Scientism in the Arts and Humanities

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As the universities expanded in the twentieth century, and as the hard sciences began to retreat to the margins of an educational system increasingly reluctant to demand too much of its students, the humanities moved to the center of the curriculum. First among them was English, a subject that established its place as a university degree in Britain only about mid-century, and largely as a result of the failed attempt by I. A. Richards to treat the study of literature as a branch of empirical psychology. Art history rose along with English, bringing with it the Hegelian historical approach that had been developed in the German universities. And the growing prominence of philosophy (still considered a branch of the “moral sciences” during my undergraduate days in Cambridge) laid the foundations for the continuing expansion of the curriculum into areas as diverse as classical civilization, film studies, and creative writing. The simultaneous expansion of the social sciences to encompass anthropology (coupled to archaeology in the Cambridge of my youth), sociology, economics, political science, and the theory of education meant that many of the new areas of study fell uneasily between arts and sciences and required extensive borrowings from both. Take media studies: was it a branch of sociology or a subsection of literary criticism? The habit very quickly arose during the 1960s and 1970s of throwing together clusters of disciplines from the social sciences and the humanities in order to generate “studies” that would appeal to the increasingly unqualified intake of students by conveying a spurious—and usually highly politicized—image of relevance.

In the current university, the impression arises that outside the hard sciences just about anything goes, and that the humanities have neither a method nor a received body of knowledge, it being up to the professor to...
decide what to teach in his class. Occasional attempts to establish a canon of great books are quickly and easily overthrown, while the journals fill with articles devoted to what Jean Bricmont and Alan Sokal have castigated as “fashionable nonsense.”

An additional problem has been created by the growth of post-graduate schools in the humanities and social sciences. University departments and the people who teach in them are increasingly assessed—both for status and for funding—on their output of “research.” The use of this word to describe what might formerly have gone under the name of “scholarship” naturally suggests an affinity between the humanities and the sciences, implying that both are engaged in discovering things, whether facts or theories, to be added in the same way to the store of human knowledge. Pressed to justify their existence, therefore, the humanities begin to look to the sciences to provide them with “research methods” and the promise of “results.” To suggest that the principal concern of the humanities is the transmission of “culture”—as has been argued by the followers of the nineteenth-century poet and critic Matthew Arnold—would be to condemn them to second-class status. If all the humanities have to offer is “culture,” then they can hardly have the same claim on the public purse as the sciences, which constantly add to the store of knowledge. Culture has no method, while research proceeds by conjecture and evidence. Culture means the past, research means the future.

Moreover, once the defense of the humanities is made to rest on the “culture” they transmit, they become vulnerable to deconstruction. One can summon any number of theories—the Marxist theory of “ideology,” or some feminist, post-structuralist, or Foucauldian descendant of it—in proof of the view that the precious achievements of our culture owe their status merely to the power that speaks through them, and hence that they are of no intrinsic worth. In this way the whole idea of culture as an autonomous sphere of moral knowledge, one that requires learning, scholarship, and immersion to enhance and retain, is cast to the winds. On this view, instead of transmitting culture, the university exists to deconstruct it, to remove its aura. The university’s purpose is to leave the student, after three or four years of anxious dissipation, with the view that anything goes and nothing matters.

Invading the Humanities

This transformation of the humanities into an anti-cultural force seems to be where we are today—or nearly so. Increasingly, we can see attempts
to rectify the humanities’ difficulties by assimilating their subject matter to one or another of the sciences.

Take, for instance, art history. Generations of students have been drawn to this subject in the hope of acquiring knowledge of the masterpieces of the past. Art history had developed in nineteenth-century German universities, under the influence of the Swiss historians Jacob Burkhardt, Heinrich Wölfflin, and others, to become a paradigm of objective study in the humanities. The Hegelian theory of the *Zeitgeist*, put to astute use by Wölfflin, divided everything into neatly circumscribed periods—Renaissance, Baroque, Rococo, neoclassical, and so on. And the “comparative” method, in which images were shown side by side and their differences assigned to the distinguishing mental frameworks of their creators, proved endlessly fertile in critical judgments. Look at the works of Wittkower, Panofsky, Gombrich, and the other products of this school of thought, many of whom fled to safety from the Nazi destruction of the German universities, and you will surely conclude that there has never been a more creative and worthwhile addition to the curriculum in modern times.

Yet the scholars are not satisfied. Is there any more “research” to be done on the art of Michelangelo, or the architecture of Palladio? Is there anything to be added to the study of the Gothic cathedral after Ruskin, von Simson, Pevsner, and Sedlmayr? And how do we confront the complaint that this whole subject seems to be focused on a narrow range of dead white European males, who spoke clearly for *their* times, but who have no great relevance to ours? All in all, the subject of art history has been condemned by its own success to a corner of the academy, there to be starved of funds and graduate students—unless, that is, it can be endowed with some new field of “research.”

Similar problems have bedeviled musicology and literary studies, and in each case the temptation has arisen to look for some branch of the natural sciences that could be applied to their subject matter, so as to rescue it from its methodless sterility. Two sciences in particular seem to fit the bill: evolutionary psychology and neuroscience. Both are sciences of the mind, and since culture is a mental arena, both sciences ought to be capable of making sense of it. Evolutionary psychology treats mental states as adaptations, and explains them in terms of the reproductive advantages they conferred on our ancestors; neuroscience treats them as aspects of the nervous system, and explains them in terms of their cognitive function.

Over the last several decades, therefore, we have witnessed a steady invasion of the humanities by scientific methodology. This invasion provides us
with a useful illustration of the distinction between scientific and scientistic ways of thinking. The scientific thinker has a clear question, a body of data, and a theoretical answer to the question that can be tested against that data. The scientistic thinker borrows the apparatus of science, not in order to explain the phenomenon before him, but in order to create the appearance of a scientific question, the appearance of data, and the appearance of a method that will arrive at an answer.

Structuralism in literary criticism, as exemplified by Roland Barthes in his 1970 book *S/Z*, was scientistic in this sense. It raised questions that had the appearance of science, and addressed them with theories that could not be refuted since they failed to make predictions. Barthes’s flamboyant analysis of Balzac’s short story “Sarrasine,” casting about the technicalities of Saussurian linguistics, created a certain stir in its day, and was immediately taken up by literary critics hungry for a “method” that would deliver results. The results never came, and that particular episode is now more or less forgotten.

A similar case today can be found in the new “science” of “neuroaesthetics,” introduced and championed by V.S. Ramachandran, Semir Zeki, and William Hirstein, which promises to produce its own journal and already has a growing pile of publications devoted to its results. And the art historian John Onians has followed this example by attempting to recast his discipline as the science of (as the title of his 2008 book calls it) *Neuroarthistory*.

Philosophers and critics have, over the centuries, asked themselves questions about the meaning of art, why it is so special, and why it affects us as it does. Their speculations have been subtle, difficult, and alert at every point to the human significance of the subject—what the work of art means to us, who interpret it and take it to heart. This human significance is a cultural phenomenon—the kind of thing that the humanities emerged in order to study. And so the first move of Ramachandran and Hirstein, in the 1999 paper in which they laid out their theory, is to present art as already dressed in the science they propose to apply to it:

The purpose of art, surely, is not merely to depict or represent reality—for that can be accomplished very easily with a camera—but to enhance, transcend, or indeed even to distort reality...[W]hat the artist tries to do (either consciously or unconsciously) is to not only capture the essence of something but also to amplify it in order to more powerfully activate the same neural mechanisms that would be activated by the original object.
Having thus reduced the effect of art to one of perceptual distortion, and dazzled the reader with a reference to “neural mechanisms,” Ramachandran and Hirstein summon a psychological principle—the “peak shift” effect, by which an animal that has learned to respond to a stimulus responds more strongly to an exaggeration of that stimulus—to give a general explanation of “what art really is.” The ensuing mishmash of abridged and misapplied theories has been explored and exploded by the British professor of philosophy and aesthetics John Hyman. In his 2010 article “Art and Neuroscience,” Hyman shows that the neuroaestheticians misunderstand the peak shift effect, that they are woefully ignorant of art, and that their theories really have nothing to say about art as distinct from non-art. For our present purposes, it is also worth noting the way in which science intrudes into Ramachandran’s description of the subject. Instead of a careful and circumspect attempt to define a problem, there is a perfunctory description of a few artistic phenomena, an unwarranted reference to a preferred explanation (“neural mechanisms”), and an anticipation of the result of applying it. This is the sure sign of scientism—that the science precedes the question, and is used to redefine it as a question that the science can solve. But the difficulty of understanding art arises precisely because questions about the nature and meaning of art are not asking for an explanation of something, but for a description.

Science and the Subjective

Why should there be such questions, and why is it that they lie beyond the reach of the empirical sciences? The simple answer is that they are questions that deal with the “spirit,” with Geist, and therefore with phenomena that lie outside the purview of experimental methods. But this is not an answer that would satisfy people today; putting it that way is likely to prompt a wry, skeptical smile. The “spirit” vanished with Kant’s demolition of the Cartesian theory of the subject. Or if it didn’t vanish, then how could it have survived the advances in cognitive science, genetics, and evolutionary psychology that have abolished the illusions through which religion governed our world? All that Ramachandran and company are doing, it might be said, is to replace the vague language in which the dispute between science and the Geisteswissenschaften—“spirit or mind studies,” in some ways a more helpful term than our “liberal arts”—was originally formulated with something more in keeping with our modern view of what we are. The problem is that there is no agreed-upon “modern view of what we are,” in no small part because we are unsure of
the relation between “we” and “I,” being unsure of the place of the self-conscious individual in the science of the species.

As a conscious subject, I have a point of view on the world. The world seems a certain way to me, and this “seeming” defines my unique perspective. Every self-conscious being has such a perspective; this is what it means to be a subject rather than an object. When I give a scientific account of the world, however, I am describing only objects. I am describing the way things are, and the causal laws that explain the way things are. This description is given from no particular perspective. It does not contain words like “here,” “now,” and “I”; and while it is meant to explain the way things seem, it does so by giving a theory of how they are. In short, the subject is in principle unobservable to science—not because it exists in another realm but because it is not part of the empirical world. It lies on the edge of things, like a horizon, and could never be grasped “from the other side,” the side of subjectivity itself.

Is the subject a real part of the real world? In one sense not. For if I look for it in the world of objects I shall never find it. But without my nature as a subject, nothing for me is real. If I am to care for my world, then I must first care for this thing, the subject, without which I have no perspective from which to see the world, and so have no world. This attention to the subject is the purpose of art, or at least of the art that matters. And that is one reason why those humanities that have art and culture as their theme will never be reducible to natural sciences.

We understand others through the attitudes that Martin Buber summarized as relations between Ich and Du (I and You) but which would perhaps better be described as relations between I and I. We see each other I to I, and from this relation all judgment, all responsibility, all shame, pride, and fulfillment arise. This momentous fact about the human condition might be summarized in the word bequeathed to us by Roman law, and taken up by Boethius and Aquinas: “person.” We are persons, and personality is of our essence.

Flowing from personality, there are concepts that play an organizing role in our experience—concepts like ornament, melody, duty, and freedom—but belong to no scientific theory because they divide up the world in a way that no natural science could countenance. Science tells us a lot about the ordered sequences of pitched sounds; but it tells us nothing about melodies. A melody is not an acoustical but a musical object. And musical objects belong to the purely intentional realm: they are about something else; they are imbued with meaning; they are sounds as we self-conscious beings experience and relate to them. The concept of the person is like the
concept of a melody. It features in our way of perceiving and relating to each other, but it does not “carry over” into the science of what we are. The fact that the person does not carry over into science does not mean that there are no persons, but only that a scientific theory of persons will classify them with other things—for example, with apes or other mammals.

In other words, the kind of thing we are is defined through a concept that does not feature in the science of our nature. Science sees us as objects rather than as subjects, and its descriptions of our responses are not descriptions of what we feel. When we refer to the soul, we generally do not refer to some Cartesian substance floating in the inner nowhere. We refer to the organizing principle of first-person awareness: the capacities for self-attrition, self-knowledge, and inter-subjective response that seem to distinguish ours from every other species, and that make the life of a person into a thing worthwhile. This organizing principle is what Aristotle and Aquinas meant by describing the soul as the form and the body as the matter of the human being; all that I have added to their account is to define the form in terms of the organization exhibited by the first-person singular—that is, in terms of a person.

Our behavior towards each other is founded on the belief in freedom, in selfhood, in the knowledge that I am I and you are you and that each of us is a center of free and responsible thought and action. Out of these beliefs arises the whole world of interpersonal responses, and it is from the relations established between us that our own self-conception derives. It would seem to follow that we have an existential need to clarify the concepts of the self, of free choice, of responsibility and the rest if we are to have a clear conception of what we are, and that no amount of neuroscience is going to help us to clarify those concepts. We live on the surface, and what matters to us are not the invisible nervous systems that explain how people work but the visible appearances to which we respond when we respond to people as people. It is these appearances that we interpret; and it is upon these interpretations that we craft responses that will in turn be interpreted; and so on. It is because culture is built upon these interpersonal and inter-subjective relations that it is a distinct realm of human inquiry, one which cannot be replaced by a natural science.

**What Pictures Are About**

This returns us to the history of art and the study of pictures. What are pictures—scientifically speaking, in contrast to what they mean? It is fairly obvious that Titian’s famous painting of the *Venus of Urbino* (1538) consists
of a canvas on which are distributed pigments (see below). We could describe this distribution using geometrical coordinates in two-dimensional space, and so pixelize Titian’s picture in a digital formula that enables a machine to reproduce it. This formula makes no mention of the woman, her servant, or the eyes that challenge and the hand that hides. Yet it contains all the information necessary to produce the image, in which those things are seen by someone who has the capacity to understand pictures. We could imagine animals who were adept at recognizing the distribution of pixels, and could selectively respond to every difference between patterns of pigments that we see as pictures, but who could not see pictures. And of course, we are familiar with the digital programs that record, transmit, and present pixelated images in machines that see nothing at all.

The normal response to that kind of example is to say that pictorial images are emergent features of the physical objects in which they are contained. The picture of the young lady of Urbino is not something over and above the colored patches in which we see it, but neither is the picture reducible to these patches: though the right distribution of colored patches can produce the picture, what it is is a feature of the painting that emerges for those with the imaginative powers required to perceive it.

Titian, Venus of Urbino (1538)
Galleria delli Uffizi, Florence
Indeed, someone might be an expert in producing copies of the Venus of Urbino even though he is blind to its subject matter, and sees it only as a distribution of pigments on a canvas.

It is certain that there is much to be said about Titian’s painting in terms of the disposition of pigments on a two-dimensional matrix. But it will not amount to an interpretation of the painting and will tell us nothing about its significance or value. For it will not mention the most important fact about the painting, which is what it is about. The word “about” is notorious: it is the very same word that causes all those difficulties in understanding mental states that were once thought to present an immovable obstacle to any simple physical analysis of the mind. Pictures have intentionality just like beliefs and desires. And they can be compared in this respect not only with other paintings but with works of literature and music. It is a question of interpretation whether Titian’s painting is to be understood as the expression of a domestic and nuptial sexuality, or whether the young lady is to be seen more as a courtesan than a wife. One can compare the painting with another that explicitly refers to Titian’s, the famous Olympia by Manet (1863, see below), in which the rough trade of the Boulevard is put in ironical relation to the soft downy embraces
of Renaissance Venice. Interpretation starts here, in comparative judgment, and it is hard to see what neuroscience can contribute to the result. Pictures are understood by finding their meaning, and by assessing the place of that meaning in the life of the observer, and what it conveys about the human condition. You are likely to gain insight into Manet’s painting if you set it side by side with two novels: Daudet’s *Sappho* (1884) and Zola’s *Nana* (1880). You understand what Manet is saying better if you see Titian’s world ironically reflected in the forms and props that surround this hard-bitten *boulevardienne*.

Art critics have a discipline, and it is one that involves reasoning and judgment. It is not a science, and what it describes forms no part of the physical world, which does not contain Olympia or anything else you see in Manet’s painting. Yet someone who thought that art criticism is therefore deficient and ought to be replaced by the study of pigments would surely be missing the point. There are forms of human understanding that can be neither reduced to science nor enhanced by it.

Here is where the neurothugs step in, to declare that, of course, the science of pixels won’t explain pictures, since pictures are in the eye of the beholder. But there is also such a thing as the fMRI of the beholder, and this *does* contain the secret of the image in the frame. Since understanding a picture is a matter of seeing it in a certain way—in such a way as to grasp its visual aspect, and the meaning which that aspect has for beings like us—then we should be examining the neural pathways involved in seeing aspects, and the connections that link those pathways to judgments of meaning.

But what, exactly, would such a study show? Suppose we have achieved a perfect decipherment of the pathways involved in seeing an aspect and in stabilizing it in the mind of the observer. This is not a judgment of criticism, and while it might enable us to predict that the normal observer will, on confronting Titian’s picture, see a naked woman lying on a couch and looking at him, it will say nothing in answer to the critic who says: Yes, but that is not all that there is, and indeed you must see that this woman is not naked at all, but rather unclothed, that her body, as Anne Hollander shows so convincingly in *Seeing Through Clothes*, has the texture and the movement of the clothes she has removed, and that those eyes do not look at you but look through you, dreaming of someone you are not. Critics don’t tell us how we do, with normal equipment, see things, but how we ought to see them, and their account of the meaning of a picture is also a recommendation, which we obey by making a free choice of our own. Neuroscience, then, remains only a science: it cannot rise to the level of intentional
understanding, where meaning is created through our own voluntary acts. Hence we should not be surprised at the dreariness of neuroaesthetics, and its inability to cast light on the nature or meaning of works of art.

Just as there is an understanding of art, which forms the domain of criticism, and which is a rational exercise with its own standards of validity, so there is an understanding of people, which forms the domain of interpersonal relations, and which is a rational exercise obedient to norms of its own. And just as it is an error to think you can replace art criticism with the neuroscience that allegedly explains the experience of art, so too is it an error to think you can replace interpersonal understanding with the neuroscience that allegedly explains our behavior. This shift requires describing human behavior in terms that remove it from the context that gives it sense; it requires becoming a reductionist, someone who fails to see that the most important features of the human condition are emergent features, ones that inhabit the surface of the world and are invisible to those whose eyes are fixed on the depths.

The Meme Delusion

Human cultures are reflections on and in the surface of life, ways in which we understand the world of persons, and the moral framework within which persons live. But this exalted idea of culture has in recent decades undergone another scientistic assault, this time from Richard Dawkins and his concept of the “meme,” first spelled out in *The Selfish Gene* (1976). Natural selection can account for all the difficult facts presented by human culture, Dawkins suggests, once we see culture as evolving according to the same Darwinian principles that drive biological evolution. Just as any organism is a “survival machine” that exists to serve self-replicating genes, human beings are also “survival machines” for self-replicating “memes”—mental entities that use the energies of human brains to multiply, in the way that viruses use the energies of cells. Like genes, memes need a place to inhabit, and their success depends upon finding the ecological niche that enables them to generate more examples of their kind. That niche is the human brain.

A meme is a self-replicating cultural entity that, lodging in the brain of a human being, uses that brain to reproduce itself—just in the way that a catchy tune reproduces itself in hums and whistles, spreading like an epidemic through a human community, like “La donna è mobile” the morning after the first performance of Verdi’s *Rigoletto*. Dawkins argues that ideas, beliefs, and attitudes are the conscious forms taken by these self-replicating
entities, which propagate themselves as diseases propagate themselves, by using the energies of their hosts: “Just as genes propagate themselves in the gene pool by leaping from body to body via sperm or eggs, so memes propagate themselves in the meme pool by leaping from brain to brain via a process which, in the broad sense, can be called imitation.” Daniel Dennett, in such books as Freedom Evolves (2003) and Breaking the Spell: Religion as a Natural Phenomenon (2006), adds that this process can be variously harmful or beneficial to the host—parasitic or symbiotic.

The theory of the “meme” threatens to debunk the whole realm of high culture by making culture into a thing that survives in the human brain by its own efforts, as it were, and which has no more intrinsic significance than any other network of adaptations. To make the theory remotely plausible, however, Dawkins has to distinguish memes that belong to science from memes that are merely “cultural.” Scientific memes are subject to effective policing by the brains that harbor them, which accept ideas and theories only as part of science’s own truth-directed method. Merely cultural memes are outside the purview of scientific inference and can run riot, causing all kinds of cognitive and emotional disorders. They are subject to no external discipline, such as that contained in the concept of truth, but follow their own reproductive path, indifferent to the aims of the organism they have invaded.

The meme idea is appealing at the level of metaphor, but what does it amount to in fact? From the point of view of memetics, absurd ideas have the same start in life as true theories, and assent is a retrospective honor bestowed on the ones that succeed in reproducing. The only significant distinction to be made, when accounting for this success, is between memes that enhance the life of their hosts, and memes that either destroy that life or coexist commensally with it.

One of the distinguishing characteristics of human beings, however, is that they can distinguish a concept from the reality it describes, can entertain propositions from which they withhold their assent, and so can move judge-like in the realm of ideas, calling each before the bar of rational argument, accepting them and rejecting them regardless of the reproductive cost. And it is not only in science that this attitude of critical reflection is maintained. Matthew Arnold, in his classic collection of essays Culture and Anarchy (1869), famously described culture as “a pursuit of our total perfection by means of getting to know, on all the matters which most concern us, the best which has been thought and said in the world, and, through this knowledge, turning a stream of fresh and free thought upon our stock notions and habits.”
Like so many people wedded to a nineteenth-century view of science, which promised scientific explanations for social and cultural phenomena, Dawkins overlooks the nineteenth-century reaction that said: Wait a minute; science is not the only way to pursue knowledge. There is moral knowledge too, which is the province of practical reason; there is emotional knowledge, which is the province of art, literature, and music. And just possibly there is transcendental knowledge, which is the province of religion. Why privilege science, just because it sets out to explain the world? Why not give weight to the disciplines that interpret the world, and so help us to be at home in it?

That reaction has lost none of its appeal. And it points to a fundamental weakness in “memetics.” Even if there are units of memetic information propagated from brain to brain, it is not these units that come before the mind in conscious thinking. Memes stand to ideas as genes stand to organisms: if they exist at all (and no evidence has been given by Dawkins or anyone else that they do) then their ceaseless and purposeless reproduction is of no concern to culture. Ideas, by contrast, form part of the conscious network of critical thinking. We assess them for their truth, their validity, their moral propriety, their elegance, completeness, and charm. We take them up and discard them, sometimes in the course of our search for truth and explanation, sometimes in our search for meaning and value. And both activities are essential to us. Although culture isn’t science, it is just as much a conscious activity of the critical mind. Culture—both the high culture of art and music, and the wider culture embodied in a moral and religious tradition—sorts ideas by their intrinsic qualities, helps us to feel at home in the world and to resonate to its personal significance.

It is true that the theory of the meme does not deny the role of culture, nor does it undermine the nineteenth-century view that culture properly understood is as much an activity of the rational mind as is science. But the concept of the meme belongs with other subversive concepts—Marx’s “ideology,” Freud’s unconscious, Foucault’s “discourse”—in being aimed at discrediting common prejudice. It seeks to expose illusions and to explain away our dreams. But the meme is itself a dream, a piece of ideology, accepted not for its truth but for the illusory power that it confers on the one who conjures with it. It has produced some striking arguments, not least those given by Daniel Dennett in *Breaking the Spell*, in which he explains away religion as a particularly successful but dangerous meme.

But memetics possesses the very fault for which it purports to be a remedy: it is a spell with which the scientistic mind seeks to conjure away the things that pose a threat to it—which is also how we should view...
scientism in general. Scientism involves the use of scientific forms and categories in order to give the appearance of science to unscientific ways of thinking. It is a form of magic, a bid to reassemble the complex matter of human life, at the magician’s command, in a shape over which he can exert control. It is an attempt to subdue what it does not understand.

Surely human beings can do better than this—by the pursuit of genuine scientific explanation on the one hand, and by the study of high culture on the other. A culture does not comprise works of art only, nor is it directed solely to aesthetic interests. It is the sphere of intrinsically interesting artifacts, linked by the faculty of judgment to our aspirations and ideals. We appreciate works of art, arguments, works of history and literature, manners, dress, jokes, and forms of behavior. And all these things are shaped through judgment. But what kind of judgment, and to what does that judgment lead?

It is my belief that culture in this sense, which stems from the “I” perspective that is the root of the human condition, points always towards the transcendental—the point on the edge of space and time, which is the subjectivity of the world. And when we lose our sense of that thing, and of its eternal, tranquil watchfulness, all human life is cast into shadow. We approach the point at which even the St. Matthew Passion and the Rondanini Pietà have nothing more to say to us than a shark in formaldehyde. That is the direction we have taken. But it is a direction of drift, a refusal to adopt the posture that is inherent in the human condition, in which we strive to see events from outside and as a whole, as they are in the eyes of God.