Incommensurability and Representation

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Incommensurability occurs in science where two theories lack a common measure, a standard reference, or an external criterion that could have served as grounds for comparison. Yet, although incommensurability appears to stem from the absence of a world beyond theory, I will claim that there would be no place for the notion of incommensurability in our epistemology were we not giving our theories realistic interpretations. In other words, in order to assume that theories are incommensurable, we have to assume that each theory works as a conceptual net through which the world is seen differently. We have to assume that a theory employing the term 'star' sees an object through this term; and each theory can give the term 'star' a different realistic interpretation, that is, identify the term with another celestial body. Incommensurable theories, while each sees the star differently, all represent stars. Without realism towards theories and towards the entities they assume, theories would have been straightforwardly inter-translatable and commensurable.

The purpose of the present paper is to explore this particular interpretation of incommensurability in terms of the question of realism in art. Incommensurability between theories means that while a given theory assumes it can 'grasp' an object, the theory is also caught in the impossibility of really grasping it in any exhaustive way. In a similar sense, in assuming that art can realistically represent, both the artist and critic view an object through the mode of representation chosen while being caught in the impossibility of grasping the object in any exhaustive way. In art, as in science, each school and even each particular artwork, is fixated on a

specific object, and is fixated on representing it in a specific way. Yet the object of representation is always also the object that escapes representation and we need the conviction of a representing agent (scientist or artist) to believe in the presence, a tentative and elusive one though, of the object through representation. To pursue this argument, I will first present a rather lengthy exposition of the concept of incommensurability in the philosophies of Kuhn and Feyerabend, an exposition that should provide the basis for the ensuing discussion of realism in artistic representation.

Incommensurability in the philosophy of science

Incommensurability is associated with Thomas Kuhn's philosophy of science, although it can be shown to figure in other versions and formulations in the work of earlier philosophers. According to Kuhn, incommensurability by definition undermines any claim to the growth of human knowledge or any claim that scientific propositions will gradually converge unto truth. The reason for this lack of validation procedure has to do with the fact that paradigms of science are discontinuous, each constructing a world differently. Scientific lexicons, even though repeatable from one paradigm to the next, are also incompatible because each scientific lexicon relates terms to phenomena in a different manner. After a scientific revolution, names and terms are often guarded intact, but the objects and phenomena assembled under them have changed (compare the sun, moon and stars as items in the scientific lexicon before and after Copernicus.)

For Kuhn incommensurability, defined as lack of continuity or overlap between scientific ontologies, carries also an important epistemic consequence: there is no neutral language given to those holding to diverse paradigms, no third language capable of formulating both. This notion of epistemic split as part of the doctrine of incommensurability stands against a long philosophical tradition that in one way or another assumes the continuity of knowledge.

On face value, the picture of incommensurability appears clear and familiar enough, despite Kuhn's notorious reputation for vagueness of terminology. The concept of incommensurability has indeed been either dismissed or trivialized in philosophy because or despite its provoking

connotations. Kuhn himself is however not very clear on what is the deeper cause for this lexical, epistemic and ontological incommensurability, this comprehensive split between theories. How is it, one could ask, that incompatible interpretations in the context of science, produce a radical situation such as incommensurability? Kuhn himself indicates that the incompatibility involved exceeds the bounds of language. This becomes apparent once one perceives that translation cannot solve this incompatibility. Untranslatability, or the partial communication between successive theories, has to do with what theories represent, or what they refer to: scientists can debate the choice between theories that share a vocabulary because each attaches terms of this vocabulary differently to nature (Kuhn 1970, 198). That is, new theories are called for, according to Kuhn (p.97), in order to resolve anomalies in the relation of an existing theory to nature. Incommensurability emerges at that specific point where the mechanism of signification in one theory cannot be accommodated with the mechanism implemented by another theory because these are brought about to make different claims about nature. Since the new theory comes in to solve a state of incompatibility between the old theory and nature, it is inevitable that the two theories will turn out to be incommensurable.

It seems therefore that what primarily determines incommensurability is the supposition that there is a nature challenging the explanatory capacity of a theory, that the scientist can posit phenomena that exceed the predictive power of a given theory. This is the most reasonable way to understand Kuhn's claim that differences between theories are not fictive but real, and that any attempt to retrospectively attribute meaning to terms of an old theory, will only result in "partial seeing." A change of paradigm is a change in the way of seeing, a translocation of a conceptual net through which scientists look out at the world. Against the natural tendency of the scientific spirit to describe a continuous history which guarantees that early theory of the phlogiston is connected to later theories of oxidation, Kuhn shows the failure in attempting to interpret earlier scientific terms in terms of current ones. The way for carrying out these interpretative acts is by necessity blocked by the fact that the later scientific point of view represents a "partial seeing" different from the old one.

This "realist" and even empiricist interpretation of Kuhn's outlook on science that I suggest here, in no way represents how his work is usually understood, as can be shown in figures I, II, II below that illustrate the difference between three modes of representing the relations between scientific theories and nature.

Model I	Model II	Model III
(the naive realist view)	(the anti-realist view; or how Kuhn is usually being interpreted)	(the realist view of Kuhn)
One Nature	No nature outside theory	Nature outside theory
Commensurability	Commensurability	Incommensurability

Kuhn was understood by most philosophers of science as assuming the irrelevance of empirical reality or of nature to the language of science. Yet if that was case, why should there be such a difficulty in assuming commensurability among scientific theories? All one would have to do is elaborate the propositional content of one theory so that this will be graspable by holders of another theory. If such was Kuhn's claim, we would end in Model II, while in fact his views are better represented by Model III.

Kuhn's own later reaction, as many of his critics noted, is inconsistent with earlier statements made in *The Structure of Scientific Revolutions*. This inconsistency can partly be explained if we see Kuhn as distinguishing between the "realist" view of the scientist scrutinizing the predictive potential of his theory vis-a-vis nature, and the position of the philosopher who knows that translation is always and necessarily imperfect and compromised. In other words, Kuhn (1977) allows the possibility of seeing theories as referring schema yet remains incredulous towards the possibility of a neutral algorithm for choosing a theory. From within a given scientific paradigm, failure of communication cannot be solved by translatability since part of the differences between holders of different theories "is prior to the application of the languages in which it is nevertheless reflected." Translation can hence supply areas for penetrating from one theory to another, yet in a revolutionary process translation cannot illuminate theory change.

In his later work Kuhn, I would claim, puts more and more emphasis on the philosopher's point of view, describing imperfections of translation and of reference determination, and less emphasis on the point of view of the scientist which predominated in the earlier work. Kuhn (1977) claims that a theory change creates a communicational divide among supporters of the separate theories because of the imperfect lin-

guistic mechanisms of reference and translation.[1] In other words, Kuhn accentuates to a greater extent the role of language not as a symptom of difference between worlds but as an autonomous sphere, whereas his earlier work saw meaning change as a symptom of cognitive and ontological divergence. This change in where the split among theories is located can explain the much more marginal place incommensurability occupies in Kuhn's later conceptions.[2]

This change of emphasis in Kuhn is related to the fact that most of his critics center on the question of translatability between languages when raising objections against the notion of incommensurability. Philosophers of science who criticize Kuhn's incommensurability see it as tantamount to untranslatability; they hence aim to show that two languages will retain referential relations even under substantial conceptual change.[3] Both Kuhn and Feyerabend were criticized for denying the idea of "a third language," for overseeing the fact that as radical as a scientific change may be, at critical moments in the history of science, there is always a language in which this change is registered. No matter how discontinuous the choice of scientific theories may have been, scientists "must have at their disposal a range of terms adequate to the empirical testing of these theories, whose meaning was unaffected by the theories themselves."[4] There is hence an idiom within which continuity is held,

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1. In a paper published in 1976 Kuhn claims that theory transformation can be represented as juxtapositions of elements from a traditional core with others drawn from more recent developments, and that "distinct theories do overlap in occasional important applications." Kuhn, Thomas S. (1976). "Theory- Change as Structure-Change: Comments on the Speed Formalism." *Erkenntnis 10*, p.179-199.

2. Sankey Howard (1991). "Translation Failure between Theories." *Studies in the History and Philosophy of Science* 22:2, p.223-236.

3. Margolis Joseph (1970). "Feyerabend on Meaning." *Personalist* 51, p.521.

4. Hung Hin-Chung (1987). "Incommensurability and Inconsistency of Languages." *Erkenntnis* 27, p.323-352; Hung shows how the paradox of incommensurable theories (the fact that they are both about the same subject-matter and differ in subject-matters) can be accounted for. Behind the intensional relation of inconsistency in the content of theoretical assertions there is an extensional relation of realizability. Hence incommensurable theories differ in internal subject-matter but they share an external subject-matter: true sentences of one language are realizable in a second language. For instance, Thermometry is the external subject-matter of both the Caloric theory and the Kinetic theory of heat. The resulting inconsistency between these theories is however an intensional notion. The relation of extensional sameness which guarantees realizability in a new theory (of the

even if temporarily. Equipped with a third language, radical changes in meaning do not entail epistemic and ontological incompatibility. It can be shown, then, that there is no incommensurability once the difference between theories is reduced to a difference between two scientific languages.

Unlike Kuhn, Feyerabend (1988, 176) has suggested that a previous theoretical phase can be characterized as incommensurable, and still we can go on articulating the ideas contained in this earlier phase. In that Feyerabend further develops Kuhn's original view on incommensurability. For Feyerabend incommensurability between theories (world views) goes all the way down from terms to the very possibility of seeing and describing things.[5]

In most cases of divergence among theories, and Feyerabend surveys a whole range of such cases, one can describe, even if just partially, the relations between the languages involved. Feyerabend suggests a procedure for reading a prior method given that the describer or historian are viewing this method from the point of view of a later system. In formulating this procedure Feyerabend is instructed by the conviction that discontinuity among methods or 'styles' should not prevent one from learning another method, providing this learning does not follow the logic and language familiar to the historian, but rather is conducted out of a genuine effort to gain knowledge about a prior method. A detailed learning of another method should attempt to reconstruct what are the things that it is capable of representing and which elements lack representational value.

In Against Method Feyerabend provides a detailed account of ancient culture, grounding his meticulous learning of that system on the assumption that formal features of a language or a style are in fact ontological features of the world to which this language gives shape. Feyerabend, in

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sentences formulated in another theory) also enables scientific growth.

5. Note that Feyerabend is more stringent than Kuhn regarding the source and implications of incommensurability; he insists that "incommensurability... is a rare event," that is, that mere difference in meaning does not lead to incommensurability and that even when theories (languages, points of view) are incommensurable, they are not completely disconnected Incommensurability only occurs when one theory resists a divergent point of view so that conditions of meaningfulness for the terms used for articulating this point of view are not available. Feyerabend, Paul (1987a). *Farewell to Reason*. London & NY: Verso, p.81; Feyerabend, Paul (1988). Against Method (revised ed.). London & NY: Verso, p.165ff).

other words, gives a realistic interpretation to the notions of 'style' or 'language': "a particular style gives a precise account of the world as it is perceived by the artist and his contemporaries... every formal feature corresponds to (hidden or explicit) assumptions inherent in the underlying cosmology."[6] Only by seeing that other languages are also shapers of events, that is, only under a realistic interpretation of a style, can incommensurability both be grasped and partially resolved.

In concluding this section, it should be stressed that incommensurability requires realism because this is the only way to problematize the relations between incompatible languages: only when a method or language is seen in its representational aims, as a shaper of events and a mapper of a cosmology, can we see how languages become incommensurable. When one remains on the level of signifiers, incommensurability is in fact just a difference in meaning and can always be translated away. Incommensurability emerges when one acknowledges the representational aims of a language.

Anti-realism and the historical dimension of incommensurability

Incommensurability, for both early Kuhn and Feyerabend, has to do with the very notion of language as representation. A language (or method or theory) that aims to represent a cosmology through its formal 'stylistic' features, is incommensurable with other languages because each shapes the world according to its own suppositions; the world itself is at the same time viewed as, to some extent at least, prior to its particular theoretical shaping. This prior existence of the world is crucial both to representation of nature by science and to the representation of the world by art: assuming that the object on which the artist or scientist sets his mind as an object of representation (the object of the drive and desire to represent), is an object shaped but not created through a particular mode

6. Although the question of the prior existence of the world to language and theory is trivialized by anti-realists, I believe the implications to be drawn from the anti-realist doctrine that the world is a construct of belief or theory, are much more far-reaching for the notion of representation than anti-realists admit. See for instance Goodman (1978, 119) and Rorty (1982, 15); both see the question of 'the world's existence' as inconsequential.

of representation, is an essential condition for explaining why scientists, artists, critics and theorists struggle with the immanent partiality of representation. In other words, nature, or the world of objects, can be conceptualized in many incompatible ways; the visual artist can conceptualize the three-dimensional world as determined by the distance of the observer, or as determined by a projection on the retina – each conceptualization will produce a very different realism. Evidently, the two modes are however incommensurable because no single one is capable of constructing the object in an exhaustive manner. Each particular mode of representation hence falls short of its object. Artists and art critics can therefore argue that visual perspective, as realistically effective as it may be, can only partially reproduce the three-dimensional object of the gaze; writers and literary critics can struggle with the fact that language is too oppressive a tool to be able to represent fully the way people think. In short, the fact that the world is always shaped from a particular point of view does not mean that the world is the result of theory-making but only that its shape is being determined by theory.[7]

It was shown that incommensurability results from a realist interpretation of theories and hence has to do with the very definition of a representational relation between signs or images and objects. The going account, however, incorporates incommensurability into an anti-realist doctrine and in that reduces the intricacy involved in this notion. Incommensurability is not a matter of a change of meaning but of a radical change of kinds of entities[8] ; hence, incommensurability has complex relations with any anti-realist doctrine (and this is, in my opinion, why the notion of incommensurability has been widely misinterpreted).

Feyerabend and Kuhn apply incommensurability not only to science but also to cultural studies which, given to radical anti-realist and anti-essentialist influences for almost two decades, have widely adopted the idea that there are no facts outside texts or independent of theories. Yet, whereas for philosophers of science the claim that there is no objective basis for evaluating theories can be devastating, theories of culture appear to be more receptive to such views, as if theories about culture can

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7. Kordig, C.R. (1970). "Feyerabend and Radical Meaning Variance." *Nous* 4, p.399-404.

8. See for instance the analogy between Feyerabend and Stanley Fish in Kenshur Oscar (1984) "The Rhetoric of Incommensurability." *The Journal of Aesthetics and Art Criticism.* p.375-381 (although Kenshur attempts to demonstrate that both unavoidably rely on facts about texts and about meanings).

do well even without facts or objects to validate them. The question of the kind of implications anti-realist precepts can have for theories of culture goes beyond the subject of the present paper, yet it should at least be acknowledged that epistemic questions arise with particular force when we deal with cultural phenomena that proclaim an explicit aspiration to represent as accurately as possible a picture of reality. It is one drawback of anti-realist notions about art and culture in general, that they do not discriminate between modes of expression that do and those that do not put the representation of reality in a central place.[9] It is my claim in this paper that the notion of incommensurability, as here interpreted, can precisely deal with cultural and artistic phenomena that proclaim a realist attachment to the world. Incommensurability pertains to those cases where representation aims to approximate an object (whether the object of representation is three-dimensional space, inner consciousness, social reality or any other dimension of the real). The incommensurability involved indicates that modes of representation cannot "contain" or exhaust an object, just as any given scientific concept is always short of catching a corresponding natural phenomenon because that object is always shaped by the concept in use, and because there are other, incompatible ways of conceptualizing the object. Something of the object is hence always left out of its representation, to which the existence of other modes of conceptualization (in a previous scientific phase, for instance) attest.

Incommensurability is thus characteristic not only of the realist mode itself but it also applies to the relations between different modes of representation. Yet, when disengaged from the world determined by a past theory, we are capable, despite the incommensurability involved, of using linguistic mechanisms to reconstruct the conditions under which terms of that theory became meaningful. This is not to say that we are equipped with a third language neutralized of our own cosmology through which a full-bodied and exhaustive comparison of languages is possible. It is possible though, claims Feyerabend in response to Putnam's rejection of the incommensurability thesis, "to tell us that Galileo has 'incommensurable'

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9. Even Cubist art can be claimed to represent general concepts, but clearly accurate representation of reality is not central to the Cubist agenda (see Hintikka Jaakko "The Concept as a Way of Seeing: On the Problem of Representation in Modern Art and in Modern Philosophy" (in Hebrew). *Iyuun* 25:3, 1974, p.139-157.

notions and then to go on and to describe them at length."[10] But why does incommensurability not counteract such reconstructing projects?

Both Kuhn and Feyerabend consider the history of representational art as relevant to the question of continuity and progress in the sciences of man precisely because within the history of representational art these questions of continuity and progress are crucial. Realist trends in the history of visual art, for instance, claim to represent the reality of the eye and the glance with growing success.[11] That is, realism, as a type of artistic representation, emerges from the idea that art can represent reality without distorting it in any significant manner, and different phases of the realist project fix on ways for dealing with this representational aim. The realist mode is hence distinguishable from modes of artistic expression that do not aim at mimetism, and its history is the result of an incommensurability between realist and non-realist modes of representation.

The history of representational arts is crowded with manifest attempts to converge with the real, yet each attempt sets its object elsewhere. Renaissance artists for instance, developed modes of representation so that the picture would look more and more like the three-dimensional world (by using perspective, foreshortening, occlusion, etc.) Impressionism modified the object of representation fixing on the changing appearance of nature in face of the subjective gaze of the observer; even the Abstract has its own desire to represent an object here identified with the forms abstracted from nature itself.[12] It can be said that at times when art strives to represent nature as accurately as possible, its representational function becomes similar to that of science. No wonder that Kuhn as well as art theorists, find it instructive to link art to science in those periods and contexts where artists' main drive lies with representing

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10. See Feyerabend (1987). "Putnam on Incommensurability: Comments on 'Reason Truth and History'." *British Journal of the Philosophy of Science* 38, p.76. The idea that incommensurable theories are comparable by various objective or rational standards, is also suggested by Hintikka, Jaakko. "On the Incommensurability of Theories." *Philosophy of Science* 55, 1988, p.25-38.

11. In literature there is a claim to a growing success and effectiveness in representing the inner world of characters (i.e., mental states, associative sequences, thoughts and fantasies) as we move from earlier forms of the novel to the stream-of consciousness novel.

12. This is how Piet Mondrian conceives of abstract art: Mondrian, Piet (1994). *Natural Reality and Abstract Reality* (An Essay in Trialogue Form, 1919-1920). New York: George Braziller.

knowledge about reality and about the observer's perception of reality as objectively as possible. Despite this important mimetic drive prevalent in many artistic periods, anti-realists meet little objection when claiming that realism needs no factual basis to achieve its effect (while in science such claims always raise objections).

To conclude this section, note that realism, both in its instantaneous and its historical dimensions, needs to be realistically interpreted in order to make sense. The next section will illustrate the idea that such a realistic interpretation inevitably produces incommensurability in every representational act.

Realism in art: a case of incommensurability

Realism in art, like scientific theories, is an attempt to represent the world of objects as accurately as possible. The artist who aims to grasp something of a real object (whether a physical, an abstract or a mental entity) must carry out his artistic project while believing in there being an object prior to artistic production. It is precisely this belief that is responsible for a discrepancy between the pronounced mimetic intention of artists during specific artistic periods and the difficulties met when an actual representational mode is developed to satisfy a mimetic drive. This discrepancy shows that without fixing on a specific object of representation, that is, without aiming at realism, representation would have introduced a problem neither to its practitioners nor to its theorists. It is this discrepancy, born out of the very drive at mimetism, that can be explained and analyzed in terms of the notion of incommensurability as presented in this paper. In order to show in what sense the mimetic drive to represent the real always faces a representational discrepancy with its object and that the work of art can hence never grasp its object in any exhaustive manner, I will briefly concentrate on one example: the case where the realist drive aims at the representation of the other's consciousness or mind by literary "mimetic" means.

In a recently published paper, Martha Nussbaum addresses the question of the possibility of knowing other minds as this possibility is represented in "stream-of-consciousness" novels such as Virginia Woolf's *To the Lighthouse*. In this novel, that serves as Nussbaum's telling example, as in others of its genre, the characters (and the narrator) strive to satisfy a

profound wish to know what is going on in the mind of other human beings. Although Nussbaum dedicates her paper to illustrating varieties of implementing this drive to know other minds, her paper proves to carry some further implications that pertain to the present discussion. Nussbaum's analysis reveals that despite a pronounced intention to attain knowledge of other minds, numerous obstacles interfere in fulfilling it and the mental object of representation remains essentially unknown. Interferences that prevent such knowledge include for instance the fact that little of what is considered inner activity of the mind is at all communicable, that there is a "tremendous gap between what we are in and to ourselves, and the part of the self that enters the interpersonal world,"[13] that language, through which the mind is expressed, issues from a personal history and idiom which does not facilitate deciphering another person's meanings, that the act of bringing emotions to consciousness changes them, etc. Nussbaum's analysis hence raises the inevitable question of whether and how can the consciousness of the other be represented at all? Can it be identified and can it be known, even when we deal with literary texts that see the representation of minds as their main task? The difficulties in the way of knowing other minds put the subject in a position of the sceptic forced to doubt the very possibility of such knowledge. Following Stanley Cavell's argument about the position of the sceptic vis-a-vis the other's mind,[14] Nussbaum acknowledges that the project of knowing another is tantamount to a desire to incorporate the other, to totally encroach the privacy of the other mind. Representation of the other as other is therefore impossible: the very logic that should enable epistemic access to the other's mind, turns this sought for knowledge into something different from what was initially intended. The possibility of knowledge and its frustration are embedded in the very same logic." Having the other person's thoughts and feelings as oneself, in one's own body and mind, is neither necessary nor sufficient for knowledge of the other: not sufficient, because that would precisely be not to know the other, the separateness and externality of that life, those feelings; not necessary, because we can conceive of a knowledge that does not entail possession, that acknowledges, in fact, the impossibility of possession as a central fact about the lives of persons" (p.742-3). This formulation is intriguing first

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13. Nussbaum, Martha C. (1995). "The Window: Knowledge of Other Minds in Virginia Woolf's *To the Lighthouse*." *New Literary History*, p.733.

14. Cavell Stanley (1976). "Knowing and Acknowledging," in: *Must We Mean What We Say?*, Cambridge: Cambridge UP, p.238-266.

because it indicates that in order to assume knowledge of other minds, the subject has to enter an imaginary position of identifying his own inner identity with the other's. It hence relates to the impossibility of attaining the very type of knowledge to which everything is in fact tuned. But this formulation is curious also in view of typical ways in which literary theorists usually deal with the representation of minds: as a literary technique or an effect produced by specific techniques. That is, by merely questioning whether stream-of-consciousness novels can really enable us to know how the mind of another works, the tendency of literary critics to identify specific linguistic and discursive strategies with knowledge of the other's consciousness, is put in doubt.

To clarify this point we can look at one typical example: Dorrit Cohn's *Transparent Minds*, a classic in the tradition to which I make reference here.[15] Cohn talks in her book about techniques such as psycho-narration, types of interior monologues, grammatical indicators, etc. These are devices that evolved with psychological realism to elicit an effect of actually transferring the reader to the inner world of a character. Although different critics diagnose the success of such techniques differently, and different writers developed diverse techniques to signal the depth and spontaneity of inner worlds, they all share the belief that these mimetic devices are employed "to record the random and apparently illogical flow of impressions passing through a character's mind."[16] The point is, however, that throughout this tradition there is no account for why should these devices be correlated with the specific type of knowledge aimed at, knowledge of the human condition in its inner, rather than outer, dimension. Cohn herself admits (1978, 7) the paradoxical nature of representing consciousness and sometimes also admits a difficulty in correlating a mimetic effect with the nature of a given technique. An air of mental reality is produced by language patterns that signal mental activity although what they report is an unreal notion of the mind as transparent and communicable. Yet this paradoxical quality does not lead her to undermine the mimetic effect produced by such literary techniques; moreover, even if we were to name this effect "conventional," still it must be acknowledged that some literary devices and not others succeed in reproducing a picture of a character's mind for the reader.

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15. Cohn, Dorrit (1978). *Transparent Minds: Narrative Modes for Presenting Consciousness in Fiction*. Princeton University Press.

16. See *A Dictionary of Modern Critical Terms*, ed. Roger Fowler (Routledge, 1987).

In many ways Nussbaum follows this conception. Her conclusion is, however, that although a novel such as Woolf's is being wholly absorbed in representing the other's mind, and although this novel, in view of its pronounced aim, reflects a conviction that it is only literary texts that can bring the reader close to knowledge of other minds, it in fact shows that wanting to know the other mind grants no access to the content of the mind or to the internalism desired. In this sense, being sealed in or sealed out of another person's mind is a matter of ethics rather than, or more than, a matter of epistemology. Knowing another mind is actually knowing the boundaries that enclose the privacy of the other's inner world; hence familiarity and deep knowledge of the other is precisely the acceptance of not being able to know the content of the other's thoughts. Thus, although Nussbaum also refers to the paradox of striving to know the other's mind, she, just like Cohn, implicitly argues that a mimetic effect can be produced although the object of mimetism cannot be made present.

Although I chose to refer here to the literary practice of representing other minds, a similar case can be made for visual art. Ernest Gombrich has shown, for instance, how visual portraits that strive to catch the transcendent identity of a portrayed person are convincing without being objectively realistic. We can hence look at a portrait and "have the feeling that we really perceive what is constant behind the changing appearance..."[17] This illusion of actually seeing the person or the face behind the painted portrait, however, cannot be explained by correlating the portrait, through likeness, with any definite, constant or mobile feature of the person portrayed. Personal identity, that is, can never be grasped although it can be realistically produced through numerous variations. As in the case of minds, without assuming that the person portrayed does possess a personal identity, a portrait (when painted within a realist tradition) would not be a portrait. Looking at a successful portrait we can tell whose identity it reproduces and yet remain unable to locate what is it in the picture (given the immobility of its images and the fact that a person is always disguised by a social mask) that reproduces for us the identity the painter set out to represent.

What can one deduce from literary or visual attempts to realistically reproduce an individual inner identity, attempts that lean on a given rep-

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17. Gombrich, Ernest (1972) "The Mask and the Face: the Perception of Physiognomic Likeness in Life and in Art." in: E.H.Gombrich, J.Hochberg and M.Black (eds.) *Art, Perception and Reality. Baltimore and London*: The Johns Hopkins UP, p.45.

ertoire of language or visual signals whose realism is doubtful? To answer this, one should be reminded that in order to assume a realism of any kind, both literary authors and visual artists claim to a relative high transparency of the artistic means they employ. Narrated monologue (or free indirect discourse, as it is called by other critics) is a linguistic device that can record the random flow of inner thoughts because it reproduces, by means of language, the effect of inner processes. Woolf's novel produces the effect of direct contact with real minds because we read the words of the literary text, the same as the arrested image of the portrait, as producing what are called "characters" that stand for actual human beings. That is, in order to attribute to specific representational devices the role of signalling any reality domain, one must assume that representation is transparent vis-a-vis the type of knowledge it enables. For example, by using visual perspective the artist signals to the observer that a painting should be looked at as if it was an open window. Realism requires a belief in the presence (rather than a suspension) of the represented object.

This claim to transparency, which conditions any claim to know the thing represented, in fact characterizes all artistic forms of realism. In other words, if one would like to distinguish the type of literary text that aims to represent something about the content of the human mind from other types of texts which have other mimetic aims or none at all, one should acknowledge that this specific mode of representation aims to signal the presence of the mimed object. Anti-realists will of course attribute this presence to a suitable and familiar convention; yet in taking that move anti-realists just give up on any differential notion applicable to modes of representation.

Although some periods in the history of art aim to represent reality as accurately and objectively as possible, studies of realism in art show that this aim can never be achieved. Perspective is not an objective representation of visual reality as clearly as free indirect discourse does not represent the way people think; both perspective and free indirect discourse are signifiers that determine an object by other means than by reproducing knowledge about it. Realist representation is caught in the dialectic between artistic aim and artistic practice. Realism is what cannot ignore the presence of the artistic signifier (or image) and the absence of the object of representation yet aims to overcome their non-identity. In representation, reality is always distorted: no image can reproduce it. Realist representation is characterized by the inevitable split it creates between the signifier (the artistic image) and the object art aims to represent. This rela-

tion of impossible representation is what I propose to call incommensurability.

When we try to reconstruct a system different from the one we hold and when we succeed in "penetrating into the new language and we are sure we master its insights," says Kuhn, an incommensurability will always remain. Even if the other system is reconstructed according to the methods of the anthropologist who adopts the point of view of the other system, once we succeed in producing meaningful statements about that system, the meaning-attributing terms will remain only partially comprehended, claims Feyerabend. No theory, no linguistic meaning and no symbolization, can contain an object. When we study cases of realism in the history of art, the same situation occurs; we can reconstruct the mimetic drive of the artist, yet, an incommensurability, a severance of the subject from the object of representation, is immanent to any system that wishes to grasp something of nature, to represent an object as accurately as possible. In the case of representing other minds, this severance is both reflected (language is sequential, public and verbal and hence cannot reproduce the mind whose relations to language are undefined) and denied (linguistic signifiers function as if they replicate the workings and mechanisms characteristic of the inner flow of thoughts).

When the author writes using specific techniques, his language works to produce and transmit information about the structure of a real object, and with this information, an illusion of an inner reality is invoked. Yet literary techniques, which are signifiers in the hands of an author, can never reproduce the object or its effect, only the distortion of both. Representation is a relation which always introduces a split by making the presence of the object an impossibility. Incommensurability inheres in every moment of representation. Yet the fact that each literary period interprets differently the way in which the reality of objects should be represented (should it fix on the external events, on social or private ones, on mental subjective states or on any other "piece" of the real) points both to the incommensurability between the reality to be represented and the representation itself, but also indicates the incommensurability that inheres in the relations between various modes of representing reality. Each stage in the history of mimetic art is incommensurable with its own artistic objective; at the same time the various stages in this history are consequently also incommensurable.

As noted above, some philosophers of science and of art, have provided ways of ignoring the object represented. For instance, mechanisms such as reference, translation and interpretation are instruments for suppressing incommensurability. They enable us to see continuity and a pos-

sibility of constructing a whole body of knowledge through a language. The suppression of the object in the doctrine of incommensurability is similar to the suppression of the epistemological question of the other mind in literary works that are called stream-of-consciousness novels – both are equally wrong in suggesting that realistic art or positive science can prosper without an object. Yet both in art and in science, putting the object in parenthesis can only help us ignore the whole problem of representation. Putnam claims (1992, 124) that the doctrine of incommensurability appeared in French thought decades before Kuhn, notably in the work of Ferdinand de Saussure, who had considerable influence on structuralist and poststructuralist French philosophy.

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