



Katarzyna Stadnik

Maria Curie-Skłodowska University, Poland

**LANGUAGE AS A MEMORY CARRIER OF
PERCEPTUALLY-BASED KNOWLEDGE.
SELECTED ASPECTS OF IMAGERY IN CHAUCER'S
KNIGHT'S TALE AND *TROILUS AND CRISEYDE***

Abstract. In the paper, we address the question of the relation between language and culture from a Cognitive Linguistic perspective. While accounting for the role of language as an aid to cultural transmission in maintaining the community's conceptual order, we address the question of whether the concept of a linguistic worldview aptly captures the interplay between language and culture. We suggest that, due to cumulative cultural evolution spurred by the incessant development of human knowledge, layers of conceptualisations accumulate over time. It is proposed that this palimpsest of conceptualisations results from human interaction that transcends the constraints of the present moment, encompassing the past and present, as well as delineating possible developments of the community's future conceptual order.

Keywords: language and culture, linguistic worldview, memory carrier

In the paper, we posit that language is integral to human cultural experience. One type of this research strain embraces the conception of sociocultural situatedness (see Bernárdez, 2008), associated with the conception of situated cognition. We view the situatedness of the language user as the experiential context relative to which the community member conceptualises their experience. Thus, construed in this way, situatedness is a source of perceptually-based knowledge, which language users encapsulate in their usage, and which is subsequently transmitted across generations of a cultural community. We offer an account of how the concept of situated cognition can shed some light onto the problem of the interplay between language and culture. In particular, we revisit the conception of the worldview.

1. The Continuity of Language and Culture

While the notion of situated cognition can be theorized differently, we offer a wider reading of the concept, which goes beyond the embodiment thesis *per se*. One noteworthy interpretation of the situated nature of human cognition has been provided by Robbins and Aydede (2009). Thus, while the embodiment thesis posits that cognition engages not only the brain, but also the body, the embedding and extension theses expand it even further. Cognition is viewed as embedded insofar as “cognitive ability routinely exploits structure in the natural and social environment” (p. 3). In comparison with the two conceptions, the extension thesis seems most radical in that it assumes that “the boundaries of cognitive systems lie outside the envelope of individual organisms, encompassing features of the physical and social environment” (pp. 7–8). Each thesis informs research into the issue of language and culture differently, allowing to address different aspects of the intricate relation.

Since our paper focuses on the question of language as a repository of perceptually-based knowledge (see Goldstone & Barsalou, 1998), we are interested in the status of language as a memory carrier that helps sustain the community’s culture, regarded as a cognitive system, “a system of knowledge, beliefs, and values—that exists in the minds of members of society” (Casson, 1999, p. 120).¹ That is, if it is assumed that knowledge accumulated by past generations is encapsulated in language, what is the relation between the situated nature of human cognition and language as an aid to cultural transmission?

One aspect of language which makes it suited to foster the transmission of knowledge across generations of community members concerns the fact that linguistic usage enables sharing perceptually-based knowledge. Since “language use and cognition are grounded in the speakers’ bodily and sociocultural experience” (Frank & Gontier, 2010, p. 49), the use of language can enable community members to engage in sharing perceptually-based knowledge:

If you are told that pomelos are citrus fruits similar to grapefruits but larger and sweeter and with a thicker rind, you can easily reuse the perceptual information you have stored about other citrus fruits to form a pretty good representation of pomelos without ever having had experience with one. Given this linguistic description and the perceptual information you have stored about other citrus fruits, you would probably be able to identify a pomelo at a fruit stand, and can make some good predictions about how pomelos might behave, look, taste, sound, smell, feel in the hand, and so on. (Boroditsky & Prinz, 2008, p. 112)

If human knowledge can be expanded by combining ungrounded linguistic symbols with some stored perceptual information, language can facilitate mind-sharing between community members. This perspective on the multimodality of human experience involves reference to the influence of multimodal perception on the development of various channels of cultural transmission. As Barsalou (2012) explains,

although the basis of a culture can be localized in its artifacts, activities, organizations, and institutions to a considerable extent, it can also be localized in conceptual knowledge of these external entities. . . . Cultural transmission can be viewed, in part, as the propagation of conceptual knowledge from generation to generation, along with the transmission of other things, such as skills. (Barsalou, 2012, pp. 245–246)

If language is regarded as a memory carrier of perceptually-based knowledge, what is then the relation between the situated nature of human cognition and the status of such knowledge? On the account offered in this paper, the latter issue entails the idiosyncrasy of human cognition, which may involve not only universal cognitive constraints (e.g., change blindness, see Frith, 2007; Myin & O'Regan, 2009), but also constraints specific to the individual (e.g., memories, which may be incomplete or become distorted in the course of one's lifetime).² Since “[our] prior knowledge contributes to [our] own experiences” (Barrett, Wilson-Mendenthal, & Barsalou, 2015, p. 88), perceptually-based knowledge encapsulated in linguistic usage can differ across community members. In this sense, shared knowledge facilitates smoothing out individual differences in perception between community members. Both aspects of human cognitive limitations, individual-specific and universal, seem important for the issue of situatedness as a source of human knowledge in that the community's conceptual order is negotiated in human interaction, to which individual members contribute their share. To the extent that human knowledge can be imperfect and/or biased due to the idiosyncrasy of human cognition, linguistic usage might reveal the fact that knowledge we inherit from past generations might be flawed and/or inaccurate.

For illustration, we use the example of the notion of (a)ether from physics, which in the 19th century was believed “to act as the medium for transmission of electromagnetic waves (e.g., light and X rays) much as sound waves are transmitted by elastic media such as air”.³ However, it also seems worth mentioning that (a)ether and *ethereal* contain vestiges of meanings which testify to the Aristotelian worldview (Dewitt, 2010, p. 8). While (a)ether can be used in the OED sense of “air regarded as a medium

for radio”, *ethereal* means “extremely delicate and light in a way that seems not to be of this world”, echoing the medieval usage pertinent to the fifth element to be found in the sphere beyond the moon, inaccessible to humans (Lewis, 1964).

It is suggested that the idiosyncrasy of human cognition can deny us the comforts of omniscience in that, due to our cognitive constraints, we are bound to struggle and make mistakes, as we try to make sense of our experience in the world. This idea is captured in the words of the physicist Richard Feynman (1964), who succinctly explains how theories in physics are developed,

In general, we look for a new law by the following process. First, we guess it . . . Then we compute the consequences of the guess . . . and then we compare the computation results to nature, with experiment or experience, . . . to see if it works. If it disagrees with experiment, it’s wrong. In that simple statement is the key to science.

The case of Galileo’s discovery of the rings of Saturn lends support to that claim. Since stargazing was difficult in the early 17th century, Saturn’s rings remained invisible to the naked eye. The view in Galileo’s crude telescope was blurred due to the poor magnifying powers of the device. In fact, he could do nothing but simply take a guess, trying to make sense of the three fuzzy blobs that he was able to make out. Hence, Saturn’s rings were interpreted as the planet having “ears” (Dewitt, 2010, p. 153). Only later did Huygens properly hypothesise them to be the rings of Saturn thanks to the better quality of the telescope he used. Today, we can admire the stunning Cassini images of the planet.

Geeraerts (2010) offers an additional linguistic example of the aforementioned problem, providing a valuable historical analysis of the conceptual metaphor of ANGER. His study seems to suggest that, while human knowledge constantly evolves, linguistic usage is likely to retain vestiges of former ways in which members of a specific cultural community conceptualised their condition,

the examples given . . . [e.g., *You make my blood boil*, etc.] relate to the humoral doctrine. Respectively, the . . . examples refer to the humoral characteristics of cholera, black bile, yellow bile, and blood. But if the lexical relics of the humoral doctrine are so pervasive, the conceptual metaphor ANGER IS THE HEAT OF A FLUID IN A CONTAINER appears also to fit into the humoral views: the body is the container of the four cardinal fluids, and anger involves the heating up of specific fluids. . . . When we recognize that the medieval physiological-psychological theory of the four humours and the four temperaments has left its

traces on our emotional vocabulary, we learn to consider the ANGER IS THE HEAT OF A FLUID IN A CONTAINER metaphor as one of those traces. It is then not motivated directly by the physiological effects of anger . . . but is instead part of the historical (but reinterpreted) legacy of the humoral theory. (p. 252)

While these insights may imply the idea of the palimpsest nature of human memory (Kapralski, 2010), whether individual or collective, they indicate the significance of the gradual development of human knowledge for the evolution of the community's culture. Since knowledge gathered by the community accumulates over time "in layers", older conceptualisations can coexist with and/or have influence on newly acquired knowledge. As already argued, language can lend itself to being one effective channel of cultural transmission, capable of storing traces of human situatedness. By this we mean that historical data can hold vestiges of mental images left by previous generations. We do not intend to address the immense wealth of research into mental simulation, whereby it is assumed that "language understanding is contingent upon the understander mentally simulating, or imagining, the content of utterances" (Bergen, 2007, p. 277). This is beyond the scope of this paper. However, we use the idea of mental imagery relative to the conception of language as "collective memory bank", historical usage being reinterpreted as one type of repository for mental imagery, an inheritance from a distant past. It is suggested that at stake is the continuity of the community itself. The role of language as a memory carrier can be construed as a means by which the community establishes the common ground of experience shared across generations of its members (see also Tomasello, 2014, on the so-called ratchet effect). In this sense, even if human knowledge encapsulated in language may be inaccurate, the maintenance of the past ways of conceptualising the human condition may be instrumental in fostering among the community's members a sense of collective identity, relative to which individual identities of community members are established. In this light, the situated nature of human cognition should be understood more broadly than "situation-bound" cognitive activity (Wilson, 2008).

With regard to the material culture, the iconosphere (Szczerki, 2014) can be considered as a rich source of perceptual input, which can be shared by community members from subsequent generations. In this sense, the knowledge of an individual community member may derive from the continuity of both language and material culture (see Barrett, Wilson-Mendenthall, & Barsalou, 2015 on the notion of "remembered present"; see also Frank & Gontier, 2010, on the synchrony/diachrony division). If so, the Saussurean

distinction between synchrony and diachrony seems inherently flawed. We thus advocate the adoption of a panchronic perspective, which allows viewing human cognitive activity as dependent on the continuity of culture, including not only language as an aid to cultural transmission, but also the enduring presence of the community's material culture.

How does the conception of the linguistic worldview inform the issue of the continuity of culture? To answer this question, we need to address the problem of directionality in the language–culture relation. In particular, we refer to Bartmiński's program of reconstructing the linguistic picture of the world. As we read in Łozowski (2013),

the answer to the directionality question determines the very object of research, its methodological orientation, its points of focus. . . . To the Polish audience, Bartmiński's program is better known under the name of *językowy obraz świata*, or, in direct translation into English, *linguistic picture of the world*. Both labels are ambiguous, each of the two possible interpretations licensing a different research orientation of the language–culture relationship. One of them favors culture, which is when the intended syntagma is [*językowy*] [*obraz świata*], or [*linguistic*] [*picture of the world*]. We then assume that there exist ready-made and independently-pictured experience-based conceptualizations of the world we live in to which language may but does not have to be applied; what we learn *about* the world from language is part of what we know *of* the world from our cultural experience. On the other hand, the syntagma of [*językowy obraz*] [*świata*], or [*linguistic picture of*] [*the world*], suggests that our world does not exist otherwise than as pictured in/by language, or, at least, that the sense of the world we have is linguistic in nature. The object of research shifts, then, from cultural imprint on language, as in [*linguistic*] [*picture of the world*], to linguistic imprint on culture, as in [*linguistic picture of*] [*the world*]. But what is at stake extends, naturally, beyond mere terminology. (Łozowski, 2013, pp. 351–352)

Indeed, it seems that, depending on the adopted orientation, one might give research priority to various aspects of the language–culture relation, which has important methodological implications. For instance, Shapiro (2011) links “the Whorfian idea that language determines *everything* about thought” (p. 74; emphasis retained) with Conceptualization research, suggesting that “[u]nderstanding what counts as evidence for determinism and the limitations the hypothesis faces will help us understand the hypothesis of Conceptualization” (p. 72). As the author has it, this strand of research into embodied cognition “purports to show a relationship between the kind of body an organism possesses and the kinds of concepts an organism can acquire” (p. 71). Shapiro describes what he considers to be a parallel between

linguistic determinism and Conceptualization thus: “[w]hether linguistic determinism is true depends on whether language determines *concepts*, and similarly, whether Conceptualization is true depends on whether bodies determine *concepts*” (p. 78). Yet, as the author himself admits “Whorf’s claim is that people have the same picture of the universe only if they share a language” (p. 85). If so, we suggest that what can inform the discussion concerning the relation between the situated nature of human cognition and language as a memory carrier is the distinction into the strong and the weak version of the Sapir-Whorf hypothesis. Whereas the “strong” version assumes that non-linguistic thought is “constrained by the categories made available by the language one speaks” (Evans, 2007, p. 128), the “weak version” suggests merely some influence. Given the CL assertion that “humans have common perceptual and conceptualising capacities” (Evans & Green, 2006, p. 97), similarities across languages are only to be expected. As the scholars further elucidate, in CL, it is assumed that “language not only *reflects* conceptual structure, but can also *give rise to* conceptualization” (p. 101; emphasis retained). Hence, not only is language a repository of the community’s knowledge, but also a means of maintaining the continuity of the community in time.

Can we reconcile the conception of the linguistic worldview with the idea of language as a memory carrier, an aid to cultural transmission? For Bartmiński, a prominent representative of this strand of research, linguistic worldview is “a subjective interpretation of reality, a ‘second’, cultural reality of sorts, different than the scientific picture of the world” (Bartmiński, 2009, p. 36). As the scholar asserts, “in the colloquial, folk or naive view of humans and their world, the sun still *rises* and *sets* (five centuries after Copernicus!), *stars twinkle*, . . . etc.” (p. 24). The emphasis laid on the “naive” nature of the linguistic worldview seems to entail a tacit separation of human knowledge into “scientific” and “non-scientific”. On our account, this may indicate a chasm between the naive worldview of the common people and the scientific picture of the world accessible to researchers, as if the idiosyncrasy of human cognition could not affect a handful of selected community members.

Furthermore, it seems worth noting that the conception of linguistic worldview involves investigation of metaphors in language,

A full reconstruction of linguistic worldview must also take into account yet another type of data, which I call “ad-linguistic”, composed of the socially entrenched, belief-based knowledge of the world, common to the speaker (sender) and the hearer (receiver). . . . The set of ad-linguistic data, relevant to the process of communication, also includes conventionalised patterns

of behaviour. . . . For example, doubts as to a metaphorical or mythological understanding of sentences such as . . . “The stars look upon us”, “The heaven/sky is angry” . . . decided by the knowledge of beliefs relating to the animistically understood nature and to the principles of behaviour with respect to it. . . . In archaic folk tradition, one must behave towards them in the same way as one would towards living creatures: . . . the sun must not be pointed at, etc. (Bartmiński, 2009, pp. 34–35)

As Bartmiński argues, “the sentences above have, for the members of the community in which they exist, a mythological, rather than a metaphorical, sense” (p. 35). For us, this wavering is very telling indeed. It is suggested that such problems may arise from dismantling the entirety of human experience into components, which appears to testify to the Saussurean legacy that separates language from human experience, resulting in the seemingly neat distinction between synchrony and diachrony or linguistic and ad-linguistic data. In the analysis presented in the subsequent section, we show that such dichotomies may prove elusive in light of the continuity of language and culture, as well as the palimpsest nature of human memory.

2. Selected Aspects of Late Medieval Imagery in Chaucer’s *Knight’s Tale* and *Troilus and Criseyde*

In his *Knight’s Tale* and *Troilus*, Geoffrey Chaucer conjures up the image of the Wheel of Fortune as an allegorical vehicle for the constancy of change in human life, a symbolic tradition clearly common to the two Chaucer’s works and Boethius’ *Consolation of Philosophy*.⁴ The vivid perceptual and motor imagery implicit in Fortune’s description below seems vital, since it draws on the permanence of the idea of Fortune’s Wheel, based, in our view, on human embodiment:

. . . Fortune,
That semeth trewest whan she wol bygyle
who seems truest when she wishes to deceive
And kan to fooles so hire song entune
she knows how to sing her song to fools
That she hem hent and blent, . . .
so that she catches (beguiles) and blinds them . . .
And whan a wight is from hire whiel ythrowe,
and when someone is thrown from her wheel
Than laugheth she, and maketh hym the mowe.
she laughs and makes a face at them.

. . . From Troilus she gan hire brighte face
 she began to turn her bright face away from Troilus
Awey to writhe, and tok of hym non heede,
 and took no heed of him
But caste hym clene out of his lady grace,
 but cast him clean out of his lady's grace
And on hire whiel she sette up Diomede
 and on her wheel she set up Diomede

Troilus, Book IV, ll. 2–11 in Benson (1987, p. 538)

Such images were known to the poet's audiences (both readers and listeners) from their own situated experience of the contemporary visual culture, e.g., manuscripts. Hence, the poet could use that repertoire of medieval mental imagery, selecting words to evoke associations from the contemporary symbolic tradition (Kolve, 1984). His memorable images of *Knight's Tale* and *Troilus* concerning the machinery of Fortune's Wheel often include astrological descriptions indicating planetary configurations believed to shape human fate. For instance, in the following extract, Chaucer conjures up the pagan imagery familiar to the poet's audience, "available to them in the memory bank of images stored in their imaginations" (Brown, 2011, p. 182). Thus, Saturn refers to the planet-god, who together with other gods such as Mars or Venus, is believed to have his own spheres of influence at their highest at specific times, acting in concert with the zodiac. Hence, their overall influences combine to yield a specific effect on human lives, as illustrated in the following lines from the *Knight's Tale*, depicting two Theban knights, Palamon and Arcite, sentenced to imprisonment by Theseus, the duke of Athens. When referring to their plight, one of them says:

For Goddes love, taak al in pacience
 endure with patience our prison
Oure prisoun, for it may noon oother be.
 for it may not be otherwise
Fortune hath yeven us this adversitee.
 has given us this adversity
Som wikke aspect or disposicioun
 evil aspect or disposition (influence)
Of Saturne, by som constellacioun,
 by configuration of the planets (esp. at one's birth)
Hath yeven us this, although we hadde it sworn;
 has given us this (fate), although we had sworn
 to the contrary (the opposite would occur)

So stood the hevene whan that we were born.
 the particular position of the planets at our birth
 so determined our destiny
We moste endure it; this is the short and playn.
 we must endure it; this is the long and the short of it

KT, ll. 1084–1091 in Benson (1987, p. 40)

A closer reading of both extracts reveals that Chaucer combines various images in his works in a network of interrelated motifs, blurring distinctions between metaphor and human belief. That Chaucer intertwines the imagery of the Wheel with Theban/Trojan myths seems to be no coincidence, given the poet's sociocultural background. Chaucer skilfully blends images from symbolic tradition integral to his situatedness, which means that the contemporary perspective onto the classical past was that of late medieval Christian Europe. The pagan imagery thus leaves its enduring impact on the Christian symbolic tradition, as it is reused to fit the Christian context.

While in the first extract the poet makes us envisage the incessant rotation of the Wheel resulting in human plight parallel to the image of Fortune turning her face away from the poor Troilus, in the second, the shape of the Wheel seems inscribed in the rotation of the spherical universe, the visualisation of which accords with the medieval Ptolemaic mindset. Stated differently, the ideas implicit in the imagery interlock, hinting at a coherent, albeit somewhat pseudoscientific, medieval belief-system. Yet the latter evaluation is based on our current knowledge. How much of our present-day scientific theorising about the world and the universe is future-proof remains to be seen.

Furthermore, Chaucer ends both works with a description of the main characters' souls ascending to heaven. Specifically, the poet's account of Troilus' death evokes images of the medieval model of the universe. However, historically, both the model and the image of Fortune's Wheel are not late medieval inventions of Chaucer's age. One notable source of influence on the ideas developed by the poet was Boethius' *Consolation of Philosophy*, which inspired Chaucer to elaborate in the two works on the question of free will and necessity. Even more importantly, Chaucer's *Knight's Tale* and *Troilus* are not the poet's sole invention as he transformed earlier works by Boccaccio (*Teseida* and *Il Filostrato*, respectively), which also reworked related pagan myths (see Havelly, 1980). This continuity is argued to have been supported not only by linguistic resources, but also by medieval visual arts, the imagery being recognisable in various parts of contemporary

Europe. It follows that such various beliefs formed a system of medieval knowledge that guided the way in which Chaucer's contemporaries made sense of their experience. In the respective Chaucerian usage of *mot-* 'may, must' (here, *moste*), the sense of the modal verb reveals a medieval way of thinking. As the Middle English Dictionary says, one of the meanings of *mot-* was "to be compelled (to do sth.) by forces which control or overrule the will; to be compelled by destiny or the nature of things (to do or be sth.)". Most importantly, however, this usage was grounded in the sociocultural situatedness of Chaucer and his audiences.

While Chaucer's conception of the universe reflected contemporary views before the Copernican revolution and subsequent developments in science, one might wonder whether the fall of the Ptolemaic system could have affected knowledge stored in language. If so, corresponding linguistic expressions such as *the Sun rises/sets* should have been banished from language long ago. Yet people do use both. Indeed, if seeing is believing, perceiving our Earth from outer space might be a thought-provoking experience. Although we believe the contrary to be true, we cannot see anything different but the Sun rising and setting over the horizon. On the other hand, it may be suggested that by storing the perceptually-based knowledge of past generations, language fosters a sense of continuing collective identity among community members. As a memory carrier uniting past and present generations, language can help community members share knowledge across space and time, and thus negotiate the collective conceptual order before it is passed to subsequent generations of language users from the community. In this way, perceptually-based knowledge transmitted via linguistic usage allows community members to share minds in panchrony, that is, beyond the physical constraints of the present.

3. Conclusion

Although tools can change human perception of the world and the universe, revolutionising our knowledge, language might fail to account for the change. Insofar as the state of cumulative cultural evolution does not allow humans to overcome their cognitive constraints on a permanent basis, the distinction between "naive" and "scientific" human knowledge might be unclear. Given the idiosyncrasy of human cognition, both kinds of human knowledge distinguished in the conception of the linguistic worldview may be fallacious. In this sense, what counts as "scientific" knowl-

edge can be “naive”. Furthermore, in light of the multimodality of human experience, the division of linguistic data into “linguistic” and “ad-linguistic” may well be unfounded. Rather, language might hold mental imagery that persists in time due to cognitive constraints shared by humans across centuries.

Overall, the conception of a linguistic worldview appears to indicate a fixed picture of the world fossilised in language. It is suggested that the effects of cumulative cultural evolution on language may be rendered more aptly by the metaphor of palimpsest, in which past knowledge can intermingle with present understanding of human experience in the world. Human knowledge may accumulate in layers, facilitating the continuity of cultural communities.

NOTES

¹ The idea of language as a memory carrier of perceptually-based knowledge can be related to the issue of iconicity in human communication. It has been suggested that “iconicity could provide a mechanism to account for how language comes to be embodied (grounded in our sensory and motor systems), which is core to meaningful communication” (Perniss & Vigliocco, 2014, p. 1). Although the conception of iconicity as a bridge between language and human sensorimotor experience is a complex issue, and as such cannot be developed more fully in the paper, it is nevertheless worth mentioning that knowledge need not be represented explicitly (see, for instance, Kirsh, 2009). In the case of iconicity in language, “the iconic mapping can exhibit varying degrees of abstraction” (Perniss & Vigliocco, 2014, p. 3). On the general notion of implicitness as an inherent feature of natural languages, see Papi (2009). For further, more detailed accounts of iconicity in language, see, for instance, Perniss, Thompson, and Vigliocco (2010), or Vigliocco, Perniss, and Vinson (2014). See also Hougaard and Hougaard (2009) on the idea of the human body as a vehicle of sense-making in face-to-face interaction.

² For the problem of individual differences in visual perception, see, for instance, Francuz (2013). The scholar elaborates on various neurocognitive aspects of human perception by referring to resources from visual culture. As the author argues, although the physiological basis of perception across different individuals is the same, there may exist significant differences at the neurophysiological and neuroanatomical levels specific to particular individuals, which can affect the process of the creation of an image and its perception (p. 22). This seems relevant insofar as perception is viewed as an act of active creation, to which prior knowledge of the individual contributes. As explained by Barrett, Wilson-Mendenthal, and Barsalou (2015), “conceptual knowledge combines with sensory inputs to construct human experiences” (p. 87). Thus, if knowledge accumulated in language and other cultural resources by subsequent generations is distributed heterogeneously across community members, individual differences in perception can arise.

³ ether. (2015). In *Encyclopædia britannica*. Retrieved 28 April 2015 from <http://www.britannica.com/EBchecked/topic/193978/ether>

⁴ The common imagery of the Wheel of Fortune is illustrated by the *Knight's Tale* I. 926–26, *Troilus* 4.1–11, and *Boece* (Chaucer's translation of the *Consolation*) 2 prosa 2.51–57 in Benson (1987).

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