ABSTRACT

Magic Spectacles: Glass and the Transformation of Vision in Modern Russia

The founder of Russian versification was a glassmaking pioneer. In eighteenth-century Russia, the mirror became a symbol of law. Zamiatin's *We*, the first anti-utopia, takes place in a world made of glass. A preoccupation with glass is manifested at various discursive levels within Russian culture. This study reveals a dynamic relationship between the functions of glass as a useful material and an inspirational metaphor in the cultural history of modern Russia. In a series of case studies, I place artifacts in dialogue with works by Lomonosov, Chernyshevsky, Zamiatin, Khlebnikov, Mandelstam, and Eisenstein and examine developments in literature in tandem with ones in the glass industry. My approach combines material culture studies, semiotics, and the analysis of literature, art, architecture, and film. I cover a span of time bracketed by events arising from the Petrine revolution in the eighteenth century and the Bolshevik revolution in the twentieth. Both revolutions ushered in new ways of seeing. Fittingly, in these time periods glass was of particular interest: it is a material that, more than any other, engages with the sense of sight. The capacity of glass to be both looked at and looked through evokes the possibility of two planes of existence. To a variety of thinkers, glass has thus suggested the presence of another reality. This helps to explain the role of glass houses in utopian visions,

as do the democratic ideals associated with transparency and the desire to take on the luster that a glass case confers. The capacity of glass to capture and manipulate light was used historically to glorify those in power. The presence of glass in the material environment provoked transformations of the literary language. A number of Russian writers saw glass as a metaphor for language itself, because glass is a manmade, protean substance that functions as an invisible medium capable of transforming visible reality; furthermore, akin to language, it resists total appropriation. Glass has served a dual purpose in Russian culture: for the collective, it helped to nurture a self-image; and for the individual beholder, it was a model and a catalyst for the imagination.

Introduction

Our sovereign and his inner circle went beyond the sea and he traveled through the foreign lands and visited Stekol'nyi [a corruption of Stekgol'm, Stockholm]. And in the foreign land a maiden rules the Glass Kingdom; and that maiden abused our sovereign; she put him in a hot frying pan, took him out of the frying pan and had him tossed into a dungeon. […] That is not our sovereign, but a foreigner; our sovereign, while among the foreigners, was sealed into a barrel and cast into the sea.[1]

According to popular legend, Peter the Great met an untimely end in the perilous kingdom of Glassland. In ironic contradiction to the transparent name of that kingdom, the emperor, it seems, was hidden from sight in a dungeon, then sealed in a barrel and consigned to the depths of the sea. It was not Peter, but a foreigner masquerading as him (just as glass can masquerade as a more precious material, from amethyst to gold), who returned to rule over Russia. Peter should have never traveled abroad; and he certainly should have never, ever set foot in Glassland.

In this legend, glass becomes invested with several provocative attributes. It is a signifier of the foreign, the alien, the strange; it belongs to the fairy-tale realm, and more broadly, the domain of the imagination. The word *Stekgol'm*

[1] "Как государь и его ближние люди были за морем и ходил он по немецким землям и был в Стекольном, а в немецкой земле Стекольное Царство держит девица, а та девица над государем ругалась; ставила его на горячую сковороду и, сняв с сковороды, велела его бросить в темницу. […] Это не наш государь, немец; а наш государь в немцах в бочку закован, да в море пущен." This folk speculation on the fate that had befallen Peter I during his trip abroad is cited in S. M. Solov'ev, *Istoriia Rossii s drevneishikh vremen v piatnadtsati knigakh*, Book VIII (Moscow: Izd. Sotsial'no-Ekonomicheskoi literatury, 1962) 100; see also the variants on pp. 109 and 111.

[Stockholm], enigmatic-sounding to the Russian ear, mutates into the more comprehensible *Stekol'nyi*, an adjective meaning "of glass." The foreign city-name acts as an incantation, and a city of glass emerges from a linguistic misapprehension. This invention then generates another: the city of Stekol'nyi is part of an entire "Glass Kingdom" [*Stekol'noe tsarstvo*]—which comes to stand for all that is hostile and menacing to Russia. The people among whom this legend arose were apparently predisposed to think of glass in such terms.

It is customary to consider glass as synonymous with clarity; yet the Russian legend of Peter's demise makes Glassland a place where obscurity and darkness reign. Because of its transparency, we have also come to regard glass as a purely functional material—in other words, we do not really regard it at all. We simply look through it at whatever is on the other side. Yet glass is never simply functional; and in Russia, its uses are even more complex, as an example from more recent times shows. Urban dwellers are familiar with the way in which windows in subway cars come to function as mirrors when the trains race through tunnels. As Elena Frolova reports, however, the window-mirrors in the Russian metro yield bizarre reflections, for reasons that have to do with an anxiety about foreignness, just like the one that informed the legend of Peter in Glassland:

> You've probably noticed at one time or another the reflection in the glass of the passenger sitting next to you and thought: "What a freak of nature! How can he live with a face like that? With me it's a different story!" I don't want to upset you, but you are, to put it mildly, no beauty yourself (I mean your reflection in the glass). On the other hand, if there's nothing

else to do during the ride, you can make funny faces and cheer up yourself and the people around you.[2]

What is the source of these funhouse-mirror reflections? To create the panes of the windows in question, molten glass is stretched out between a series of rollers, then cooled and polished. This process inevitably leads to distortion, and thus, distorted reflections; but, as Frolova observes, in the West they have come up with a way to combat such distortion, because "they don't appreciate our national form of amusement [Они наших национальных русских развлечений не понимают]." The technique for producing perfectly smooth sheet glass involves floating the molten glass on a pool of molten tin.[3] While other countries have switched to manufacturing panes of glass using this method, most factories in Russia—including the one where the metro windows are made—still use the old technique that yields distorted glass. On the bright side, Frolova concedes, "you'll never be bored riding the metro."

The windows in a metro car do not always serve as windows, but in the Russian case, even their mirror-function is subverted. Instead of seeing a true likeness, the viewer finds himself changed, as if in a fairy-tale, into something freakish and unrecognizable (just as Peter was swapped for a foreign impostor in Glassland). Frolova gently chides the backwardness of her compatriots, yet she takes pride in their imaginative reaction to their funhouse reality, enabled by a

---

[2] Elena Frolova, "Ne ochen' prozrachnaia istoriia," *Material* 2, 2002 (http://www.okna.spb.ru/okna/articles/?inset=glass_about3.phtml)

[3] The method was invented by British engineer Alastair Pilkington in 1959.

peculiar kind of glass. Thus the question of how glass transforms vision— literally and figuratively— is topical in Russia even today.

This study explores the uses and abuses of glass in the cultural history of modern Russia. As a material, glass is unique in the way that it has captivated people's imagination throughout its long history. In the modern world, glass has played a crucial role in the transformation of technology, art, and vision itself.[4] As such its function in culture merits close scrutiny. The present study aims to show how and why glass is especially meaningful in the Russian context.

An explanation of the title of this work is in order. Let me first address the second part of the title, "The Transformation of Vision." Glass is a material that, more than any other, engages with the sense of sight. Through optics (changing how the *subject* of the gaze *sees*) and containment (changing how the *object* of the gaze *looks*), glass mediates the way we see through subtle, often invisible means. When we consider glass and its uses over the centuries, we see how our ways of seeing have changed. Telling the story of this material in modern Russia allows me to trace the evolution of ways of seeing and ways of thinking about seeing.[5]

---

[4] For a recent overview, see Alan Macfarlane and Gerry Martin, *Glass: A World History* (U of Chicago P, 2002). The authors argue that "glass was absolutely crucial to western development" (208) in part because of the instrumental role of glass in transforming visual culture during the Renaissance, and in part because of the role that the microscope, the telescope, and the barometer played in revolutionizing biology, medicine, astronomy, and chemistry.

[5] Recent research on visual categories in Russian shows the close kinship between seeing and knowing in the language itself. Thus vision has that added dimension of significance in the Russian context. See Edna Andrews, "Seeing is Believing: Visual Categories in the Russian Lexicon," *Meaning as Explanation: Advances in Linguistic Sign Theory*, ed. Ellen Contini-Morava and Barbara Sussman Goldberg (Berlin: Mouton, 1995) 361-377. I am grateful to Alfred Sproede for bringing this article to my attention.

"Transformation of vision" also has a related, figurative sense: it has to do with the effect that the presence of glass has on the imagination—the mind's eye. In the form of the window, glass has historically transformed the psyche by changing what we can see of the outside world. Glass can be both looked *at* and looked *through*. The way in which glass plays with our vision can evoke the possibility of two planes of existence—the material and the spiritual, this world and the next. Therefore glass suggests the presence of another reality--and as an extension of this idea, to a number of thinkers over the last several centuries, glass has suggested utopia.

The first part of the title, "The Language of Glass," denotes two related phenomena. First, I am referring to a metaphorical relationship between glass and language that I have observed in a number of literary texts. Several remarkable physical properties of glass set it apart from all other materials. Because it is manmade and has a vast potential for expression and metamorphosis, it is the material that most closely resembles language. Moreover, with its capacity to magnify, reflect, embody, or distort visual reality, it is an ideal metaphor for *literary* language. As I hope to show, Mikhail Lomonosov took notice of this link between glass and language, and other writers continued to develop the same analogy.

The second meaning of "the language of glass" pertains to my methodology. In this study, I juxtapose glass artifacts and literary works, treating

both as texts that mutually illuminate one another. I argue that "works of glass" also can be read as texts because they are part of the same sign system as the verbal documents that I analyze. In reading literary texts and artifacts side by side, I have two goals. First, I seek to excavate and reveal seldom-seen objects of beauty and significance—from the Mirror of Law to the Crystal Bed—that would otherwise be lost to scholars. Second, I aim to shed new light on literary works whose authors deploy glass *realia* in telling ways. Literary critics conventionally regard the material world of a fictional text in terms that evoke the hierarchy of personage and stage property: just as in the theater, the actors have primary and the props only secondary importance, so too in fiction the material objects depicted—according to this assumption--only exist to fill in the space around the characters. I hope to encourage a new, more mindful way of reading: by shifting the emphasis from the human to the material world, I strive to undo this hierarchy to show that artifacts in literature can speak volumes, if given the chance. It is important to look at the elements of material reality in a work of literature because our relationships and self-definitions are always mediated by the objects that surround us. Glass in particular is always about mediation—it mediates the way we see.

Just as I take into consideration both writers and readers of literary works, I examine glass from the dual perspective of production and consumption. To put it another way, this project concerns the experience of both the authors and the readers of the "works of glass" under consideration. My interest in the

production side of the glass industry is inspired by Isobel Armstrong's insightful work on the transformations of the visible world and in the world of ideas engendered by the mass production of glass in nineteenth-century England. She combines a poetic imagination with scholarly rigor, reminds us that "texts disclose the invisible presence of an invisible layer of glass in innumerable ways,"[6] and shows glass itself as the eloquent text that it truly is.

This project represents an attempt to broaden the boundaries of the Slavic field, and to explore how material culture studies can help enrich the analysis of literature. Material culture studies is a subset of cultural studies; "material culture" may be thought of as culturally constituted relationships to objects; social relations as mediated through objects; and/or the material forms taken by culture (defined as a process through which human groups construct themselves and are socialized). Daniel Miller sees the task of material culture studies as a rescue effort, recuperating artifacts from fetishization and making them legible, understandable as embodiments of human values.[7]

We respond to material things with our senses, in contrast to processing abstract ideas with our intellect. Arguably, this former kind of response is more universal than the latter. Jules David Prown provocatively asserts that artifacts

---

[6] Isobel Armstrong, "Transparency: Towards a Poetics of Glass in the Nineteenth Century," *Cultural Babbage: Technology, Time and Invention*, ed. Francis Spufford and Jenny Uglow (London: Faber and Faber, 1996) 140.

[7] Daniel Miller, "Artefacts and the Meaning of Things," *Companion Encyclopedia of Anthropology*, ed. Tim Ingold (London: Routledge, 1994) 399.

are material expressions of underlying cultural beliefs that are obscured or repressed in written documents and works of art, which are produced with the explicit intent to communicate.[8] Daniel Miller seems to argue rather for the dishonesty of artifacts: "Objects often appear as more 'natural' than words, in that we come across them in the main as already existing things, unlike at least spoken language, which is produced in front of us. This quality of artefacts helps, as it were, to entrance us, to cause us to forget that they are indeed artefacts, embodiments of cultural codes, rather than simply the natural environment within which we live."[9] This line of reasoning can also serve as an argument in support of interpreting artifacts rather than taking them at face value—which is exactly what I am trying to with material objects depicted in literary texts.

In the Russian context, materiality has a special status because of the eternal concerns in Russian culture about matter versus spirit. Mikhail Epstein, theorist and practitioner of realogy, the science of things, argues that Russians embraced Western materialism because of a native philosophical tradition, a "long-standing preoccupation with the 'mystery of things,' with material objects as phenomenal codes of being." Epstein finds the roots of this preoccupation in such Russian belief systems as the emphasis on corporeality in Russian Orthodoxy and tradition of "dual-faith," "whereby the cult of Mother-Earth and

---

[8] Jules David Prown, "The Truth of Material Culture: History or Fiction?," *History through Things: Essays on Material Culture*, ed. Steven Lubar and W. David Kingery (Washington, DC: Smithsonian Institution, 1993): 5.

[9] Miller 407.

the cult of the Heavenly Father continually interacted to produce a unique mentality of 'idealistic materialism.'" This tradition informs a range of beliefs, from the revolutionary materialism of Herzen and Chernyshevsky to Nikolai Fedorov's doctrine of resurrection.[10]

Material culture studies fascinated me before I even knew that such a discipline existed. I have long sought to articulate to myself the connection between the linguistic realm and the material world. Possibly this has something to do with the violent rupture between signifier and signified that I experienced as a Russian émigré who arrived in the United States in 1979 with a meager arsenal of English words (the Queen's English, as it turned out). In fact, those material remnants of our abandoned Soviet home that we managed to preserve—a carved wooden jewelry box, a tennis ball the color of smoke, an A-line *sarafan* in a florid pattern—made me conscious even then of the treasure trove of meaning that lies concealed, waiting to be discovered—a story waiting to be told—in the humblest of things.

The objects that I have just catalogued would find a home in Epstein's "lyrical museum." By means of his writings as well as a physical museum that houses personal artifacts and their particular stories, Epstein seeks to bring to light the "endlessly diverse and profound significance of Things in human life, their rich figurative and conceptual meaning which is not at all reducible to the

[10] Mikhail Epstein, "The Stature of Things in Russian Thought." (http://www.russ.ru/antolog/intelnet/sympo_epstein_things.html)

utilitarian function. Human life is largely constituted by Things and also deposited in Things as in the peculiar geological layers that let us observe the changes in age, taste, attachments, and passions. […] The world is articulated, 'uttered' through Things."[11] Just as Epstein and his fellow thinkers try to preserve meaningful private artifacts from falling into obscurity, I am motivated to perform a similar rescue attempt with regard to objects that were once in the public domain, and seen by innumerable eyes. Even private artifacts, however, can be considered through the prism of the collective. We may have private relationships with our things, but when these things were made, their creation was informed by ideas in the culture at the time. One could think of them as material embodiments of the culture—the sites where certain collectively-held ideas crystallized.

As a material that captures and manipulates light like no other, glass lends itself to mass spectacle; it is revealing to trace how it has contributed throughout history to spectacles whose aim was to discipline and indoctrinate. Michel Foucault's insights on the relationship between power and the gaze inspire my own approach. I expand upon Richard Wortman's term "scenarios of power," which refers to performative myth-making meant to consolidate autocratic power by appealing to "the symbolic sphere of ceremonies and imagery" in imperial Russia. My focus, however, is not on processes that unfold in time, such

[11] Mikhail Epstein, "Things and Words: Toward a Lyrical Museum," *Tekstura: Russian Essays on Visual Culture,* ed. and trans. Alla Efimova and Lev Manovich (Chicago: U of Chicago, 1993) 153-54.

as Wortman's coronations or the Soviet rituals documented by Katerina Clark, but on concrete objects that become part of the environment and that large groups of people are compelled to look at—whether because these objects are always in their line of sight, or on the horizon (the Kremlin stars, the spire of Moscow State University) or part of an invented tradition in which they are obligated to participate (the glass sarcophagus in Lenin's mausoleum). The objects themselves may be static, but the experience of seeing them is a dynamic one in that it brings about a transformation within the self.

Reflective glass plays a significant part in the present study, but my interest in the collective gaze takes this project beyond the type of subjectivity typically associated with literary images of mirror contemplation. There is an established literary tradition of fantastic tales in which a doppelganger emerges from a magical mirror, and Russian literature participates in this tradition in ways peculiar to it. Valerii Briusov's "In the Mirror" (1901) and Aleksandr Chaianov's "The Venetian Mirror, or the Remarkable Adventures of a Glass Man" (1922) are two stories on the theme of catoptrophilia in which the protagonists switch identities with their reflections. They can be placed into the doppelganger tradition, but they are also exceptional in their reinvention of it. In the period when these two stories were written, plate glass came into wider use and there emerged a kind of spectacular subjectivity, suggested by the image of multiple store-front reflections of passersby who simultaneously see themselves and others seeing them. Vladimir Mayakovsky, speaking for the Futurists at a

public lecture in 1913, defined beauty as the frenetic street life of the urban crowd and enormous shop windows reflecting the images of tramways, trucks, and automobiles flying by. The interaction of the shop windows and the urban crowds creates an environment of multiple reflection and aesthetic inspiration. Armstrong discusses this phenomenon in the context of nineteenth-century England: the human sensorium begins to respond to "the new production of mass-produced transparency in which one's body can be, glancingly, inadvertently, reflected back from the environment, belonging to the urban phantasmagoria outside one's control. For the first time in our culture, perhaps, the self can be a mirage returned from the surfaces of the city's landscape."[12] In the Russian context, such modernist works as Olesha's *Envy* depict and reflect upon the psychological impact of this phenomenon.

Reflection is an obvious way in which glass mediates how we see the world, but even transparent glass alters perception. According to Wolfgang Schivelbusch, when advances in glassmaking technology allowed the manufacture of large shop windows, the commodities on display began to look radically different; consumer goods took on the aura of works of art: "The uninterrupted, transparently sparkling surface acted rather like glass on a framed painting." A mid-nineteenth-century observer explained: "Dull colours receive … an element of freshness, sparkle and refinement, because *glass as a*

[12] Armstrong 124.

medium alters appearances and irritates the eye. […] Putting paintings under glass makes them appear better than they really are. The protective glass confers upon good copies an additional element of deception. The plate glass of shop windows, too, has an 'improving' effect on some goods."[13] Glass bestows value on whatever it encases, by giving it a surface luster associated with more precious substances. Why is glass a perpetually modern material? Why do so many futuristic visions include gleaming glass houses, and why did utopian thinkers want to live in such dwellings? Is it a matter of the democratic ideals associated with transparency (the destruction of the boundary between inside and outside, public and private, as championed by the advocates of architectural glass), or the desire to take on the luster that a glass case confers?

Studying the spectacular display-function of glass can reveal much about the beliefs and anxieties of a society. In his *System of Objects*, Jean Baudrillard approaches glass as commodity and mystification, and makes the reader ponder the implications of a material that fosters the denial of the body, contact, and communication, and that so readily contributes to the construction of a society of spectacle. The ambiguity of our appraisal of glass has to do with "the fact that it is at once proximity and distance, intimacy and the refusal of intimacy, communication and non-communication." We somehow cannot help but project a human value-system upon this unassuming material, whose "cardinal virtue

---

[13] Cited in Wolfgang Schivelbusch, *Disenchanted Night: The Industrialization of Light in the Nineteenth Century*, trans. Angela Davies (Berkeley: U of California P) 146-7 (emphasis added).

[is] that of a moral order." Such qualities as its purity and reliability, "along with all those connotations of hygiene and prophylaxis […] make it truly the material of the future—a future, after all, that is to be one of disavowal of the body […] in the name of a radiant and functional objectivity."[14] Yet Baudrillard's notion of the disavowal of the body inherent in glass is problematized by images in works of literature and architectural writings that imbue glass with human, bodily attributes. This latter phenomenon may be a kind of wishful thinking, an attempt to draw a parallel between being human and such desirable qualities of glass as clarity, purity, and honesty.

Glass is both utilitarian and mystical, and as such it speaks to the oscillation between these two poles in the human psyche. Utopian building projects are the most striking example of architecture that is designed to transform not only the outside world but mankind itself—architecture that works miracles. Inevitably, glass is involved in such projects; it is always-already modern, but it also carries associations of ancient mystery and timeless magic. Glass signifies both the future just out of reach and, in the glass city from the Book of Revelation, the very end of history.

At the opening ceremony of the Great Exhibition of 1851 in London, housed in the famous Crystal Palace, the Archbishop of Canterbury delivered a speech invoking the glass city of the New Jerusalem. He bade his listeners to

---

[14] Jean Baudrillard, *The System of Objects*, trans. James Benedict (London: Verso, 1996) 41-42.

regard the Crystal Palace as "a heavenly palace," then cited the following passage (a slightly abbreviated version of the passage from the Book of Revelation, 21:10-21:23): "And he carried me away in the Spirit to a mountain great and high, and showed me the Holy City, Jerusalem, coming down out of heaven from God. It shone with the glory of God, and its brilliance was like that of a very precious jewel, like jasper, clear as crystal. It had a great, high wall with twelve gates. The city was like pure glass. It did not need the sun or the moon to shine on it, for the glory of God gives it light, and the Lamb is its lamp." The glass building that housed the exhibition was filled with plants and regarded by contemporaries as a gigantic winter garden (indeed, architect Joseph Paxton was a greenhouse designer). At the time, gardens were strongly associated with paradise. The building was also lit from within by numerous gas lanterns, which underscored the correspondences with the radiant glass city of New Jerusalem. Yet as Grigorii Revzin points out, while the Archbishop's speech belonged to the genre of the sermon "where such associations are rhetorically appropriate," his audience took his words literally. "In 1851 Europe finally found out what heaven would look like. It is made of glass and steel, illuminated, and filled not with angels and righteous men, but with an enormous quantity of goods, merchants, and shoppers."[15]

---

[15] Grigorii Revzin, "Khram kuptsa-spasitelia," *Kommersant''-Vlast'*, 3/27/01, http://archi.ru/press/revzin/vlast2703.htm.

From the advent of larger windows in the wake of the Petrine revolution in architecture to the Constructivist designs for all-glass houses, architecture is a central motif in the present study. In his monumental work *Kul'tura Dva*, Vladimir Papernyi uses architecture to discuss larger manifestations of Stalinist culture; for him architecture typifies certain features of "Culture Two," making them stand out in stark relief.[16] What makes architecture so telling as an illustration of broader cultural trends may have to do with its scale and spectacular nature—it is always in view, and it reshapes the landscape—as well as with its function: as a space for dwelling, architecture "hits us where we live," to take the idiom literally.

For Walter Benjamin, architecture, and in particular its material components, is also a way to get at the ideas underpinning a particular moment in history. Benjamin writes on the phenomenon of Parisian arcades, most of which were built in the late 1830s, and whose beauty attracted visitors from abroad to their sparkling wares: "In their fittings art is brought in to the service of commerce."[17] He cites an *Illustrated Guide to Paris* that calls the arcade "a city, indeed, a world in miniature," apparently because the glass roof creates a sort of second firmament (in the same essay Benjamin characterizes the arcade as "both

---

[16] Papernyi contrasts the dynamic culture of the Revolutionary period, "Culture One," with the Stalinist "Culture Two," which privileged stasis and monumentality. See his *Kul'tura "Dva"* (Ann Arbor: Ardis, 1985).

[17] Walter Benjamin, "Paris: The Capital of the Nineteenth Century," *Reflections: Essays, Aphorisms, Autobiographical Writings,* trans. Edmund Jephcott (New York: Schocken, 1978) 146-7.

house and stars"). One of the most striking observations in this essay is on the use of iron in the construction of arcades. Iron and glass have been called the modernist materials par excellence.[18] Benjamin draws an insightful connection between the use of iron in architecture and the material's earlier incarnation: iron "undergoes a development that accelerates in the course of the century […] The rail becomes the first prefabricated iron component, the forerunner of the girder. Iron is avoided in residential buildings and used in arcades, exhibition halls, stations—buildings serving transitory purposes."[19] In effect, Benjamin traces the association between modernity and speed (note his use of the word "accelerates" to underscore his point) back to the role that iron played in the construction of railways.[20] The rail, the key structural element of a train track, evolves into the

[18] For example, see Maryse Fauvel on the peculiar timelessness of the Louvre pyramid: the glass that serves as its primary material "marks the advent of modernity at the end of the nineteenth century. The pyramid thus seems somewhat removed from time, both in form and content. It might well date from the end of the nineteenth century, since glass, in association with iron or steel, characterizes the industrial, commercial age, with its railroad stations, its indoor markets, its skyscrapers, and its arcades." "From Iron to Glass: Transparency and Pluralism," *Studies in Twentieth-Century Literature* 20 (1996): 341.

[19] Benjamin 147. Benjamin adds that the "architectonic scope for the application of glass" expanded at the same time as that of iron did; yet "the social conditions for its intensified use as a building material do not arrive […] until a hundred years later. Even in Scheerbart's 'glass architecture' (1914) it appears in utopian contexts." (Ibid.)

[20] Famous works by such authors as Tolstoy and Dostoevsky contain forebodings on railroads as signs of impending apocalypse. Stephen Baehr ("The Troika and the Train: Dialogues between Tradition and Technology in Nineteenth-Century Russian Literature," *Issues in Russian Literature before 1917*, ed. J. Douglas Clayton [Columbus, OH: Slavica, 1989] 85-106) traces the development of this theme in nineteenth-century Russian literature.

girder, the key structural element of a building, and the iron invests the building with a similar aura of acceleration in space and time.[21]

I would argue that glass presents an analogous case, whereby a technological innovation typical of "modernity," in particular one that evokes the association of speed and transitoriness, can be linked to an architectural element. Mikhail Iampolskii has observed the parallel between the transparency of film celluloid and that of utopian glass buildings at the turn of the twentieth century.[22] A contemporary example of the same principle is the use of glass in the information revolution. In the past several decades, the phenomenon of glass-based fiber optics has accelerated the pace of life in unprecedented ways. The optical pathways along which light impulses travel can be seen as the most recent incarnation of the railway, with all its symbolic associations. In fact, contemporary buildings are being constructed already wired with fiber optical cables. Now the glass is on the inside: it has become another kind of structural element altogether.

In eighteenth-century Russian literature, one detects a phenomenon that can be called (with apologies to Marx) "glass consciousness." Throughout this study, I

---

[21] The circumstances under which the Crystal Palace came into being further shed light on the link between accelerated time and the "modern" materials of iron and glass: "Because the [exhibition] commission was on a tight schedule, the building had to be composed of prefabricated material—iron and glass rather than brick and mortar—that would be ready at once to house exhibits." See Thomas Richards, *The Commodity Culture of Victorian England: Advertising and Spectacle 1851-1914* (Stanford, CA: Stanford UP, 1990) 22.

[22] Mikhaïl Iampolski, "Le cinéma de l'architecture utopique," *Iris* (1991) 39.

am interested in going back in time to moments when glass was considered magical, precious, rare; when people noticed it, and its effect on the visible world. Even in the twentieth century, when glass was becoming ubiquitous, new works of glass were still appearing for the first time (from light bulbs to their spectacular counterpart, the Kremlin stars—to take just one example). Written texts are records of the reception and experience of these objects; they also enrich our understanding of them.

The span of time encompassed by my study is bracketed by the Petrine revolution in the eighteenth century and the Bolshevik revolution in the twentieth. More precisely, the phenomena with which I am dealing arose out of these revolutions. I use "revolution" to refer to an ongoing process rather than a single discrete event; thus, "Petrine revolution" signifies the broad-ranging reforms that Peter I instituted and the consequences of these reforms. I believe that these two periods have much in common. Both revolutions ushered in transformations in consciousness—new ways of seeing. The eighteenth century was obsessed with optics and vision—the legacy of the Baroque as well as the Enlightenment. The turn of the twentieth century saw a resurgence of the obsession.[23] The Zor-Ved group was just one of the many artists' organizations interested in exploring the phenomenon of seeing and trying, moreover, to transform the sense of sight in order to create better human beings. The role

[23] Katerina Clark documents this thoroughly in *Petersburg, Crucible of Cultural Revolution* (Cambridge, MA: Harvard UP, 1995).

technological advances played in the visually-oriented culture also cannot be underestimated. Looking at a broad span of time allows me to draw out meaningful patterns and show how cultural history repeats itself.

Glass is an inherently ambiguous material, carrying conflicting associations of solemnity and play; safety and danger; truth and deception; stability and fragility; modern technology and folkloric magic; and others. One cannot talk about glass without talking about vision, and hence, this dualism may have something to do with a profound ambiguity at the heart of visual perception. The discourse on glass at a particular time in history thus sheds light on the tensions and paradoxes within the larger culture at that historical moment.

Central to my project is the artistic response to the phenomenological presence of glass: this material, or rather, this presence influenced the way artists perceived of the creative process, the use of language, and their ways of seeing. Artistic production is often quite revealing: writers are both very sensitive to the stimuli of the phenomenal world and to the ideas in the air, and their writings can serve as barometers of public opinion of the time. However, I document the way that glass played on the imaginations of not just artists, but people from all walks of life. Thus, I look not only at high art but its more popular manifestations from songs to sayings; and I also consider legal, journalistic, and other types of discourse, all the while seeking recurring motifs and rhetorical strategies.

Historical Overview

My study proper begins with glass in modern Russia, that is, Russia in the wake of the Petrine reforms that brought the country out of the medieval period. But what was the status of glass in Russia prior to that time? A brief glance at the uses of glass in pre-eighteenth-century Russia, when this material was precious and rare, helps to underscore the dramatic role it would play in the culture in subsequent centuries.

Kievan Rus' is famous for its glass mosaics, such as the ones used to decorate the cathedral of St. Sophia. However, the origins of Russian glassmaking go back even farther. Archeological evidence shows that the craft first developed on what is now Russian territory in the northwestern town of Old Ladoga in the second half of the eighth century.[24] The Mongol invasion put a temporary halt to the development of glassmaking in Russia;[25] small workshops (*guty*) continued to function on the territory of Ukraine while Russia was under the Mongol yoke: "Deep in the woods and in villages hidden away in oak groves, puffs of smoke arose from small workshops fabricating 'cherkasskii' glass, as they called it in Rus'."[26]

---

[24] Thomas Noonan et al., "The Development and Diffusion of Glassmaking in Pre-Mongol Russia," *The Prehistory and History of Glassmaking Technology,* ed. Patrick McGray (Westerville, OH: American Ceramic Society, 1998) 294, 299.

[25] T. I. Dul'kina and N. A. Asharina, *Russkaia keramika i steklo 18-19 vekov: Sobranie gosudarstvennogo istoricheskogo muzeia* (Moscow: Izobraziltel'noe iskusstvo, 1978) 11.

[26] Ekaterina I. Batanova, *Sovetskoe khudozhestvennoe steklo* (Moscow: Iskusstvo, 1964) 11.

Glass vessels dating back as far as the fourth and fifth century B. C. have been discovered during excavations of burial sites and settlements in Crimea and southern Ukraine. These small vessels of opaque colored glass decorated with zigzag designs were used to store incense [*blagovonii-bal'zamarii*]. Glass blowing had not yet been invented, so the vessels were made by stretching hot glass paste into threads, which were then wound around a mold made of a mixture of sand and clay. The rapidly cooling vessel was subsequently rolled on a stone slab to smooth out the surface.[27] Excavations have also unearthed thick-walled spherical glass vessels, about the size of an apple, hermetically sealed and containing a saline liquid, dating to the eleventh through the thirteenth century. Scholars speculate that they were vessels containing tears, religious relics brought from the Holy Land.[28] The ancient chronicles show that glass containers (*sklianitsy*) were used in thirteenth-century Pskov and Novgorod to hold precious liquids such as myrrh.[29] Glass drinking vessels called *sleznitsy* were widespread in the twelfth through fourteenth centuries. They were in the shape of funnels crudely soldered at the bottom, 12 to 15 cm in height, of light yellow and green glass.

---

[27] E. A. Levinson et al., *Khudozhestvennoe steklo i ego primemenie v arkhitekture* (Leningrad: Gos. izd. literatury po stroitel'stvu i arkhitekture, 1953) 85.

[28] Nikolai Kachalov, *Steklo*, (Moscow: Izd. Akademii Nauk SSSR, 1959) 212. According to William S. Ellis, mourners in ancient Egypt "caught their tears in small glass vials." See *Glass: From the First Mirror to Fiber Optics, the Story of the Substance that Changed the World* (New York: Avon, 1998) 4.

[29] Batanova 10.

When such a drinking vessel was filled with liquid, the drinker could not put it down on the table but had to drain it at one go.[30]

Because glass was mostly imported from abroad and therefore an expensive luxury item in medieval Russia, windows at the time were made of such materials as bulls' bladders, fish eggsacks,[31] rags, or (for the privileged few) mica.[32] (In her recent novel *Kys'*, set in a post-apocalyptic Moscow whose denizens have regressed to a primitive way of life, Tatiana Tolstaia includes numerous references to windows covered with animal bladders [*puzyri*].) Glass windows only began to appear in the mid-seventeenth century, although most peasants continued to use other materials up to the middle of the nineteenth. Windows were of various shapes, sometimes round (produced by cutting off the base of a wide flat-bottomed blown glass vessel[33]) and other times in the form of the letter д; they were sealed off with iron bars and shutters on the outside.[34]

---

[30] Ibid. 9. According to Dal''s dictionary, *sleznitsa* (or *sleznik*) also referred to vessels in which mourners collected their tears; the vessels were then buried together with the deceased.

[31] The fish eggsacks were sewn together and used as window coverings. See Richard Hellie, *The Economy and Material Culture of Russia, 1600-1725* (Chicago: U Chicago P, 1999) 134.

[32] Levinson et al., 52. In the seventeenth century, the tsar's palace featured mica windows with inserted "mountings" [*okonichnye stanki*] upholstered with cloth and thick felt. At times the mica was decorated with painted pictures of people, animals, birds, flowers, etc. See M. G. Volkhovskoi, comp., *Domashnii byt russkikh tsarei v XVI-XVII vv. po Zabelinu, Kliuchevskomu, Karnovichu i drugim* (1904; Moscow: Panorama, 1992) 21-22. Transparency or a view of the outside was obviously not a priority in the case of these windows.

[33] Kachalov 213.

[34] "Okno," *Entsiklopedicheskii slovar'*, ed. I. E. Andreevskii. 43 vols. (St. Petersburg: F. A. Brokgauz and I. A. Efron, 1897) 824.

During the construction of St. Petersburg in the early eighteenth century, even the homes of the well-to-do had windowpanes of mica, not glass.[35]

Mirrors in pre-eighteenth century Russia were primarily small handheld ones. A particularly lavish example was an implement of the tsar's grooming, consisting of a large fan of ostrich or peacock feathers or a folding fan of satin or leather, with a mirror at the center.[36] Wall mirrors began to appear in the second half of the seventeenth century; they were hung only in interior rooms such as bedchambers, never in outer rooms used for receptions. These mirrors had frames of decoratively carved wood that was painted, gilded, or silvered, and frequently had pasted-on velvet and stamped leather embellishments. They were placed between windows or on blind walls and were always covered with taffeta, satin, or velvet curtains on rings, or were locked up in the manner of icon-cases [*kioty*].[37] The prices for mirrors in Muscovy ranged from two kopecks to 100 rubles, with a median of 75 kopecks. (Four kopecks was equal to an average day's pay.[38]) Prince Vasily Golitsyn, "one of the wealthiest men in late Muscovy," owned 81 mirrors, for which he paid 679.2 rubles, an enormous sum

---

[35] James Cracraft, *The Petrine Revolution in Russian Imagery* (Chicago: Chicago UP, 1997) 179. In 1713, the tsar ordered 40 poods of mica, and in 1715, 150 crates of "window glass" [*okonnykh stekol*] to be purchased abroad and shipped to St. Petersburg. See S. P. Luppov, *Istoriia stroitel'stva Peterburga v pervoi chetverti XVIII veka* (Moscow: Izd. Akademii nauk SSSR, 1957) 106-7.

[36] Volkhovskoi 31.

[37] Ibid. 25.

[38] Hellie 221.

at the time. The cost of one of the mirrors, 20 rubles, was equal to that of "six slaves."[39]

The value of glass in pre-modern Russia is underscored by the fact that glass beads were an early form of money. These beads were known as *glazki* (stressed on the second syllable). (The name comes from the eye-like millefiori designs on the surface of the beads.) Even at such an early stage, the connection between glass and seeing is apparent: around the turn of the seventeenth century, the word *glaz* displaced *oko* as the signifier of the eye. Such beads, decorated with gold and silver foil (dating to the seventh-eighth and eighth-ninth centuries, respectively) have been found in excavations at Old Ladoga; similar beads, including ones that were gold, yellow, blue, and green in color have also been found in Kiev.[40] The beads were frequently washed out by rains and ended up in the crumbling banks of large rivers. Nikolai Kachalov cites the chronicler Nestor who was told in 1114 by the inhabitants of Ladoga that children frequently found such beads: "Around here, after a heavy rain, our children find little glass eyes, big and small ones, with holes drilled through

---

[39] Ibid. 592. For detailed descriptions of Muscovy mirrors, see I. E. Zabelin, *Domashnii byt russkikh tsarei v XVI i XVII stoletiiakh*. Book I (Moscow: Kniga, 1990) 193-95.

[40] Levinson et al., 89.

them, and others collect them near the Volkhov River when the tide washes them ashore."[41]

According to Andrei Chernov, a glass workshop was established in Old Ladoga by the 780s; glassmakers from the Near East (brought in voluntarily or by force) plied their trade there. The workshop manufactured small decorative beads (*biser*) and the beads known as *glazki*. In addition to being the center of Russian glassmaking, Old Ladoga was a major trading post; the *glazki* made here were given to local hunters in exchange for furs,[42] which were then sold to Arabian merchants for silver coins. Chernov argues that these glass beads played a crucial role in the formation of the Russian state: "It is this silver that would pay for Riurik's mission, the construction on the 'upper river' of Novgorod, the transfer of the capital to Kiev, and the very birth of the unified Old Russian state." One of Chernov's cohorts conjectures that the *glazki* served as the currency of Ladoga for two centuries because these eye-beads recalled the left eye of the Scandinavian god Odin, who sacrificed it in exchange for wisdom.[43]

Glass in pre-modern Russia was a popular material for adornment, of one's self and one's surroundings. Archeological digs on the territories of towns

---

[41] «Яко сде есть, егда будеть туча велика, а находять дети наши глазкы стеклянные и малыи и великыи, провертаны, а другые подле Волхова беруть, еже выполаскивает вода." Kachalov 207.

[42] According to Noonan at al. (299), "Ladoga's central role in the fur-bead trade was probably the reason why glassmaking arose at the site: glass beads have traditionally been key goods exchanged for fur."

[43] See Andrei Chernov, "Tak vot gde tailas' Rossiia moia…," *Ogonek* 29 (July 1998): 53-54.

including Kiev, Novgorod, Chernigov, Minsk, Kostroma, Galich, and Ladoga have unearthed multicolored glass bracelets, bead necklaces, and rings dating to the tenth through the twelfth centuries.[44] In 1508 Grand Prince Vasilii had the icons in the Church of Annunciation decorated with silver, gold, and glass beads [*biser*].[45] Another example of glass used to decorate church interiors is that of the famous smalt mosaics for the St. Sofia cathedral in Kiev (which were made at about the same time as those of the St. Mark cathedral in Venice).[46] Excavations from 1951 showed that these smalts were manufactured at Kiev, not brought in from outside, as had previously been believed.[47] Glass in Kievan Rus' could take both serious and whimsical form; the latter was exemplified by ceramic toys in the form of egg-shaped rattles that were glazed by being dipped into molten glass. These popular toys were exported to Novgorod and Old Riazan, as well as to Scandinavia.[48]

The first Russian glass factory was built by Swedish artillery master Julius Koiet in 1639 in the village of Dukhanino, in the Dmitrov district near Moscow. This factory specialized exclusively in window glass and apothecary vessels

---

[44] Batanova and Voronov 8; see also Noonan et al. 304.

[45] Volkhovskoi 13.

[46] Evgenii P. Prokof'ev, *Russkii khrustal': Gusevskii khrustal'nyi zavod* (Leningrad: Khudozhnik RSFSR, 1970) 6.

[47] Batanova and Voronov 9.

[48] Levinson et al. 92-3.

made of greenish glass.[49] The factory could not keep up with the growing demand for glass from the court, let alone from other sectors of the population. Thus a second glass factory, this one belonging to the tsar, was established at Izmailovo near Moscow in 1668.[50] It is here that the history of modern Russian glassmaking begins.

Glass came into its own in the eighteenth century concurrently with the development of a secular literary language and the emergence of Russia as an imperial power and a modern state. Decorative glass offered a host of expressive possibilities to artisans who produced objects glorifying the state as well as imitating nature (and celebrating man's conquest of it). Mikhail Lomonosov, the father of Russian versification, was also a pioneer in glassmaking; his "Letter on the Usefulness of Glass" (1753) praises the material on aesthetic and scientific grounds and makes clear the connection between glassmaking and his work in the literary laboratory. This poem, an expansive paean to the miraculously versatile (and poetically suggestive) material that is glass, also contains an implicit celebration of the Russian literary language as an equally expressive medium that likewise bends to its master's will.

---

[49] A. Oreshnikov, "Aptekarskaia posuda vremeni Petra Velikago," *Starye gody* (February 1908): 89.

[50] Kachalov 223.

With its optical qualities evoking simultaneously the sparkle and grandeur of the Baroque, the clarity of Classicism, and, with objects from telescope lenses to windows and chandeliers, the discourse of the Enlightenment, glass provided a series of metaphors for eighteenth-century writers seeking to describe the character of the tumultuous times in which they lived. Glass is thus mentioned in a multitude of eighteenth-century texts, but it also acts *as* a text to be read, from drinking vessels engraved with words and images alluding to imperial glory, to the peculiar, prismatic Mirror of Law (*zertsalo*), which bears Petrine decrees and simultaneously demands and defies interpretation. The *zertsalo* symbolized jurisprudence and was employed as an emblem of surveillance—the sovereign's "all-seeing eye"—during all Russian legal proceedings. These objects appeared during the Petrine period and remained in use until the Bolshevik revolution of 1917, when most were destroyed in a wave of iconoclasm. This intriguing artifact, combining aesthetic and utilitarian elements, has no European analogues. The tradition of didactic literary works known as "mirrors" is well attested, but only in Russia do we see an attempt to make the metaphor real and transform a verbal symbol into an imposing construction of gilded wood and glass. A complex of associations between the *zertsalo* and the emblem of the all-seeing eye illustrates the connection between seeing and power: the Petrine "mirror" ultimately was meant to be perceived as the eye of God.

As the nation's glass industry came of age alongside with its literature in the nineteenth century, glass took on new meanings. Massive glass constructions such as the Crystal Bed played a role in the glorification of Russian imperial might through ceremony and spectacle. Eventually, large-scale glass production and the increasingly widespread use of windows allowed people to imagine a perfect future based on communal glass houses.

The twentieth century marked a return to "glass consciousness." From the Acmeist poets to the World of Art movement, artists rediscovered and revisited the eighteenth century to gain access to cultural memory and to shake off the fetters of realism, which had reigned supreme in the previous century. The artistic gaze shifted from the tableau seen through the window (the leading metaphor for realist art) to the cracks on the window's surface. In other words, artists once again began to scrutinize language itself, reveling in its materiality even as they questioned its adequacy as a transparent container for meaning. Glass alters the way we see; it is a medium, like language. When writers become interested in "the word as such," that is, their attention is drawn to the medium itself, how it mediates and constructs models of reality, they also become aware of how glass functions as a construction material and a medium.

In all spheres of cultural production, from writing to art, architecture, and film, glass became important once again, but in new and different ways. It became the modern construction material par excellence; visions of enormous, prismatic glass palaces fueled utopian fantasies in Russia and all across Europe.

Glass played key roles in technological developments, such as the search for a superior eye, from cameras to optical lenses. The material was instrumental in the creation of technologies of surveillance; in contrast to the *zertsalo*, these devices were far less spectacular and far more insidious.

Ironically, while modernists turned their attention to glass, what they most prized was its ability to become invisible. Kandinsky's paintings on glass (1912-17) were inspired by Russian icons and by Hinterglasmalerei, a style of folk art that had been in existence in Europe since late Antiquity and flourished in southern Bavaria in the eighteenth century. In these works Kandinsky tries to present a pure play of color, with no canvas to mediate the viewing experience.[51] Because they were to be viewed from the reverse side, these paintings were done backwards—the upper layers of paint were applied first. For Kandinsky, the glass medium thus transformed the creative process itself.

An analogue of sorts may be found in Marcel Duchamp's painting on glass, *The Bride Stripped Bare by her Bachelors, Even* (1915–23). Apropos of his turn to a transparent canvas, Duchamp wrote: "If a painter leaves the canvas blank, he still exposes to the viewer something that is considered an object in itself. This is not true of glass; the blank parts, except in relation to the room and the viewer, are not dwelt upon… Every image in the glass is there for a purpose and nothing

---

[51] For information about these paintings, see Will Grohmann, *Wassily Kandinsky: Life and Work* (New York: Harry N. Abrams) 112, and Hans Konrad Röthel, introduction, *Vasily Kandinsky: Painting on Glass (Hinterglasmalerei). Anniversary Exhibition*, The Solomon R. Guggenheim Museum, New York, 1966.

is put in to fill a blank space or to please the eye." Calvin Tomkins explains that, because one could simultaneously look *at* and look *through* a painting on glass, the experience of looking became "ambiguous, open-ended, and unfixed"; this quality allowed the artist to take his exploration of movement to an entirely new level: "Duchamp's interest in trying to represent physical motion in painting [as in *Nude Descending a Staircase*] had been superseded by his concern with movement of another kind–with the transition from one mental or psychological state to another."[52] For artists, glass is an ideal material to respond to and articulate change—by its very nature, neither fluid nor solid entirely, it embodies the state of transition.

Already in the seventeenth century, the tension between looking-at and looking-through inherent in glass was a provocative one for writers, as in the case of George Herbert's poem "The Elixer" (1633): "A man that looks on glasse / On it may stay his eye; / Or if he pleaseth, through it passe, / And then the heav'ns espie." The way in which glass plays with our vision can evoke the possibility of moving between two planes of existence—the material and the spiritual, this world and the next.

The visionary artist Velemir Khlebnikov makes explicit the connection between glass and dynamism with the dream of an easily transportable, feather-light glass architecture. Khlebnikov's projects for the future (1920–21) include

[52] Calvin Tomkins, *Duchamp: A Biography* (New York: H. Holt, 1998) 125.

"cities of glass, shiny as inkwells […] 'Sunward' is written upon them in the terrifying alphabet of iron consonants and vowels of glass!" The house of the future will be "a container of molded glass, a mobile dwelling-module" that can move from place to place with lightness and ease. Khlebnikov sings the beauty of future cityscapes that resemble "glass and steel honeycombs"; one of the dwellings that he proposes is a building in the form of an open book that consists of "stone walls set at an angle, and glass sheets of living modules arranged fanwise between these walls." Here Khlebnikov almost seems to be mocking the notion of transparency in literature (by making it literal), which would become increasingly a mandate in years to come.

Utopian architectural projects called for extensive use of glass, which took on a significance that transcended its utilitarian value. Robert Hughes juxtaposes the age-old reverence for stained-glass windows with modern architects' infatuation with glass as a construction material: "It was the face of the Crystal, the Pure Prism. […] It suggested a responsive skin, like the sensitive membrane of the eye, whereas brick and stone were impervious, a crust against the world." Akin to stained glass, it was regarded by some with a nearly religious fervor. In 1914, German poet Paul Scheerbart argued that replacing brick buildings with glass ones would bring about "a paradise on earth." The idealization of glass architecture had a particularly poignant significance in the years after the First World War; Hughes explains: "A world remade of glass would have evolved beyond throwing stones—or artillery shells. Glass architecture was pacifist

architecture, the very image of exalted vulnerability which, given a new social contract, would remain forever intact."[53]

The sarcophagus built to display the embalmed body of Lenin was an altogether different "glass house." In the days following Lenin's death, letters and telegrams to the Burial Commission called for the preservation, and continued visibility, of Lenin's body: "It is imperative that Il'ich physically remain with us and that he can be seen by the working masses… The body of Il'ich should not be consigned to the earth, but should be embalmed and placed in a central museum in order that the workers of future epochs will be able to see the leader of the proletariat." (The anxiety about the leader's visibility again resonates with the legend of Peter in Glassland.) The sarcophagus was made out of plate glass, mounted into an oxidized copper frame, and took the form of a triangular prism. This object bears a striking resemblance to the imperial *zertsalo*. That emblem of state power surrounded by sacral associations was said to reflect the "holy features" of Peter I, who indeed became for some the object of religious veneration. Similarly, the sarcophagus was part of an official attempt to create a cult, i.e., a system of popular veneration, around Lenin.

This system of veneration was in part made possible by the physical properties of glass. The ability to manipulate light means the ability to create a spectacle that holds sway over the emotions of large groups of people. Glass has

---

[53] Robert Hughes, *The Shock of the New: Art and the Century of Change*, rev. ed. (New York: Knopf, 1991) 178.

an inherent capacity to manipulate light; therefore, a glass object can take on a rhetorical function. Throughout this study I return to the spectacular potential of glass and show how the tension between the tendentious capacity and the playfulness of this material has manifested itself in Russian culture.

The organization of the present study is as follows:

I open Chapter 1 with V. V. Lukin's play *The Trinket-Dealer* (1765), which treats such objects of optical glass as the telescope and the lorgnette—glass eyes, in a sense—thus foregrounding the concept of the transformation of vision. Also, I begin with a theatrical work because the theatrical metaphor is important for my discussion of the spectacular and playful nature of glass. Next, I conduct a close reading of drinking vessels inscribed with text and images and discuss the iconography of sociability and power as well as the role glass vessels played in domesticating ideology. I also look at drinking and ritual: "joke" vessels as part of a "jesting" culture. The centerpiece of the chapter is an analysis of Lomonosov's "Letter on the Usefulness of Glass," which extols the union of art and science and uses glassmaking to hint at the author's experiments in the literary laboratory. I argue that Lomonosov, a pioneer in versification and glassmaking, presents glass as a metaphor for literary language. I also discuss Lomonosov's monumental mosaics and his battle with Academy rivals over the uses and abuses of glass. I conclude with a look at how windows shape perception in the *Memoirs* of Princess Natalia Dolgorukaia, and the attendant topics of the female gaze, power, and powerlessness. I place this literary analysis

in the context of the Petrine revolution in architecture: the transition from isolationism to an outward-looking perspective; St. Petersburg as "window on Europe" and the significance of windows as such.

Chapter 2 is devoted to the *zertsalo* or Mirror of Law as all-seeing-eye (object of surveillance), emblem, conduit of ideology, and sacred container. An analysis of Kapnist's play *Iabeda* (1798), a satire of legal corruption in which the *zertsalo* appears as a significant prop, further illuminates the meaning of this artifact. I use the discussion of the *zertsalo* to address the role of material and metaphorical mirrors in early-modern Russia. The *zertsalo* was an emblem of the Petrine revolution that continued to make its presence known throughout the nineteenth century; thus I analyze how writers of this period deploy this object in their works and engage in dialogue with the Petrine legacy, thereby shedding new light on familiar texts.

In Chapter 3, I discuss spectacular glass objects created at the same time as the canonical literature seemed (but only seemed) to be turning a blind eye to glass. In the nineteenth century, glass production reached its apogee—hence I allow the often-obscured processes of production to take center stage. Chernyshevsky's *What is to be Done?* shares space in this chapter with legends about Russian glass artisans and the notes of the man responsible for delivering the Crystal Bed, a diplomatic offering in a time of war, to the Persian shah.

Chapter 4 argues that glass architecture was at the heart of the utopian aspirations and dystopian fears in twentieth-century Russia. The modernist turn

back toward the materiality of the signifier signals the return of "glass as such." The notions of voyeurism, surveillance, and collectivism combined as the avant-garde and then the Bolshevik revolutions ushered in new ways of seeing. Glass contributed to this phenomenon in the material environment and in the world of ideas. The "satirical windows" of ROSTA transformed the commodity fetish into political propaganda. Glass was seen for a time as the construction material of choice for the task of building socialism. I examine two opposing views on the notion of a glass utopia: Khlebnikov's enthusiastic embrace versus Zamiatin's rejection of the idea.

Chapter 5 adds another voice to the debate over glass houses: that of filmmaker Eisenstein. Yet the medium is different, and the topic is subtly different too: Eisenstein was not critiquing or championing the idea of the glass house as a way to bring about utopia; instead, he intended to use a glass house as a space within which to carry out his ideological critique of the Western bourgeois way of life. However, the anxieties about surveillance that emerge from his project echo those found in Zamiatin's anti-utopia, and make it seem as if his attack is aimed at a target much closer to home.

In Chapter 6 I analyze Olesha's *Envy*, a work rich in optical imagery, depicting life seen through "the wrong end of the binoculars" and containing an intertextual allusion to Chekhov's image of broken bottle glass as a metaphor for a writerly way of seeing. The glass artifact that serves as the focus and emblem of this chapter is the electric light bulb, a mass-produced, utilitarian object that

came to possess great symbolic significance in Soviet times thanks to the capacity of glass to hold light in captivity. I also look at the uses of glass during High Stalinism, examples of official spectacle from the subterranean (Mel'nikov's sarcophagus for Lenin and the Avtovo metro station as "underground Crystal Palace") to the sublime (the Kremlin stars and the "gold" spire of MGU, actually made of metallized glass). The seven "Stalinist Gothic" buildings constituted a triumph of heavy opacity, an apparent rejection of the Constructivists' celebration of lightness, transparency, and crystalline aesthetic; yet glass reasserted itself in the form of the MGU spire, a perfect example of triumphalist falsification. Also notable is the rhetoric of Soviet art-historical texts dealing with glass, a seemingly innocent topic that still invites musings and outbursts on ideology, danger, rehabilitation, falsification, and the anxiety around mimesis. In the Conclusion, before summing up I propose ways to understand the relationship between glass and Logos in the work of Osip Mandelstam—a writer notable for his poetics of thingness— and consider some cryptic passages in his poetry in the light of this relationship.

Mikhail Epstein's recent novel *Novoe sektantstvo*[54] purports to document the beliefs and practices of banned religious sects that led a secret existence during the Soviet period. These sects are fictional creations, but their tenets are based on

[54] The full title is *Novoe sektantstvo:Tipy religiozno-filosofkikh umonastroenii v Rossii (1970-1980gg)*. It is translated as *Cries in the New Wilderness: From the Files of the Moscow Institute of Atheism*, trans. and intr. by Eve Adler (Philadelphia: Paul Dry, 2002).

actual ideas that were in the air in Russia in the 1970s and 1980s.[55] One of the sects profiled in the novel is a glass-obsessed doomsday cult known variously as the *steklovidtsy* [glass-seers], *steklodely* [glassworkers], and *stekol'shchiki* [glaziers] (or "Glassars," "as they are called in the European countries"). They are a secret brotherhood, at once a professional union and mystical society, with origins reaching back for thousands of years—their beliefs having been propagated in Russia by Count Shuvalov, the addressee of Lomonosov's "Letter on the Usefulness of Glass"—and thus analogous to the Masons; yet unlike the Masons, the Glaziers are virtually unknown, because their basic guiding principle is that of invisibility. Inspired by the image of the New Jerusalem in the Book of Revelation, they predict that at the end of time, the earth shall turn to glass and become a transparent vessel for divine light. The Glaziers believe that transparency is itself divine,[56] and thus they strive to purify and transform the world, and themselves, in God's image. They see glass architecture in mystical

[55] In his "comedy of ideas," Epstein draws upon both the worldviews expressed by fellow Soviet intellectuals and on popular religious beliefs he encountered during fieldwork in southern Russia and Ukraine. These two sources are not as disparate as it may seem; as Epstein argues, ideas have always taken on the status of theology in Russia: "Such is our spiritual tradition: […] religion as the expression of the extreme limits of urgent, importunate thought. […] [E]very Russian ideology sooner or later turns into a theological doctrine of the ultimate meaning of human life, and every social movement that fails to seize power turns into a heresy, a sect." Ibid., 6-7.

[56] As their theoretical manifesto reads: "God hid nothing from his beloved human children … The vessel of faith is filled with the invisible—not with the hidden, but on the contrary, with the transparent. God's invisibility is His perfect transparency … Heaven directs our gaze beyond the bounds of everything visible, in order to present the visible image of Unboundedness itself. In antiquity, heaven was understood as a piece of glassware worked by the greatest Master, and this was not a metaphor for heaven but a fact about glass itself, which is nothing but the bowl of heaven, charged in holy hands with pouring forth divine light and illuminating the frame of things." Epstein, *Cries in the New Wilderness* 147.

terms: "Whereas through stone the earth sends its weight up to heaven, through glass heaven lends its transparency to earth. […] Glass, which is smelted from sand, from a component of the earth, celestializes it, as it were, from within."[57] The Glaziers seek to make not only their surroundings but also themselves transparent. Glass becomes a model for being in the world:

> A transparent human being is one who has attenuated his earthly existence to such a delicate state that it begins to transmit light… You do not even notice such a human being, but in his light you see yourself, you see more deeply into yourself. The highest status in this impenetrable world is that of invisibility. The invisible is one who does not prevent others from being seen. […]A man becomes a void in the Universe--and then he fills it, as air fills a glistening bubble. A glassblower blows void into solid matter to thin it out until it shines. Let everyone become the glassblower of his own "I"![58]

Extending the analogy between glass and self, the Glaziers carry vitreous amulets (watches, eyeglasses, lenses) not only as tools but as secret signs, self-definitions, in a perfect illustration of how glass is both utilitarian and symbolic: "Sometimes they use these things, but, even more important, they constantly study their magical property: to be without concealing being."[59]

The Glaziers have a privileged place in Epstein's "comedy of ideas": they are the last of four doomsday sects, and the penultimate sect to be discussed; last of all is "literary sect" known as the Pushkinians, who have built an elaborate religious system around the poet. Tellingly, Epstein (the founder of the "lyrical

---

[57] Ibid. 146 (translation slightly modified).

[58] Ibid. 148 (translation slightly modified).

[59] Ibid. 149.

museum") juxtaposes the Russian national poet and the poetic material of glass. Epstein is attentive to the plurality of voices in his culture, and deftly picks out the recurring motifs. It is not surprising, then, that he introduces us to the Glaziers; indeed, parallels between glass, language, and consciousness, as well as a general preoccupation with the material, are manifested at various discursive levels within Russian culture. I would like to let the voices of the *steklovidtsy* serve as an overture to my own project.