

## 13 ► Informing (about) the Actual World

“Mathematics does not take pictures of the world, it’s only a way of making sense. Twins, waves, black holes – we make bets on what makes best sense” (*Hapgood* 571), says Kerner of Stoppard’s 1988 spy thriller *Hapgood*, when explaining how the quantum mechanics theory helped him understand the plot of their espionage game. *Hapgood*, Stoppard’s first “science play” (the other being *Arcadia*) was his attempt to put scientific issues on the stage. There are various ways in which science may enter the stage.<sup>44</sup> In *Hapgood*, there are at least three different applications of science, in particular the use of scientists as characters, the inclusion of scientific explications into the dramatic text, and a structural make-up which follows the quantum mechanics theory in a metaphoric way. To describe the last influence briefly, the play’s characters act as electrons, according to the theory’s explanations of the behaviour of light, they follow, in particular, the “complementarity principle” known from quantum physics.

It is the first two applications that concern the topic of this book the most, however, as they combine some of the features of employing the new messenger. An inclusion of scientists, as in *Hapgood*, is on the one hand, an opportunity for the playwright to set his play in an appealing environment and give his characters motivation connected to it, such as a struggle for a discovery or specific ways of solving even more specific problems, such as the popularity of television series from scientific environment shows; on the other hand, it works as a signal that science becomes a constitutive element of the plot construction, as in the case of A.C. Doyle’s deductive genius Sherlock Holmes, whose specific methods, for example, serve as the structuring propeller of his stories. Scientists and similar characters (such as philosophers in *The Coast of Utopia*, as it will be shown below) qualify for new messengers in several ways. Their occupation grants them a certain social status, which goes together with their legitimate access to knowledge from their field and also gives them the ability to report about results of their work to others.

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44) I dealt with the issue of science in the works of Stoppard, Frayn and David Auburn in my Master’s dissertation *Science on Stage: Scientific Issues in Contemporary Anglo-American Playwriting*, Master’s diss., Brno: Masaryk U, 2004. Print.

Stepping out of their primary role as dramatic characters with a name is guaranteed. In other words, they are accepted by the audience as the messengers of news from the field of science.

The other aspect goes hand in hand with the first, and it involves motivation for the switch of the mode of communication. Scientists are expected to and excused to from breaking free from the ties of the dramatic dialogue when they switch to reporting. Although the genre of their reports may be labelled as explications, lectures, or even classroom lessons, information is delivered and the referential function is the dominant mode of their communication in the moments when they report.

This point calls for a generalization, as it presents the last, but by no means least, category of the new messenger's function covered in this book, in addition to pushing the action forward and acting as political agents. There are such uses of the new messenger, and scientists are among the most prominent types of characters in this respect, in the works of Frayn and Stoppard in particular, that report from outside the frame of action of the stage about facts or events that represent knowledge from the actual world. Moreover, this knowledge, in order to meet the requirement of the genre of a report, is presumably unknown to the audience. In other words, new messengers become teaching agents. In these cases they inform others about facts or events from the actual world.

This concept is problematic as it poses the question of the relationship between the world of fiction and the actual world. What is the connection? How do these two influence one another? What becomes of an actual world phenomenon when it is included in the fictional world? In the theoretical chapter on the history of the structural poetic tradition I grounded my overview on Lubomír Doležel's work *Occidental Poetics*. His views seem also helpful when addressing crucial issues such as these. It is reasonable for a better understanding of a piece of literary art to consider all its components parts of the fictional world; for example, "historical" figures do not take part in historical novels, it is their fictional counterparts who carry their names and borrow some of their properties. This position is well developed in Doležel's *Heterocosmica*. Let us then assume that the same holds for a scientific theory. It bears the same name and it shares some of its properties (such as definitions, explanatory power, and so on). However, as part of a fictional world, it operates primarily within this world, that is to say, it is a fictional counterpart.

How does a "fictional" theory apply to the actual world? Such a question is out of the scope and aims of this work, so allow me to make a working assumption about this issue. The attempted answer lies in the fact that this is where the pragmatic aspect comes onto the scene. Theatre (and let me repeat that I understand each dramatic text as incomplete, as it is necessarily a step towards completion in a performance) is a live medium based on communicating content between the stage and the audience. In this communication, which is essential for theatre, messages including explications of scientific theories are delivered to the audience who understand the concept that it is a part of a fictional world, however, who then relate them to their actual lives and the world they live in. Without the possibility of teaching the audience about the world they live in, visiting theatres would make no sense.

## *Hapgood* by Tom Stoppard

Tom Stoppard's play about espionage primarily focuses on the character of Hapgood, who is referred to by other British spies such as the "mother", and her career in the secret service and as a mother of a little boy Joe. The plot revolves around the development of a secret weapon at the time of the Cold War ending. One of the spies is Kerner, a Russian double agent. Kerner is a scientist working at CERN, developing a missile based on anti-matter. He is a scientist in the field of quantum mechanics. He is able to solve the paradox of twin spies when he applies his knowledge about physics to the impossible behaviour of the other spies, who function more as an application of some of the quantum mechanical theories rather than human beings. Having one character in two spots at the same time seems as a logical slip, until Kerner makes it clear that the one character is in fact two. To explain this paradox, as it seems, Kerner lectures about several principles of quantum mechanics, thus clarifying the confusion.

The play was not a success, in fact it was one of Stoppard's least successful plays. "The London production of *Hapgood* was Stoppard's first relative failure [...], its international success was much more limited than his previous major plays" (Fleming 176). Yet Stoppard attributed this to the spy plot rather than to the fact that the play is a metaphoric application of quantum mechanical principles.

Scientist Kerner becomes a new messenger with a teaching role in two aspects in this play. Firstly, he presents certain principles of quantum mechanics, which serve as explanations of some of the plot complications, as well as the play's dual structure, reflecting the dual quality of light: "The play's structure also engages the theme of duality, as nearly every one of the twelve scenes has a double" (Fleming 181). Most characters have their twins (doubles), too. Kerner explains behaviour of light particles based on their duality nature in the form of a lecture in physics to Hapgood:

Kerner: [...] An electron can be here or there at the same moment. You can choose. It can go from here to there without going in between; it can pass through two doors at the same time, or from one door to another by a path which is there for all to see, until someone looks, and then the act of looking has made it take a different path. [...] It defeats surveillance because when you know what it is doing you can't be certain where it is, and when you know where it is you can't be certain what it's doing: Heisenberg's uncertainty principle [...] (*Hapgood* 544)

This speech is, in its form, a lecture in physics. On the referential level, it speaks about the behaviour of sub-atomic particles, thus mediating the theoretical knowledge of the principles of quantum mechanics to Hapgood and the audience. In this sense, Kerner appears as a teaching agent, whose role is to transfer knowledge and he is doing so in a form of a report.

On the other hand, this report is not without impact on the development of the play's plot. It serves to explain the counter-intuitive behaviour of the Russian spies, the Ridley twins: "Clearly, part of the appeal of incorporating scientific theory into theatre is the

sheer technical challenge. Quantum mechanics describes the interaction of particles at a subatomic level, where the ‘common sense’ rules of classical mechanics no longer apply” (Edwards 171). From this moment on, Hapgood and her team know how to catch the Russian agent twins: “Once Hapgood and her associates have worked this out for themselves, the plot of the play centres on their attempt to entrap the Riddleys” (173). This connection is made clear in Kerner’s observation that “The particle world is the dream world of the intelligence officer” (*Hapgood* 544).

In some of Kerner’s other lectures on physics, the connection with the play’s plot is not that direct. He adds more details and further theoretical knowledge. His other reports from the world of physical theory have little impact only on the play’s plot, and he is becoming primarily the teaching agent about physics:

Kerner: Every atom is a cathedral. I cannot stand the pictures of atoms they put in school-books, like a little solar system: Bohr’s atom. Forget it. You can’t make a picture of what Bohr proposed, an electron does not go round like a planet, or loses a quantum of energy and then it jumps, and at the moment of quantum jump it is like *two* moths, one to be there and one to stop being there; an electron is like twins, each one unique, a unique twin. (545)

The other aspect of Kerner’s reports about science concerns his lectures on the history of science. These can be again divided into ones with an illustrative quality relevant to the play’s plot, such as his historical lesson about the bridges in his native Königsberg:

Kerner: [...] Well, in Immanuel Kant’s Königsberg there were seven bridges. [...] An ancient amusement of the people of Königsberg was to try to cross all seven bridges without crossing any of them twice. It looked possible but nobody had solved it. [...] [W]hen Kant was ten years old, the Swiss mathematician Leonhard Euler took up the problem of the seven bridges and he presented his solution in the form of a general principle. [...]

Hapgood: What did Euler prove?

Kerner: It can’t be done, you need two walkers. (541-2)

Besides the amount of plot unrelated information, which is perhaps amusing and certainly educational, Kerner’s observation illustrates the behaviour of the Russian agents. In other words, proof of a mathematical phenomenon serves to explain the plot development in *Hapgood*, while teaching about the history of science – in this case, mathematical proofs.

Yet, Kerner’s science history lessons at times only serve to teach about details from this field and serve the purpose of amusing the audience, as in the case of the story about Bohr’s horseshoe:

Kerner: Niels Bohr lived in a house with a horseshoe on the wall. When people cried, for God’s sake Niels, sure *you* don’t believe a horseshoe brings you luck!, he said, no, of course not, but I’m told it works even if you don’t believe it. (571)

Although this particular story has little to do with science as such, it has a scientist at its centre. For this reason, it belongs to the “popular” history of science. Kerner, who is himself a physicist, has knowledge of historical anecdotes like this one, and he is their legitimate reporter.

In sum, *Hapgood* contains several lectures on science and history of science. Due to the fact that Kerner is a scientist, he has knowledge of the field and is authorized to transfer it further to the others. What makes his reports in this area special, is the fact that he speaks about phenomena of the actual world and in this way he functions as a teaching agent on the stage. The play, however, has no ambition to supplement serious science lectures. Wording and examples are primarily chosen to meet the dramatic quality. So while the play can teach the audience a lesson in quantum mechanics, the lesson is not first and foremost intended to be a serious scientific discourse. For this reason, simplifications and inaccuracies are inevitable. Some concepts are included because they are intriguing, but without a wider erudition in sub-atomic particle behaviour they cannot constitute a serious foundation in quantum mechanics. As a critic of Stoppard’s simplifying approach expressed, “Stoppard’s physics looks like quantum mechanics, but no quantum mechanics looks like Stoppard’s physics” (Bernstein 113). Still, the application of the counter-intuitive quantum mechanical principles on the behaviour of characters was a challenge that found its working stage expression in *Hapgood*.

### 13.1 ► New Messengers as Teaching Agents

Attempts to express scientific and philosophical ideas or, for that matter, any information from the realm of human knowledge, on the stage or in another artistic form is not a phenomenon that has appeared recently. Quite the contrary. Poetry served as a form of passing on knowledge in Ancient times, as the didactic poem *De rerum natura* (*On the Nature of Things*) by the Roman poet and physicist, Lucretius, from the first century B.C., illustrates. This poem is a textbook of his atomistic interpretation of the world and the processes therein. Another good example dealing with knowledge and its implications for mankind is the play (*The Tragical History of the Life and Death of*) *Doctor Faustus* by Christopher Marlowe from 1604. The use of theatre as a didactic environment to teach masses about various issues has had a long tradition. It is at the beginning of the twentieth century when scientific discourse began its domination in the sphere of producing and presenting knowledge, in effect claiming that other forms of presentation are inappropriate: “science at the turn of the twentieth century was the dominant paradigm of knowledge, claiming greater authority over the other ‘softer’ disciplines” (Walker 23). The staging of scientific and philosophical ideas in various forms may thus be viewed as a renewal of one of the social roles that theatre, drama and literature played in the course of history.<sup>45</sup> To show that this has been proved to be a successful connection, a critic observes that “the enormous popularity of these British and American produc-

45) See, for example, Huxley, A. *Literature and Science*. London: Chatto & Windus, 1963. Print.

tions attests to the potential for a happy marriage of art and science, and their intriguing theatricality testifies to the playwright's ability to transmute potentially unappealing or inaccessible science into compelling drama" (Blansfield, "Atom and Eve" 1).

The concept of the new messenger as a type of character who can legitimately step out of his role, switch to a narrative mode and report about facts and events from outside the frame of the action on the stage seems to be a viable approach to the issue of the presentation of scientific and philosophical topics on the stage. It is again the characters' occupations, such as scientists and teachers, that guarantee them this privilege. The contents of these reports refer to a specific knowledge, which they, in their reports, deliver to the other characters and the audience. Reportage takes on the form of a lecture and, as such, it assumes an educative role. For this reason, I have decided to illustrate this particular use of the new messenger by calling them teaching agents. This chapter shows how findings of science (physics and mathematics) and philosophy that are included into the dramatic texts and their stage realizations in Frayn's *Copenhagen* and Stoppard's *The Coast of Utopia* trilogy

### *Copenhagen* by Michael Frayn

The play was premièreed at the Cottesloe Theatre, Royal National Theatre, London, on 28 May 1998, the director was Michael Blakemore (*Copenhagen* 2). The basic story is the question, why did Heisenberg visit Copenhagen in 1941, when Heisenberg was a German physicist and Bohr, his former mentor and colleague, a Danish Jew at the time of the Nazi German occupation of Denmark. At the beginning of the play Heisenberg announces, "there are only two things the world remembers about me. One is the uncertainty principle and the other is my mysterious visit to Niels Bohr in Copenhagen in 1941. Everyone understands uncertainty. Or thinks he does. No one understands my trip to Copenhagen" (4). In two acts the play unfolds possible answers to the question; it is connected with issues involving personal friendship, the making of the atomic bomb, as well as expert issues of the two protagonists' physical theories. The third character of the play is Bohr's wife, Margrethe, who is the objective observer of the other two's attempts at finding the answer.

Leaving aside the historical and moral implications of the play, for they have only a loose connection with the topic of this chapter, the key issue remains that both Bohr and Heisenberg are physicists and, as such, possess specialized knowledge from their fields. Furthermore, they explain these issues to Margrethe and one another during the course of the play, thus becoming the teaching agents on some of the key issues of quantum physics: the uncertainty principle, complementarity, and the making of the A-bomb.

As it is difficult to illustrate the behaviour of sub-atomic particles, the designer Peter J. Davison created the stage with a light circle and three chairs. In this space, the characters move around and by their positions and behaviour, act out the principles of the theoretical issues. For example, Heisenberg's uncertainty principle, which says that it is

impossible to measure both the position and speed of an electron in an atom because the measurement always influences the result (a photon used to “look at” the particle hits it and changes its speed and position), is explained in rather non-scientific terms so that it is understandable through common sense alone:

Heisenberg: [...] you have no absolutely determinate situation in the world, which among other things lays waste to the idea of causality, the whole foundation of science – because if you don’t know how things are today you certainly can’t know how they’re going to be tomorrow. I shatter the objective universe around you. (68)

Heisenberg and Bohr move around and influence one another’s position and speed.

Bohr’s explanation of Complementarity, which roughly says that light behaves either as waves or as particles, is more scientific:

Bohr: [...] Particles are things, complete in themselves. Waves are disturbances in something else.

Heisenberg: I know Complementarity [...]

Bohr: They’re either one thing or the other. They can’t be both. We have to choose one way of seeing them or the other. But as soon as we do we can’t know everything about them. (69)

In these brief descriptions, basic explanations of the two quantum mechanical principles are delivered to the audience.

Both theories have implications for the development of the play, too. “Frayn incorporates the The Uncertainty Principle on several levels: the uncertainty of memory, of knowledge, of human behavior and motivation, and most notably of Heisenberg’s motives for coming to Copenhagen” (Blansfield, “Atom and Eve” 11). The more Bohr and Heisenberg are certain about where they went for the walk during their 1941 meeting, the less they are certain about what they discussed and vice versa. In this sense, *Copenhagen* is also an extrapolation of the theories.<sup>46</sup>

In another dialogue, Heisenberg tries to illustrate his Uncertainty Principle using another example. He again uses a real life scale analogy, this time of the whole city of Copenhagen as an atom in whose centre Margrethe and the nucleus stand:

Heisenberg: Listen, in my paper, what we’re trying to locate is not a free electron off on its travels through a cloud chamber, but an electron when it’s at home, moving around inside an atom...

Bohr: And the uncertainty arises not, as you claim, through its indeterminate recoil when it’s hit by an incoming photon [...]

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46) See, for example, the chapter “Uncertainty as Extrapolation in *Copenhagen*” in my Master’s dissertation *Science on Stage: Scientific Issues in Contemporary Anglo-American Playwriting*. Brno: Masaryk UP, 2004. 50-1. PDF online.



Heisenberg: Listen! Copenhagen is an atom. Margrethe is its nucleus. About right, the scale?  
Ten thousand to one?

Bohr: Yes, yes.

Heisenberg: Now, Bohr's an electron. He's wandering about the city somewhere in the darkness, no one knows where. He's here, he's there, he's everywhere. (*Copenhagen* 68-9)

In this speech, Heisenberg also informs others about a model of the atom, known as Bohr's model, that shattered the previous model which viewed the atom as a micro-world version of the solar system.

Besides explaining the principles of Heisenberg's Uncertainty Principle and Bohr's complementarity, which are both also illustrated by the means of the characters' movement on the stage metaphorically representing the atom, there is the last important issue dealt with in the play; the making of the A-bomb. It is in the dialogues about the bomb that the characters fully become lecturers, in other words, the new messengers from the actual world, and teaching agents.

Bohr: What happens in fission? You fire a neutron at a uranium nucleus, it splits, and it releases energy.

Margrethe: A huge amount of energy. Yes?

Bohr: About enough to move a speck of dust. But it also releases two or three more neutrons. Each of which has the chance of splitting another nucleus. [...] An ever-widening chain of split nuclei forks through the uranium, doubling and quadrupling in millionths of a second from one generation to the next. First two splits [...] Then two squared, two cubed, two to the fourth, two to the fifth, two to the sixth [...] Until eventually, after, let's say, eighty generations,  $2^{80}$  specks of dust have been moved.  $2^{80}$  is a number with 24 noughts. Enough specks of dust to constitute a city, and all who live in it. (33)

Later in the dialogue, the principle of the chain reaction needed to make a bomb from isotopes of Uranium is explained:

Bohr: Natural uranium consists of two different isotopes, U-238 and U-235. Less than one per cent of it is U-235, and this tiny fraction is the only part of it that's fissionable by fast neutrons. [...] 238 is not only impossible to fission by fast neutrons – it also absorbs them. So, very soon after the chain reaction starts, there aren't enough fast neutrons left to fission the 235.

Heisenberg: And the chain stops. (33-4)

The two scientists thus describe the possibility of building the bomb from a theoretical point of view, teaching the audience about the physics behind the deadly weapon.

Margrethe steps in and puts their theoretical consideration of making the bomb into a wider perspective: "And from those two heads the future will emerge. Which cities will be destroyed, and which survive. Who will die, and who will live. Which world will go



down the obliteration, and which will triumph” (54). Her commentary shows that it is not the primary aim of the play to lecture about physics, but to find the answer to the question: Why did Heisenberg come to Copenhagen in 1941? The play makes a bold proposal that it was to find a theoretical background for taking a dead-end road in the research of the atomic bomb, so that Hitler’s Germany could not make it in time to win the war. Before such a conclusion is reached, however, the two scientists often leave their characters to present findings of quantum mechanics and the physical principle of the atomic bomb, to the audience. In these cases, they do not function primarily as dramatic agents, but as teaching agents, whose speeches are primarily based on the referential function of language, where the reference lies in the a theory (more precisely: the Copenhagen interpretation of quantum mechanics), which is set in the actual world populated by the audience of the play.

### *The Coast of Utopia* Trilogy by Tom Stoppard

Tom Stoppard’s 2002 trilogy was considered, above, in the context of the new messengers as political agents, which was appropriate given the main focus of the plays about Russian revolutionaries from the 1830s to 1860s. Besides their personal destinies in totalitarian Russia, and their lives in exile around Europe, the plays also devote a lot of space to the background of their ideas. Among the sources for their revolutionary standpoints and activities is the primarily Western philosophy of the time. Michael Bakunin, Belinsky, Herzen and others are passionate readers of philosophical treatises, especially of those by German speculative philosophers such as Schelling, Fichte and Hegel. They also discuss the work of Immanuel Kant.

Moreover, among the characters, there is Karl Marx, who at times expresses his opinions about the historical determinism of his dialectical materialist philosophy, and, as a character of the plays (he appears in *Shipwreck* and *Salvage*) he characterises his actual world counterpart’s philosophical ideas on the stage. Primed through the words of the Russian intelligentsia, the audience have access to the philosophical background of the Russian revolutionary movement, and they can also watch the characters’ attempts at their implementation into practice, in order to consider why these radically progressive movements lead to failures and even the oppression of Nazism and Communism, as history teaches us about misinterpretations and misuses of the philosophy of German Idealism and Marx.

The philosophical background of the Russian revolutionaries is among the key issues of the trilogy. “Having picked these exiled and half-forgotten ideas out of the wreck of more than one world-transforming revolution in social relations, [Stoppard] exhibits them in as full a representation of their historical circumstance as the best current stagecraft permits, for critical assessment and practical adaptation in our time” (Tucker 150). This background is crucial for the trilogy because, “The Russian cognoscenti, caught up in arcadian fantasies and anarchist messianism, looked to philosophy to solve the problem of history, to grasp the movement of events by turning to a thinker convinced

that he knew the meaning of events” (Diggins ¶5). The exposition of their starting point, the philosophy of German idealism and its main ideas, is spread through the whole first play, *Voyage*.

Michael Bakunin announces that this philosophy will have a great impact on the future development of the society, including his native Russia:

Michael: [...] Dawn has broken! In Germany the sun is already high in the sky! It's only us in poor behind-the-times Russia who are the last to learn about the great discovery of the age! The life of the Spirit is the only real life: our material existence stands between us and our transcended to the Universal Idea where we become one with the Absolute! (*Voyage* 13)

Michael's learning about philosophy and its explication in the form of reports or reader's notes then result in several “complex dialogues half an hour long” (Tucker 153), as a critic bitinglly characterises them. “Bakunin's *mentor du jour*” (159), Nicolas Stankevich, joins him to teach him about Schelling:

Stankevich: Schelling's God is the totality of Nature struggling towards consciousness, and Man is as far as the struggle has got, with the animals not too far behind, vegetables somewhat lagging, and rocks nowhere as yet. (*Voyage* 22)

He continues to explain contemporaneous metaphysics to Michael and in their discussion, several succinct summaries of the main philosophical ideas of German idealists are delivered in the form of reports as facts from outside the frame of action on the stage.

Stankevich succinctly explains the basic idea of categories from Kant's *Critique of Pure Reason*:

Stankevich: The world outside of me has no meaning independent of my thinking it. [...] But how can we be sure there is a world of phenomena, a woman reading in the garden? Perhaps the only thing that's real in my sensory experience, which has the *form* of a woman reading – in a universe which is in fact empty! But Immanuel Kant says – no! Because what I perceive as reality includes concepts *which I cannot experience through the senses*. Time and space. Cause and effect. Relations between things. Without me there is something wrong with this picture. [...] (23)

As far as Kant's philosophy is concerned, his metaphysics is not the only aspect of his philosophy covered in *Voyage*. The basic principles of his ethics are presented in a dialogue between Stankevich and Michail's sister, Liubov:

Liubov: [...] May I borrow this? To read. (*She examines the title.*) *Grundlegung zur Metaphysik der Sitten*. Is it good? [...]

Stankevich: Kant says, the only good actions are those performed out of a sense of duty, not from emotion... like passion or desire...

Liubov: So to act out of love can never be good?

Stankevich: Kant says you cannot take moral credit from it. Because you are really pleasing yourself.

Liubov: Even if it gives happiness to another?

Stankevich: Yes. Consequences don't come into it.

Liubov: And to act out of a sense of duty, even if it leads to unhappiness...?

Stankevich: Is a moral action, yes. (25-6)

This dialogue takes the form of a class on philosophy. In fact, Liubov is performing a figure of speech that could be identified as a Socratic dialogue, which is to say, that she always asks the right question to seemingly undermine what is being said, but in effect leads the partner into formulating his idea in a form as clear as possible for the listener.

The relationship of various characters to philosophical concepts is an important source of their motivation as revolutionaries. For this reason, they often return to their philosophical background and comment on it later when they use it to explain their actions or confront it with the historical events they witness. For this reason, the practice oriented Belinsky scorns Schelling:

Belinsky: [...] But the truth of idealism would be plain to me if I had heard one sentence of Schelling shouted through my window by a man on a galloping horse. When philosophers start talking like architects, get out while you can, chaos is coming. When they start laying down rules for beauty, blood in the streets is from that moment inevitable. [...] (43)

Just as Belinsky is dissatisfied with Schelling's view of history, Michael recants Fichte only to claim Hegel. As a matter of fact, it was Hegel that "many 19th-century Russian intellectual adopted, [because he] promised both consciousness and control, the knowledge of reality and of human destiny" (Diggins ¶6). Michael thus praises Hegel:

Michael: [...] I was on the wrong track with Fichte, I admit it – Fichte was trying to get rid of objective reality, but *Hegel* shows that reality can't be ignored, you see, Father. Now I know where I was going wrong. (50)

In his confession to his father, Michael, also in basic terms, explains the main difference between Fichte's and Hegel's metaphysics.

The struggle between theoretical and practical views of the Russian revolution, which the characters are waiting for, is reflected in their attitude to reading philosophy. This is a stage expression of the historical situation as Stoppard describes it in his article:

In Moscow in the early 1830s, among the young men and women of the educated elite, there were two related but distinct responses to Tsarist absolutism [...]: the "philosophical circle", and the "political circle", amicably decried by each other as "German sentimentalists" and

“French frondeurs”. Both circles were tiny. The philosophicals took refuge from unpleasant reality in the “inner liberation” offered by German idealism. Their most famous alumnus turned out to be Bakunin. Meanwhile, the politicals studied the French Revolution and the utopian socialists. Their leader was young Herzen. (Stoppard, “Forgotten Revolutionary” ¶11)

While Michael makes all his sisters read as much philosophy as possible, Herzen’s associate, Belinsky, finds it all useless and he discourages Katya from reading it:

Belinsky: Don’t you bother with reading, Katya, words just lead you on. They arrange themselves every which way with no can can to carry for the promises they can’t keep, and off you go! “The objective world is the still unconscious poetry of the soul.” What do these words mean? “The spiritual communion of beautiful souls attaining harmony with the Absolute.” What do they mean?

Katya: I don’t know.

Belinsky: Nothing, and I understood them perfectly! (97)<sup>47</sup>

In a dialogue with Stankevich, Belinsky almost begins to believe in the practical use of Hegel’s philosophy, in particular in his “dialectical logic of history” (102). As Stankevich puts it. Belinsky then supports Hegel’s views, until Herzen draws him back to the frondeurs:

Herzen: [...] You’ve got Hegel’s Dialectical Spirit of History upside down and so has he. People don’t storm the Bastille because history proceeds by zigzags. History zigzags because when people have had enough, they storm the Bastille. When you turn him right way up, Hegel is the algebra of revolution. [...] Oh yes, I’ve read your articles. Belinsky, you’ve blinded yourself. (108-9)

Herzen’s criticism of Hegel’s philosophy is also an explication of the practical attitude to the revolutionary movement. That Herzen’s argumentation is successful is proven later in *Shipwreck*, when Belinsky says, in his last appearance on the stage: “What have these theoretical models got to do with us? [...] I’m sick of utopias. I’m tired of hearing about them” (*Shipwreck* 158). His dismissal of philosophy serves to announce the arrival of Marx, whose philosophy will be misused to install such a utopia. Belinsky’s line thus serves as historical irony.

In the above quoted dialogues, as well as various other short mentions of the German idealist philosophy, *Voyage* serves as a classroom of the history of philosophy. On the one hand, Stankevich and Michael describe the various concepts to explain their motivations to believe in a social change. On the other hand, these brief lectures also serve as an in-

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47) Belinsky misquotes Schelling here. The well-known phrase from Schelling’s *The System of Transcendental Idealism* reads: “The objective world is only the original, still unconscious, poetry of the spirit.” The latter quote is a parody of Schelling’s philosophical writings, as it combines his terms into a meaningless sentence. The audience of *Voyage* would leave the performance in confusion if they took Belinsky’s quotes for Schelling’s. In this light, Belinsky’s claim, “I understood them perfectly”, is a sophisticated philosophical joke on Stoppard’s part.

roduction into German philosophy of the nineteenth century, and create a philosophical and intellectual background for the audience.

*Shipwreck* and *Salvage* move one step further. Philosophical debates still appear, but they are of lesser importance to the plays' plots as the main purpose of these treatises was fulfilled in *Voyage*. The most important change is the incorporation of Marx among the characters. "Consumptive

Belinsky dies having repudiated the philosophy of Hegel; and, ominously, in the scene right after Belinsky's last appearance, the great Hegelian revisionist Marx makes his first" (Tucker 154). Marx is himself a German philosopher, moreover a philosopher of revolution, who can thus express his ideas directly and for himself. It is nevertheless true, that most of what he says is presented to the audience in a simplified, even vulgar way, which is, in a sense, comical given the circumstances: "Victory will be decided between the proletariat and the bourgeoisie!" (*Salvage* 164), says Marx when he is disgustingly watching the "bourgeois" revolution in Paris in 1848.

Besides the comical episode with translating Marx's *Communist Manifesto*, which was mentioned in an above chapter, Marx and his philosophy are further made subject to criticism in the play. Bakunin explains that Marx's philosophy is a Western concept which is not applicable to Russia. In fact Russia proves Marx wrong. In the context of the freeing of the serfs in Russia, he characterises Marx and his views of the peasantry:

Bakunin: I couldn't wait to get to see the West! But the answer was behind me all the time. A peasant uprising, Herzen! Marx bamboozled us. He's such a townie – to him peasants are hardly people, they're agriculture, like cows and turnips. Well, he doesn't know the Russian peasant! There's a history of rebellion there, and we forgot it. (218)

There is clear historical irony in this line, too, given what became of Marx's philosophy after Lenin transformed it and applied it in the Soviet revolution. In this sense, the report on Marx's mistake becomes a dramatically ironic proleptical commentary on the future development in Russia.

In a similar way, Marx's laws of historical development are doubted by Herzen:

Herzen: Nobody's got the map. There is no map. In the West, socialism may win next time, but it's not history's destination. Socialism, too, will reach its own extremes and absurdities, and once more Europe will burst at the seams. Borders will change, nationalities break up, cities burn [...] So it goes. (219)

The same historical irony is at play as before. Herzen's final protest that, "History has no purpose! History knock at a thousand gates at every moment, and the gatekeeper is Chance" (*Salvage* 335), cannot change the fact that the action on the stage is referring to future actual historical developments, and that the philosophical debates in fact do refer to the audience's situation in their historical world.

To stress this view of history, that is, the indeterministic view of it combined with the historically ironic stage representation of Marx's philosophical ideas, Marx has the last (philosophical) word in the whole trilogy, where "the larger ironic parallel cannot be missed. One demurs at the poetic injustice this talking-head finale does to Marx's entire body of thought" (Tucker 161). In the last scene of *Salvage*, the fictional Marx summarises the main idea of *The Communist Manifesto* by the historical Karl Marx, briefly lecturing to the audience on the principles of his economic theory and the social implications it will have in his view:

Marx: [...] Industrialisation, ever expanding to feed the markets for canoes, samovars, those wooden dolls that fit into each other, alienates the worker more and more from the product of his toil, until Capital and Labour stand revealed in fatal contradiction. Then will come the final titanic struggle, the last turn of the great wheel of progress beneath which generations of toiling masses must perish for the ultimate victory. (335)

It is in the final scene of *The Coast of Utopia*, when the disparity between theoretical sentimentalists and practical frondeurs unites in the philosophy of Marx.

In Stoppard's trilogy, Russian "philosophers" and their opponents from the "political circle" step out of the frame of action on the stage to report about history of philosophy, in particular about the main ideas of Kant, Schelling, Fichte, and Hegel. They give small lectures on metaphysics and ethics and they also show the positions from which these concepts were criticised in the historical context. In the end of *The Coast of Utopia*, it is left to the audience to consider the impact these theories, which are taken from actual history of philosophy, had on the future political development in the course of the twentieth century in Russia and elsewhere. In this way, characters become the new messengers of philosophical knowledge and in the framework of the plays, teaching agents.