chance in the most fundamental life processes -- the random redistribution of traits during meiosis and crossing over -- are the true heroes, to whom the fortunes of history should accrue.

Derzhkin's trials are not over, even after he successfully digs up the remarkable new hybrids in the fall and propagates them into the next generation. The hunt for precisely this prize — the new, frost-resistant, easily propagated, productive potato — becomes deadly. As the novel nears its dramatic climax, help from the outside is needed. In an arresting deviation from the formula, help at first comes not from the center (Moscow), but from the West. The Danish geneticist Madsen comes to see the rumored new Russian hybrid and meet its "author." Strigalov. The author has died in prison camp and the embarrassed authorities ask Derzhkin to participate in a ruse to fool the foreigner. Derzhkin will pretend to be Strigalov, an assignment laden with dramatic irony. After the crucial meeting, Derzhkin does not wait to be arrested. Having tipped off the foreigner, he packs the precious seeds and new hybrid seedlings into a backpack and flees on skis under the cover of a February blizzard. In the novel's epilogue, we find out that after his daring escape, he spends five years working quietly as a low-paid worker on a provincial sovkhoz. This allows him to cultivate his new variety in anonymity, and to sit out the first post-Stalinist years. Yet his task is not complete, because Lysenko is still supported by the new leader (Khrushchev), and greedy bureaucrats still want to claim authorship of the super-hybrid. In the epilogue, Derzhkin finally makes a trip to the center (Moscow) where the true authorship of the hybrid potato is finally resolved. Accordingly, the novel's epilogue is a scene of triumph: many years later, in a new post-Stalin era of reform, the surviving protagonists sit down to a meal of fresh potatoes. One of them (in a family of scientists!) pronounces a toast to "our hybrid" and reminds those present of the biblical words "this is my flesh." The religious overtones might seem out of place, except in the wake of an era of unrelenting surveillance and subterfuge. The lack of any genuine transparency in public discourse during a time of traumatic social change and repression (under Stalin) gave rise — in many spheres — to constructions of hidden and occult designs behind the surface logic (or illogic) of reality. White Robes does not elaborate its allusions to a Christian morality with any consistency, so that these allusions seem at odds with the presumably secular ethos of its heroscientists. Yet in light of the pervasive mood of surveillance, the perception that some kind of divine design hovers behind the events of a traumatic history is fully plausible.

We are left with one more puzzling dimension of the socialist realist protagonist's transformation into a biologically determined agent of moral action and social change. If social class no longer determines who is who, then by what criteria does one recognize who will emerge as a hero and who will be tray, shirk duty, or take the more comfortable way out? There are other doubled characters in the novel as well. They perform the literary equivalent of the biologists' twin studies, allowing us to see how two people thrust into the same social milieu and presented with the same ideological imperatives will nevertheless develop differently and play a different role in history. One subplot links the refined, ruthless prosecutor who nearly outwits Derzhkin with the secret service operative who switches sides and helps Derzhkin escape. It turns out that both men served side by side in the same Red Army regiment during the Civil War; both were formed in the same vortex of Revolutionary ideals and Bolshevik zeal. Yet one ends up persecuting the country's best scientists, while the other believes in an innate moral compass that "[d]oes not come from capitalism or from socialism, but from within" the individual person. We should view Dudintsev's emphasis on double identities as a reflection of the peculiar anxiety that characterized the intellectual world he depicts. After all, the selfproclaimed believers and the non-believers look externally the same. In the local context of this plot, a "Michurinist" and a "Mendelist-Morganist" cannot be easily distinguished at first or even at second glance. How is one to know who is on whose side? The novel's proliferation of minor characters and subplots bears witness to a fundamental ambiguity in the aims of surveillance and policing of the citizenry under communism.

Communist authorities were intent on targeting scientists who defied ideological dictates and spread subversive "bourgeois" teachings among their students. Yet the same authorities were also insecure about their own scientific knowledge and above all anxious to back methods that would produce tangible results in the form resistant crops and greater yields. The novel depicts a microcosm of the larger phenomenon of citizen surveillance under totalitarian regimes. These regimes are "wary of allowing citizens to express uncensored opinions about matters of public import in public [yet] extremely anxious to know what people [are] thinking." (Fitzpatrick, 1999, 164)

The novel's structural and thematic concern has been to find the key (Derzhkin's term) that distinguishes the true heroes of Soviet society from those who were complicit in its corruption. For the scientist-protagonists, the key turns out to be something "within" human nature that unlocks a genetic potential for selflessness (among other qualities) or, on the contrary, a stronger potential for ruthlessness. Ultimately, the role of society and social environment acquires a new kind of importance in the deterministic discourse of Soviet genetics. If both selfless and selfish qualities are innate and maintained in a latent balance, the ideal social order maximizes the manifestation of people's innate selflessness and nobility, while it restricts or minimizes the actions of the ruthless self-servers. In this way, the novel's rigorous criticism of Lysenkoism serves to reaffirm a traditional Russian literary trope of the individual's quest for transcendence to a higher, more just order. In the last decades of the Soviet period, many non-conformist writers rediscovered or revitalized a new kind of fictional protagonist, one whose behavior and personality exceed or defy the parameters of social origins and social environment. For example, Joseph Brodsky's autobiographical persona in the essay "Less Than One" articulates a sharp independence of the self from external forces in the environment. This protagonist is unchanged by historical and social conditions:

I guess there was always some 'me' inside that small, and, later, somewhat bigger shell around which 'everything' was happening. Inside that shell the entity which one calls 'I' never changed and never stopped watching what was going on outside. I am not trying to hint at pearls inside. What I am saying is that the passage of time does not much affect that entity. (Brodsky 1987, 17)

The "I" articulated by Brodsky is completely stable, and "never changes" in essence, despite the passage of time, and, in Brodsky's paradigmatic case, despite the lived reality of terror, oppression, social upheaval, political dissidence, exposure to poetry, exposure to prison, emigration to the West, and so forth. Where does the stability of the inner "I" come from, if not from "everything that was happening"?

Biologists agreed with the poets. In the same period, Raisa Berg wrote that "[h]uman nature resists remaking. Traits needed by the government are not acquired. If they could be acquired, they would not be inherited." (Berg 1988, 5) In White Robes, the defiant protagonists embody precisely those traits that the socially constructed New Soviet Man was supposed to acquire (but didn't). Where does the apprehension of genuine sincerity, creativity, and selfsacrifice come from in Dudintsev's heroes? Our sustained encounter with his fictional world leads us to the same conclusion posited by both the poet Brodsky and the geneticist Berg: human nature resists remaking. Brodsky intimated that one does not necessarily find "pearls," but in keeping with the post-Stalinist discourse of genetics, many authors found something essential in human nature that was unscripted by social forces. Dudintsev's paradoxically conservative aesthetic production should not obscure the fact that personality determined "from within" becomes a dominant trend in virtually all genres and modes of late Soviet literature something within the individual self ultimately escapes the policing efforts of the disciplinary regime. It has been the aim of this article to provide a partial look at the interactions between literature, policing, and genetic discourse, in order to shed new light on the truism that after Stalin, Soviet literature produced heroes who were more human, more sincere, and less disciplined.

#### Abstract

Socialist realism was a powerful and pervasive mode of policing. By enforcing socialist realist strictures on all official narratives about the Soviet self — narratives about national identity, history, destiny, narratives about coming-of-age, relationships between family members and society, etc. — the mandated literary form reinforced a given perception of the world. When Gorbachev suspended literary censorship in 1986, the USSR was suddenly flooded with books and narratives that had been previously banned. These works were, almost by definition, not socialist realist. My paper focuses on Dudintsev's novel *White Robes* [Belye odezhdy, 1987], a fictional account of the persecution of geneticists and the notorious policing of the biological sciences for ideological reasons.

Dudintsev's overt condemnation of past policy and his heroic depiction of banned geneticists were sensational in the context of glasnost; however, this paper demonstrates that the novel retains the structural features of the classic socialist realist narrative. Therefore, although the criteria for who are the "good guys" (fruit fly experimenters) and who are the "bad guys" (Lysenkoists) have been inverted, I argue that the novel replicates a policing aesthetics, this time in the name of a romanticized Russian nationalism. This paper also engages Christina Vatulescu's thesis in "Police Aesthetics" by exploring the ways in which Dudintsev (a prominent writer) was influenced by the aesthetics of the police files that followed his life for decades.

<sup>1</sup> A series of articles by Mark Ac

<sup>&</sup>lt;sup>1</sup> A series of articles by Mark Adams (e.g. Adams 1990) helped establish the case for Soviet priority in many early discoveries in the field of radiation and population genetics. See Vasilii Babkov 2008, for a comprehensive history of Russian-Soviet genetics research in the early part of the 20<sup>th</sup> century. <sup>2</sup> See Jonathan Weiner 1999 and James Schwartz 2008, for lucid and vivid descriptions of early American *drosophila* experiments.

<sup>&</sup>lt;sup>3</sup> In Mikhail Bulgakov's 1925 novella *Heart of a Dog*, the pre-Revolutionary eugenicist Preobrazhensky assumes that human morality as well as intelligence is significantly determined by biological inheritance. Already in the 1920s, it was difficult to reconcile the emerging narrative of human behavioral and population genetics with the Bolshevik discourse of radical social reconstruction. See Howell 2006.,

<sup>&</sup>lt;sup>4</sup> Ivan Vladimirovich Michurin (1855-1935), a plant selectioner, is often referred to as the Russian Luther Burbank. "Michurinism" was used rhetorically to invoke native expertise (as opposed to foreign scientific forerunners (Gregor) Mendel, (August) Weismann, and (Thomas Hunt) Morgan.

<sup>&</sup>lt;sup>5</sup> Nikita Khrushchev condemned the novel and Dudintsev was harshly reprimanded at a meeting of the Writer's Union. He published one more science fiction short story "*Novogodnjaja skazka*" in 1960. <sup>6</sup> For instance, a person has corrective orthodontry, wears glasses, uses sunscreen, drinks soy lattes, and marries well, passing all those recessive alleles into the next generation.

<sup>&</sup>lt;sup>7</sup> A paraphrase of Clark's well-known description; see *The Soviet Novel*, p. 257.

<sup>&</sup>lt;sup>8</sup> Strigalov has painstakingly crossbred a wild South American strain of potato with a (normally infertile) hybrid, producing a new super-hybrid that under proper conditions will produce seed true to type. In the 1940s, this kind of genetic engineering lay the groundwork for the Green Revolution in agriculture, which mostly by-passed the USSR.