As you will have seen on the program, this session serves to introduce the themes we have selected for this Lorentz Center Seminar in thinking about the connections between evolutionary theory and literature – which for the duration of this conference will obviously have to include any oral predecessors. Our group is highly diverse: it includes several participants who have devoted a large part of their professional life to precisely this theme, the intersection of evolutionary theory and art or literature. But there are also colleagues from the sciences, the social sciences and the humanities who have expertise in one field, but not necessarily the other. This introduction is meant to give a quick overview of some key themes and problems. The fact that no discussion time is scheduled should not be taken to mean that I am not prepared to discuss whatever I have to say with all of you – although I’m happy to admit that I’m rather terrified of the sheer amount of expertise gathered in this room: rather, the idea was that each of the themes in this talk will have a special session devoted to it with a more expert speaker and with several hours of discussion time. So rather than have a very brief and of necessity somewhat shallow discussion now, we’ll move on from this talk virtually straightaway to a different evolutionary theme, namely survival through lunch.

The Neodarwinian evolutionary model

Let’s begin with evolutionary theory itself:

The Neodarwinian evolutionary model has a number of key features that characterize it:

- Environmental pressures that combine with the overproduction of offspring (superfecundity) to cause organisms to be in competition – not all can survive and procreate
- Minor random variation among individuals affecting their chances of survival and reproduction
- Heritability of these features through genetic transmission
- Selective retention of those features that enhance fitness

The principles of heritability, random mutation and selective retention are crucial. Selection can be natural or sexual. Natural selection is related to the environment and the interaction between organism and environment and it affects survival and procreation. Sexual selection has to do with male-male competition for access to reproductive resources (for the humanists among us: that would be females) and sexual selection is driven in part by the choosiness of females: female preferences drive sexual selection, and can even cause run-away selection as in the peacock’s tail, which looks like a distinct survival hazard, but apparently was worth it.

Issues within this model
a. Locus of selection: genes, individual, kin, group, (meme)

A crucial question in this model is: what exactly is the ‘survivor’ here, i.e. what is the locus of selection. Is it our genes? Is it the individual organism? Or is it the group? As long as we are talking about the genetic level, group selection or group survival is a very weak contender, since the competition between groups is poorly reflected in genetic differentiation between groups or genetic homogeneity within them. [Ever since Williams 1966]. Hamilton introduced the concept of inclusive fitness or kin selection, which has generally been accepted. Inclusive fitness refers to the survival and reproduction of genetic kin: siblings are so closely related genetically that a childless aunt is well-advised to invest in the survival and reproduction of her sister and her offspring in the interest of getting her own genes into the next generation.

The issue of group selection will have to come up again in the course of this paper, and I’m sure in our discussions.

b. Change - adaptation - utility

Another general issue that will be highly relevant to our discussions is the relation between change, usefulness and adaptations. Within Neodarwinian theory, an adaptation by definition is a feature that is selected for because it enhances chances of survival and reproduction. I.e. it must have a fitness enhancing function and it must show evidence of complex design. But there are many changes that are not adaptations. Genetic drift is responsible for a large percentage of genetic variation. And there are also by-products of natural selection, which may nevertheless as a secondary phenomenon find some use. This is where Stephen Jay Gould’s famous image of the Spandrels of San Marco comes in (in an article with Richard Lewontin, see bibliography). If you build arches resting on pillars, triangular spaces will be produced as a byproduct. These spaces can be (and have been!) filled with beautiful figurative art. The structure was there for a nonadaptive reason, as a byproduct of a certain building technique. But it has been coopted for a new use that it was not selected for. This means that there is a wedge between the historical origin of such ‘spandrels’ (the word is now part of the vocabulary of evolutionary thinkers) – a wedge between the historical origins and their current functional utility. Gould calls such a phenomenon an ‘exaptation’.\(^1\) The origin of the structures now coopted into a different use may be either truly nonadaptive or adaptive for a different purpose. This is very different from a direct adaptation for current function via natural selection.

Once again, when thinking about art and literature we will have to be aware of the possibility that our capacity to engage in these practices may be a side-effect of our having acquired a large and expensive brain, or of the capacity for speech in as far as that is not itself a byproduct of an expanded brain. This in no way precludes its usefulness – not all utility refers directly to genetic survival and reproduction.

c. Dynamical theory

\(^1\) An exaptation is the cooptation of preexisting structures originally built for different reasons’.

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This in turn raises the issue of what dynamical theory we are working with. A dynamical theory is any theory we invoke to explain change, to explain the difference between state A and state B, and how one gets from one to the other. Is evolution the highest category of dynamic development in living organisms, so that any theory dealing with change affecting living organisms is by definition evolutionary (see figure)? Can we still describe the changes leading to e.g. the industrial revolution in terms of evolution? As we will see, the very least this seems to require is that we extend our notion of heritability to phenomena that do not in fact impact our genes directly. It requires that we define ‘culture’ as a system of inheritance of socially learned information (see the work by Richerson and Boyd). This has sometimes been called Lamarckian, but it is not. Lamarckian evolution presupposes the heritability of acquired characteristics on a genetic level. Cultural inheritance passes on behaviors (we cannot quite be sure of the conceptual representation underlying the behavior; people may do something in imitation of someone else without also taking over the same conceptual underpinning: one person’s raindance may be the other’s fitness program – fitness in the mundane sense of the word of something you work at in the gym) – so cultural inheritance passes on behavior without genetic modification. And far from featuring just random mutations and selective retention, cultural transmission is often ‘biased’ in that the cultural agents more or less consciously create change. It is also biased in the sense that we have a preference, possibly evolved, to follow e.g. the majority (this leads to conformism) or the prestigious or successful. In order to subsume cultural, i.e. nongenetic transmission under the theory of evolution, one could claim (rightfully) that we have evolved psychological mechanisms based in biology that enable us to make use of cultural transmission; that we have evolved domain-specific psychological programs that make us uniquely capable of social learning. In that sense there is clearly a biological basis to culture, but it is questionable how helpful this is in analysing actual culturally transmitted change.

Very interestingly, at the level of cultural change, all of a sudden the notion of group survival moves back into the center of attention. Some cultural behaviors are maladaptive in the strict sense of the word (as when I prefer a longer publication list over producing babies), yet they may still allow a culture or a group to thrive.

So what is the relation between cultural and genetic transmission? How do we model this? We need to ask ourselves, are we happy with the extension of the term ‘inheritance’ and how helpful is it in analysing the very fast processes of cultural change to insist on subsuming them under the supercategory of evolution? I’m not denying (or not yet! I’m at the stage of conscious suspension of disbelief right now): I’m not denying, then, that thinking about culture in terms of evolution can be helpful, but I want to know just what it is I’m doing when I’m doing this. Once again, I’ll come back to this point.

Dynamical theory
Evolution
Genetic
Cultural
Adaptations – Drift - By-products - Biased transmission

d. Universal vs particular

Evolutionary theory is a universalist theory. It explains universal features of life. That makes it tempting to try out its explanatory potential and its power as a paradigm by using it as a framework for thinking about issues that were traditionally the domain of the humanities or the social sciences. This is a good development in that it has caused better and more careful thought about the relations between culture and biology. Theories about life – and both evolutionary theory and more traditional studies of human communities, culture and civilization can fall under that heading – can and should compare notes, according to the principle that major domains of science and scholarship when working on the same objects cannot afford to work from principles that are inherently incompatible with each other. The principle of consilience (a word coined by William Whewell and made famous by biologist E.O. Wilson) seeks the unity of knowledge and tries to reconcile and bring together results reached in different domains of science and scholarship. In a sense, this Seminar is an exercise in consilience.

In recent years, e.g. religion and morality have been studied from an evolutionary perspective. Daniel Dennett (in Breaking the Spell) and Richard Dawkins (in The God Delusion) explain religious thought as a highly effective self-perpetuating item of information – they are adherents of the notion that there is yet another locus of survival at issue in evolutionary theory, namely the ‘meme’, a unit of cultural information – I will return to that later. Frans de Waal, in a series of publications, has argued that the building-blocks of human morality are already present in our nearest relatives, namely certain groups of primates. He has looked in particular at phenomena such as targeted helping (where the need of the individual in need of help is central, and there is no benefit to be expected for the helper), and discovered behaviors apparently based on notions of fairness and reciprocity.

It makes sense to try and see how effective (or not!) literature and art can be made to function within the evolutionary framework, and to investigate what mutual benefits could be derived from combining these areas of scholarly pursuit: How can literary studies benefit from an evolutionary perspective? What good could it possibly do evolutionary theory to extend its operations to art and literature? Art and literature are particular expressions of human culture, while also representing human universals and evoking archetypal motifs. It is possible that the levels of explanation and interpretation that interest a literary scholar and those of the evolutionary theorist do not overlap. But at the very least it is useful to check that they are not in conflict.

Over the last twenty years some extremely interesting work has been done in this subfield. A very good starting point to get oriented in the whole thematic is the book The Literary Animal (edited by Jon Gottschall and David Sloan Wilson, both here as our invited speakers), which features a brilliant paper by Brian Boyd, leading specialist in the field, to which I will return in a second. There have also been a special edition of the journal
Philosophy and Literature, devoted to Charles Darwin, in 2001, and the bibliography by now includes numerous titles, a selection of which I have put on your hand-out (all referring to good starting-points for further research, with good bibliographies of their own). Out of all the different approaches to the intersection of the areas of literature and evolution we have chosen to focus on three for this conference, and to those three I now turn

The three themes.

a. the evolutionary origins of art

The first theme is that of the evolutionary origins of art and literature. How can the phenomenon of literature be understood in evolutionary terms? This is the question to which Brian Boyd devoted the paper that I mentioned before, and that he will be speaking about this afternoon – we are extremely honored to have him here. The first thing Frans Saris said to me when I had first asked him whether he would be interested in thinking about the problem of literature and evolutionary theory, was: how do Tinbergen’s four questions apply? And he brought me a copy of the famous 1963 paper in which Niko Tinbergen had set out these questions. Brian Boyd has also used them. The questions to be asked of any phenomenon which we’d like to discuss in evolutionary terms are (I have reordered them for mnemonic reasons in alphabetical order C-D-E-F):

C for Causation: How does it work. How would literature enhance survival or reproduction? What are the mechanisms?
D for Development: When (at what age) does the feature develop in the individual? This is a question of ontogeny.
E for Evolution: What is the evolutionary origin of the trait in the species? This is a question of phylogeny.
F for Function: What evolutionary function does the trait serve. We must realize that we are talking about ‘function’ in the narrow, evolutionary sense of the word. This is not just about any kind of usefulness or convenience, but about the promotion of survival and reproduction.

Brian Boyd has in the past distinguished several approaches to these questions: one considers art a byproduct of evolution, rather than an adaptation. The linguist Steven Pinker is the most outspoken representative of this group. Art is cheesecake for the mind, says Pinker, it’s a luxury delicacy. However, Pinker makes an exception for storytelling of all things, so we can move on to the next explanation. The second is represented by Geoffrey Miller, who focuses on Tinbergen’s F-question, that of evolutionary function: Miller considers art the product of sexual selection. Art is ‘expensive’ in terms of resource allocation: in the time you write a poem, you cannot catch something to eat. It looks useless and yet is is complicated and it has a clearly aesthetic aspect. That makes it a suitable candidate for being an adaptation due to sexual selection. This, of course, leaves unexplained why women are active in story-telling, singing songs, weaving etc all over the world. Experiments have suggested, though, that being put in a ‘mating context’ stimulates male creativity more than it does female. Ladies, we are just as lousy as painters whether men are around or not, and we don’t feel like engaging in it any more.
when potential partners are around. Apparently, gentlemen, that works very differently for you …

The two other approaches discussed by Brian Boyd in the Literary Animal volume regard art as adaptive behavior and assign to it as its evolutionary function either the promotion of social cohesion, e.g. by focusing group attention on certain common stories; or the promotion of the individual’s mental organization. To start with the second point: Daniel Dennett, too, suggests that the function of literature consists in helping us develop a Theory of Mind. Having a Theory of Mind means that we are capable of attributing thoughts, intentions, beliefs etc to somebody else, even in complex forms such as ‘I think that he thinks that I think’ etc. A Theory of Mind is an important asset in survival: did the lion see me, even though it seems he has not? Does that man know that I know where he hid some food? All one can do in real life is to form hypotheses about these things, but you can never check. Stories, however, offer all kinds of scenarios, AND they often tell you what happened next. The problem with this theory is that we have basically completed the development of our Theory of Mind by the age of four or five, so there seems to be no excuse to keep indulging in literature.

The adaptive explanation of art in terms of the promotion of group cohesion is attractive. Ellen Dissanayake connects this with ideas about Tinbergen’s questions C and D, causation and development: she sees the evolutionary origin of art in the shared attention between mother and child, who constantly make eye contact (which is facilitated by the difference in color between iris and pupil in humans). Mothers are described as baby entertainment centers, giving babies their first taste of ‘art’. The potential group selection aspect of this theory worries some, is taken in their stride by others, and is explained away by yet others by arguing that social behavior also benefits the individual. I’m sure we’ll hear more about this shortly! Obviously, here too, one problem could be that the social utility of art does not prove its adaptive origin – we could still be dealing with a secondary cooptation for useful purposes of structures that happened to be there for non-adaptive reasons or as byproducts of adaptions. Brian Boyd himself has been known to make an attractive case for a variety of functions for art: shaping and sharing attention, fostering social cohesion, fostering creativity. You will hear him this afternoon.

b. Literature as a laboratory

The second theme of our seminar is to look at literature and film as a kind of archive or laboratory in which to observe human behavior, and we are very happy with our speakers Jonathan Gottschall and Murray Smith, who will also introduce tonight’s film.

The laboratory approach makes use of the idea that literature is a product of and makes use of our evolved psychology. It assumes that themes of central importance in evolutionary theory will be at center stage in many works of literature. Literature represents human universals and plays off archetypal motifs, so literature is a great starting point to learn about human behavior. This form of interpretation will therefore focus on crucial evolutionary themes such as mate selection, kin relationships and social hierarchies. The subdiscipline of evolutionary psychology starts from the assumption that
our (cultural) development has outpaced genetic evolution. Our physical and mental constitution still reflects what the evolutionary psychologists call ‘EEA’: the Environment of Evolutionary Adaptedness. This concept is not very specific. It is not supposed to refer to a specific time or place, but somewhat vaguely refers to the conditions under which the hunter-gatherers functioned. Evolutionary psychology tries to identify the selection pressures that would have been in effect in that Environment, and to predict what kinds of adaptations in our evolved psychology would have enhanced fitness, again within that Environment. In a form of reverse engineering it then designs experiments to test these hypotheses. Some of the design features that would have enhanced fitness in the EEA are now potentially maladaptive, for instance our preference for a sweet diet, now a major road to obesity and diabetes, or the fact that we are much better at detecting animals (such as snakes) than movements from other sources such as cars. Our behavior itself does not maximize fitness, say the evolutionary psychologists, rather evolutionary psychology regards organisms as adaptation executers, i.e. we do what we do as the result of adaptations to selection pressures that may no longer be operative [Tooby and Cosmides 2005,14]. Adaptations are the results of a prior history of selection [2005,26], so by the time we turn the adaptation into behaviour, it may no longer be relevant. Evolutionary psychology will constantly be on the look-out for evidence of design.

So what happens when evolutionary psychology meets literature? The results so far have been extremely diverse. A not so good example would be the Barash and Barash coproduction under one of those titles that you either hate or love: Madame Bovary’s Ovaries. To give just one example: in it father and daughter Barash (those genes!) analyse Othello, and start from the correct observation that Othello is jealous. They then offer an evolutionary explanation of male jealousy – to do with sex ratios, male polygyny, and wanting to make sure that a child is yours, and end up with the conclusion that Othello fits the bill (‘it is not surprising’, they say, ‘that Othello is jealous’); I don’t think anyone has ever expressed such surprise. However, this criticism may be unfair. Barash and Barash have written a popularizing book in a somewhat breezy style, which is probably more helpful in explaining evolutionary theory than literature; and the rule in the kind of interdisciplinary enterprise that we are here engaged in, should be that you judge new approaches by their best results, not their worst. So I have to apologize and I would like to append here a remark about the rhetoric of the new cross-disciplinary approaches. For what I just did is mild compared to the abuse heaped on various kinds of ‘adversaries’ that I have encountered: the evolutionary psychologists (Tooby and Cosmides are a good example; although I find their work very good) have set up an elaborate polemic with something they call the SSSM, the Standard Social Science Model. Scholars with more literary inclinations have identified postmodernism as the enemy, and they concentrate on certain kinds of literary scholarship to the exclusion of all others. The problem is that this is unlikely to create a willing audience. we are all violating one of the first rules of rhetorical interaction and communication: making our addressee benevolently disposed towards us. It is simply not helpful to point out that postmodernism – which is here shorthand for all literary scholarship – is at a dead end, and incapable of producing any worthwhile results, further to state that it has lost touch with both reality and truth. And that the new evolutionary approach can solve all of that
in one fell swoop. Similarly, it is not helpful when literary scholars refuse to take a
serious look at what evolutionary theory has to offer on the grounds that it is hopelessly
reductive and simplistic. The fact that a theory is elegant and economic in its premises
does not preclude its use in understanding complex processes. Reduction and abstraction
are normal scholarly processes and can be very illuminating. Understand me correctly: I
know that I am preaching to the converted. This is just an opportunity for me to say that I
am incredibly grateful that all of you who are here today have by that very fact
demonstrated a willingness to engage with the best that other disciplines have to offer and
to debate each other in a spirit of crossdisciplinary collaboration.

To return to the laboratory theme: there are many careful, sensitive and sensible readings
of literary texts around, and there will be more shortly. Jonathan Gottschall, one of our
speakers on this theme, has a book coming out with Cambridge shortly – in fact, what got
me interested in this whole theme is that I am in the fortunate position that whenever a
new approach to literature emerges, somebody is bound to try it out on Homer – and
indeed, that’s what Jonathan has done! I can also recommend Jonathan’s article in
*Philosophy and Literature* 2001 and the work by Nancy Easterlin on your hand-out, who
is very careful in delineating what the approach can and cannot do. In his 2001 article,
Jonathan sets out to match Homer’s observations on human beings with what modern
biologists think about human nature and animal behavior and he focuses on intraspecies
aggression, following the lead of the famous Konrad Lorenz ‘On Aggression’.

Lorenz claimed that within the same species, aggression is often ritualized, aiming at establishing
social hierarchies and dominance, but rarely with bloodshed – Lorenz connects this with
a principle of group selection; better not to kill your own (in fact, as Jonathan points out,
group selection has gone out of favor and later research established that some pretty
serious bloodshed and killing CAN go on among conspecifics). But he takes this as the
starting point to investigate conflict in the Iliad and to figure out whether there are any
differences between in-group and out-group conflict. The problem is interesting and
relevant on a number of levels, and the handling of the evidence is nuanced. In this case,
biological studies clearly inspired a good question.

As I pointed out before, evolutionary theory is interested in human universals. But
however much literature and art may be grounded in those universals, their interest – or at
least part of their interest! -- often lies in their individuality, and in the role they play in
the particular historical context in which they originated. This, of course, is a good thing:
it means that ideally evolutionary theory and other literary approaches should be
complementary. Interesting problems arise when explicit motivations and the discourse
deployed in a given text are at odds with tenets of evolutionary theory – as when the
heroes before Troy in Homer’s text seem to be mostly motivated by issues of social
hierarchy, reputation and prestige, but on theoretical grounds we wish to argue that what
they are all about or after is ‘really’ women. This is Jonathan’s courageous and detailed
argument in his forthcoming book – I’ll just give this to you as a teaser and restrict
myself to recommending reading it for yourselves! But there is one question connected to
this which I think will need to be discussed in our seminar: there are many cases where

\[2\] Konrad Lorenz, not Hendrik Lorentz, the mathematician/physicist after whom the Lorentz Center is
named.
evolutionary theory does not have a clear-cut answer yet. So those of us who wish to combine evolutionary theory and literature may often find ourselves in the position of having to choose among models and theories which have not yet crystallized into demonstrated certainties, and so we are of necessity choosing sides in a rhetorical venture of mutual persuasion with some of these issues. And we cannot on theoretical grounds use the overt rhetoric of the text itself, since literature in part thrives on the exceptional and since actors may not have full access to and insight into their own processes. So what is the basis for our choice among available variables? This is an important danger for these studies; I do not know yet how to work around it.

c. Uses and limitations of the theory of evolution in the study of culture

The last session of our seminar will be devoted to the specifics of cultural transmission and of the units of that transmission. What is the potential of the theory of evolution in helping us understand human culture. And what about the ‘evolution’ of literature and other cultural phenomena themselves (‘memes’ versus ‘genes’). How does ‘co-evolution’ of biology and culture work? Do stories somehow take care of their own survival? How do the phenomena of random change, selective retention, and reproduction function in a cultural (non-genetic) context?

I have already alluded to some of the work that will be relevant here, from memetics to the work by Richerson and the other Boyd. What is interesting – among many other things – in these approaches is that the locus of selection again changes: in cultural transmission, it looks as if the group becomes more central than the gene or the individual. This actually fits in with the results of an important group of literary scholars, who are not just interested in exegetical or hermeneutic approaches to literature, but work within a functional paradigm. The role of stories and story-telling in the formation and preservation of (cultural) group identity is relatively well understood. The same goes for that form of collective memory that is known as cultural memory: in the period of cultural memory no actual eye-witnesses to a certain incisive episode survive and a negotiated version of the past becomes canonical and functions as an anchorpoint of cultural identity. So group survival as a cultural phenomenon could connect scholars working on the coevolution of genes and culture and such groups of literary scholars.

The locus of selection is different yet again in memetics, which is based on the idea that there are discrete units of information comparable to genes, but culturally defined, which have differential fitness. There is some unclarity about the nature of the units, Dawkins originally mentioned catchy tunes, shapes of pots, fashions, etc., but there may also be larger cultural complexes with fuzzy boundaries.

As I announced before, a highly relevant question is whether we are still within the confines of evolutionary theory with these approaches, or whether we are transferring a model of inheritance, variability and selection to an area where they can be no more (but also no less) than metaphors and analogies. Transferred to culture, ‘inheritance’ means passing on in a nongenetic way from one generation to the next, while generation need not imply kinship. Transmission is no longer an on-off switch as it was with genes (in the
sense that a gene is either passed on or it is not). All kinds of intermediary and nonrandomly modified forms are imaginable. Selective retention is still in force, but again with a twist. Sometimes there is clear interaction with natural selection, as when certain religious beliefs promote refraining from fertility control and retaining conservative values: this will lead to more offspring with potentially more faithful retention of values, that as it were include their own copying instruction. Whereas the selective retention of genetic traits through natural selection has to do with fitness effects, the selective retention of cultural traits is often dependent on beliefs and concepts – there is a directionality and agency to the transmission that is lacking in natural selection.

These are just some brief remarks to whet your appetites, but of course we are much looking forward to hearing our specialists’ opinion on these issues – on this particular topic we will be in the competent hands of David Sloan Wilson.

Other approaches

In order to give this seminar sufficient focus, we have not included some other issues that we thought about in preparing it. Evolutionary theory is now claiming the status that Freudian theory once held: a theory about universal human behavior. Freud’s position seemed unassailable and it affected both the production of new literature written after his theories had been disseminated and the interpretation of older literature (it is safe to say that there is no such thing as a meaningless dream in the literature of any society, but the interpreter armed with Freud is particularly likely to be successful in interpreting the ones written after his theories had become widely available to the educated person of his time). Similarly, replacing Freud with Darwin, who may have a larger claim to unassailability, I wish to refer to the work by Gillian Beer, who has both analysed the writing of Darwin himself, and has looked into the question of how Darwinian thinking affected the authors of 19thcent England: definitely a literary study inspired by Darwin, but not within any of the categories described just now. Similarly, studies of utopian and dystopian literature, produced both before and after Darwin, could yield interesting results: for one thing, are there clear differences that can only be explained by a conscious knowledge of Darwin in the later group?

In thinking about my own discipline of classical studies, several possibilities come to mind for using evolutionary theory as a framework of explanation complementary to the use of other forms of literary analysis.

A brief remark on the history of literary scholarship may be useful here: over the past one hundred years, one can detect an alternating movement in the study of literature between text-immanent and contextualizing approaches. Text-immanent approaches confine themselves to the text at hand and interpret everything there is to interpret within that text, looking for webs of meaning and symbolism, using e.g. close reading and narratology. Contextualizing approaches try to locate a text in a wider socio-cultural context, as a window on the culture that produced it (e.g. New Historicism). Literary scholars have not just been engaged in the hermeneutical process of deciphering the meaning of a text, but also in establishing the sociocultural function of a text or a genre. And it is that functional
approach that offers points of contact with evolutionary theories. Just a glance through the work of those colleagues who are experimenting with the intersection of literature and evolutionary theory is enough to show that they have very little patience for the more abstruse products of postmodern approaches – but again, the rule must apply that we should look at the best and most fruitful work, rather than caricature the whole domain of the humanities.

Take poetry: Poetry is a form of special speech, which by its form, its speaker, and the occasion on which it is presented, makes special claims to our attention. In any form of spoken communication, a principle of cooperation is activated: whenever someone speaks AT us, we will assume s/he is speaking TO us and will try to understand what s/he is saying on the assumption that it will be something coherent, meaningful and relevant to the situation – that’s the cooperation principle. The relevance principle suggests that we will expend effort on interpretation proportionally to the importance we attach to the communication. We are willing to spend far more effort on the interpretation of a poem than on a passing remark addressed to us by an acquaintance, and we will go to extraordinary lengths to create a fit between a legal text (e.g. the constitution) and the legal case at hand. Some texts – in fact, the constitution is a good example, but so is Homer -- acquire an even more special status – they become the basis of a tradition, they are repeated, translated, used in teaching and commented upon, they become canonical. In terms of memetics, they are highly efficient replicators. Those texts command a third principle, not just those of cooperation and relevance, but the principle of charity, which adopts a principled stance of benevolence towards the text and its author, and will work on the assumption that the text is maximally meaningful, coherent and even true. These are all widely accepted results of studies in cognitive linguistics, canon formation, and interpretation, and it can easily be seen how these results could fit into a larger evolutionary framework of cultural transmission. But there is more: noncanonical authors can also try to influence the transmission of their own work by passing it off under someone else’s name, i.e. by engaging in forgery. And translators and commentators are basically riding piggyback on the survival potential of their source text: a commentary survives in a way comparable to a parasite’s survival. This of course is already indicative of the social status and prestige of literature itself, but literature also functions in a variety of ways to enhance or influence status and social hierarchies of stake-holders in society: the Greek poet Pindar wrote victory odes for athletes who had been victorious at the various Greek games, Olympic and other. These odes were performed in public and served both to reintegrate the victor into his community and to mark his special position vis-à-vis that community (see Kurke). Conversely, poetic invective could be used as a weapon to humiliate and damage one’s social opponents (Rosen). The issue of social hierarchies that evolutionary psychologists look for on the representational level in literary texts can also be relevant to the function and role such texts have in the society in which they belong. The special prestige that only poets can confer is also an important factor in the socio-cultural institution of patronage (Nauta). The poet enhances the patron’s social status. It is the poet who is the sole agent of the conferral of eternal fame – a commodity many Greek heroes apparently happily died for, which certainly did not help their genetic fitness. But in cultural terms they managed to survive the ages. I have already spoken about the role of stories in the establishment, in the shaping and
preservation of group identity. The above topics are often studied by literary scholars separately – using an evolutionary perspective may help clarify their internal coherence.

The organizers of this seminar have spent a number of very pleasant and cheerful hours together in preparing it: we disagreed on numerous issues and debated each other in the best spirit of cross-disciplinary collegiality, academic scepticism, and the willingness to put something potentially interesting to the test. We are thrilled that so many of you have signed up for this event, with enthusiastic expressions of support. I wish us all an inspiring seminar, and for now a great lunch – which I hear has an evolutionary theme to it (this apparently does not involve aphrodisiac mushrooms, but lots of forgotten vegetables and ur-products): so I don’t simply wish you bon appetite, but also good luck!

Leiden, 13 December 2007

Literature


Gottschall, Jonathan (f.c.), *The Rape of Troy*. Cambridge: Cambridge Univ. Press [2008]