

TOWARDS A LINGUISTIC PATHO-CHRONOLOGY: DATING POETRY USING A LANGUAGE-AND-MIND APPROACH (CASE STUDY: MIHAI EMINESCU)

BOGDAN C.S. PÎRVU¹, MIHAI A. STROE², RODICA NAGY³

Abstract: We sketch an interdisciplinary method of “linguistic patho-chronology”, i.e. the dating of a literary work by resorting to information from areas that are not necessarily simultaneously available: verbal information (the literary work), medical information (biography), contextual information (larger issues of biography). The method is applied to a concrete case: Mihai Eminescu’s last poems. What we hope to achieve is a more accurate chronology of these poems on the basis of linguistic evidence in medical context. We start by a concise presentation of the method; we then focus on a presentation of some medical and linguistic facts that are relevant for our case: the bipolar disorder type I that Eminescu seems to have suffered from, as mirrored in speech characteristics of the bipolar spectrum. We follow Nica 1972, who diagnosed Eminescu as suffering from manic-depressive psychosis, a conclusion that had been drawn also by Obersteiner and Leidesdorf (Vienna, 1883, 1984), Nothnagel, Meinert, Neumann (cf. Prelipceanu 2015: 104), as well as by Maiorescu (cf. Simion 2015: 11); similar conclusions have been drawn by a team of Romanian researchers coordinated by Simion, Popescu and Pop in 2015 (bipolar disorder I). The method thus sketched is susceptible of being used in at least two directions: dating a literary work by using medical records; dating a medical disorder by using literary records (in the latter sense one example is notorious: in 1934 Abrams derived from literary productions important information on opium use and related medical problems).

Keywords: *language-based patho-chronology, frame semantics, bipolar language, manic language, depressive language.*

INTRODUCTION

Starting from the observation that specific mental disorders are most likely to bring along specific modifications in the normal stream of linguistic manifestation, the present paper is an attempt to sketch, via the concrete case of Mihai Eminescu’s

¹ *Iuliu Hațieganu* University of Medicine, s.pirvu@yahoo.com.

² University of Bucharest, mihaistroe@yahoo.com.

³ *Ștefan cel Mare* University, Suceava, rodinagy@yahoo.com.

last period of creative activity, an interdisciplinary method involving linguistic analysis (*viz.* especially frame semantics) and medical analysis (*viz.* DSM-5-based approach), by which to accomplish a dating of literary works. Such an interdisciplinary method may prove to be highly useful especially in those cases where the exact time of creation of a work of literature (or of any art form involving verbal expression) is uncertain or not known at all owing to a lack of historical records, while medical records are available. The precision of the method, of course, should be tested in further studies by being applied to cases where the period of creation of a work of literature is well known and medical records are also available. In this sense, correlations have been found to exist between artistic output and mental disorder: see at least Slater and Meyer (1959) and Jamison (1994).

Because the method hereby proposed involves mainly linguistics and medicine (pathology), we propose for it the term “linguistic patho-chronology”, bearing in mind fully-established methods of dating in the hard sciences, such as radiocarbon dating (where the presence of radiocarbon is the marker), as well as less fully-established methods of dating in linguistic anthropology, such as glottochronology. The latter is a promising method developed by Morris Swadesh (1951, 1955, 1971) and Robert Lees (1953) (*cf.* Greenberg 2005: 28), which is based on the hypothesis that change in the fundamental lexis of a spoken language occurs with relatively constant speed. Glottochronology is thus basically a comparative method: it maps diachronically the evolution of a language (in accordance with historical records), evidencing how much the basic language forms change over time. According to Greenberg, the results of glottochronology show that around 81% of the basic vocabulary of a language is maintained over a period of one thousand years (this is considered to be the “glottochronological constant”, which Swadesh modified to 86% in his subsequent research; *cf.* McMahon and McMahon 2005: 182). In glottochronology, therefore, the marker is the basic vocabulary in its progressive or regressive unfolding through the ages. Greenberg himself used glottochronology, by comparing two related languages for which there are no historical records and by highlighting the percentage of basic vocabulary differences, in order to evaluate just when the two languages under scrutiny started to diverge from each other. Glottochronology is thus relevant for the present approach because it deals with change in language forms over large periods of time and in “normal” conditions (under such, the rate of linguistic change proves to be constant, 81%–86% unchanged basic vocabulary / millennium). For a history of glottochronology, see at least McMahon and McMahon, 2005. Among the linguists who tried to refine the method the following should be mentioned: Sankoff (1970); Embleton (1986); Starostin (2000, 2002); Forster and Toth (2003); Gray and Atkinson (2003). The literature on glottochronology and related matters is vast, with many pros and many cons, the field remaining controversial, but quite dynamic: see at least Elbert (1953); Kroeber (1955); Gudschinsky (1956); Hoijer (1956); Sjoberg and Sjoberg (1956);

Rea (1958, 1973, 1990); Arndt (1959); Gleason (1959); Hymes (1960); Bergsland and Vogt (1962); Chretien (1962); Teeter (1963); Dyen (1964, 1973); van der Merwe (1966); Clauson (1969); Brainerd (1970); Tischler (1973); Kirk, Anderson, Widdowson (1985); Greenberg (1987, 2005); Callaghan (1991); Embleton (1992); Ringe (1992, 1993, 1995, 1996); Asher (1994); Fox (1995); Trask (1996, 2010, 2015); Crowley (1997); Campbell (1998); Renfrew, McMahon, Trask (2000); McWhorter (2001); Holm (2003, 2005, 2007); Campbell and Poser (2008); Ringe and Eska (2013).

Our own method deals with change in language forms over much shorter periods (a human lifetime), and under “abnormal” conditions: change due to some health disorder – in our case, the bipolar disorder, type 1, that manifested itself in Eminescu’s last period of creative activity.

Frame-binding and frame-unbinding: key for detecting mania and depression

What we retain for now is the comparative approach used both in glottochronology and in linguistic patho-chronology. In the latter we compare the language structures (especially the vocabulary and the semantic frames in which it is expressed) used by an author at different times in his creative career (we take into consideration only those periods where some mental disorders are attested to have existed in an author). In this sense, an important tool of analysis is the comparison of different words, expressions and linguistic “frames” used by an author at different times (e.g. the commercial transaction frame contains the following elements or subframes: buyer, seller, goods, money; cf. Fillmore, 1992). Thus, Fillmore’s notion of “frame-to-frame binding” is particularly important in our approach (cf. Andor 2010), because such semantic “binding” highlights well the contrast between the normal stream of language and the abnormal stream of language that can become manifest in situations where an author develops a mental disorder of some sort. When such mental pathology manifests, the possibility appears for the normal “frame-to-frame binding” of normal speech acts (be they part of the creative activity of an author or not) to turn, by degrees and to certain extents, into modified versions covering an entire spectrum: from highly intensified “frame-to-frame binding” (such as in a hypermanic episode), and up to a total reverse, i.e. a highly intensified “frame-from-frame unbinding” (such as in a hyperdepressive episode). To be noted is that an intensified “frame-to-frame binding” process is almost certain to appear also in only a hypomanic episode, since such is needed in basically any creative process whatsoever. The same phenomena (of intensification of the binding or unbinding processes) can most probably be traced down also at lower or higher levels of linguistic organization: the subframes making up the frames, and the superframes making up the various frames. This means that we can expect to encounter in mental disorders of the

depressive type phenomena such as subframe-from-subframe unbinding and superframe-from-superframe unbinding.

FRAME-BINDING MARKING MANIA (MENTAL FLUIDITY), FRAME-UNBINDING MARKING DEPRESSION (MENTAL BLOCK)

In other words, a mental disorder of the depressive type will most possibly have as a consequence the emergence of some degree of lack of coherence and cohesion in the speech stream, or at least some degree of modification in the usual speech stream at one or more levels of linguistic organization (subframes, frames, superframes, etc.). In the manic disorder, on the other hand, the speech stream can become more fluid, more intense, lighter, brighter, with possibly new linguistic forms popping up out of nowhere and not necessarily lacking in logic and coherence – this phenomenon may be due to an abnormal fluidization of at least the three levels mentioned of linguistic conceptual organization in the psyche (subframes, frames, superframes). Conversely, in the depressive disorder, the reverse can occur: speech stream losing fluidity, intensity, lightness, brightness, creativity, logic, etc. – the phenomenon being due to modifications in at least one of the levels of linguistic organization in the psyche. What is important to note here is that when some mental disorder appears, some sort of modification of the binding or unbinding type is most likely to occur in the usual speech stream, basically because the disorder brings along with it some degree of mental fluidization (manic) or dissolution (depressive) (this process entails some loosening, dissolving or fragmentation of mental powers, manifest in linguistic or generally cognitive overfluidity or overrigidity/overfragmentation), which is why it is important to bear in mind that the passage from mental normality to mental disorder is indeed most likely to trigger a passage of the kind suggested above in the mind's linguistic core of organization, namely from a normal "frame-to-frame binding" situation to an intense "frame-to-frame binding" situation (manic: fluidization) and to an intense "frame-from-frame unbinding" situation (depressive: blocking), the two mental extremes being thus overfluidity (manic disorder) and overrigidity (depressive disorder).

Of course, here we should include also the passages at the lower level (the subframes), as well as at the higher level (the superframes). In this sense, it should be noted that a mental disorder will be most likely the more evident/serious, if the mental linguistic level of organization is the lower or deeper. The level of the superframes is the least deep, while that of the subframes is the deepest: at the latter linguistic level of language organization, we encounter the fundamental actants like the agent, the patient, the instrument or the location: of course, these are the elements (universals) of Fillmore's frames, which he also called subframes.

Thus, if the level of subframes is impaired by the mental disorder (the level at which are crystallized the crucial mental relations among agent, patient, instrument, space-time location, the action of unification, the action of separation), then the mental dissolution is of the highest/most serious degree, because it involves the most severe disruption in the fundamental logic and order of action (confusion or ambiguous overfluidity or overrigidity/overfragmentation between agent and patient, instrument and location, unification and separation, etc.).

Based on these assumptions, approximations can be made, through the analysis of semantic frames, subframes and superframes appearing in the literary works of an author, by which to match the unknown (or uncertain) period when a certain literary work was created with the known period when a certain mental disorder is attested to have manifested itself (in accordance with historical / medical records). Thus, if a modification in the usual idiolect of an author appears in a certain literary work and is specifically linked by its characteristic markers (fluidity, rigidity, fragmentariness, etc., at the levels of subframes, frames or superframes) with a certain mental disorder, then it will be highly probable that that literary work was written at the time when the respective mental disorder was registered medically. Of course, the same should be true for the reverse situation in which we know the exact date when a literary work was written, but we possess no medical records concerning the emergence of a certain medical disorder: if the text contains specific markers associated with that mental disorder, then there is a high probability that the modifications in the usual speech stream point out the fact that the medical disorder is present at the time when the respective literary work was created.

ABRAMS AND PATHO-CHRONOLOGY: THE CASE OF S. T. COLERIDGE

It should be noted in this sense that M. H. Abrams (1934, 1962, 1970, 1971) applied just such a method in order to demonstrate that Lowes (1925, 1955, 1964, 1978) was wrong in assuming that Coleridge's *The rime of the Ancient Mariner* was not written under the influence of opium. Abrams pointed out the presence in that poem of linguistic markers that characteristically appear in the literary production of writers who suffer from opium addiction: the most important example provided by Abrams of such a marker is the image of the "skeleton ship", which, according to William Wordsworth's report, appeared in Coleridge's initial dream that constituted his first inspiration for *The rime of the Ancient Mariner* – a dream containing such an image was already an opium nightmare vision, the type of which is known to appear when the opium addiction is already deeply rooted. The test group of writers with whom Coleridge was compared in Abrams's analysis

comprized the following: De Quincey, Crabbe and Francis Thompson. The strength of the method lies in the scientific use of literary records (the literary output of the authors) for mapping opium use, where medical records regarding such use of opium is ambiguous, controversial or altogether absent. In other words, Abrams applied to the study of literature linguistic patho-chronology in the direction from literature to medicine (opium use dating or disease dating starting from known poem dating).

We hereby shall use the reverse method: from medicine to literature – using medical records for mapping date of creation (poem dating from known disease dating).

THE STARTING POINT OF PATHO-CHRONOLOGY: OBSERVING CORRELATIONS IN VAN GOGH AND SCHUMANN – MANIA: THE EXCITATORY EFFECT; DEPRESSION: THE INHIBITORY EFFECT

Linguistic patho-chronology, then, should be operative both ways: knowing the exact dates of composition of a literary work should help us determine the dates when a certain mental disorder emerges; conversely, knowing the exact dates when a certain mental disorder emerged should help us determine with some accuracy the dates of composition of a literary work. In this sense, Jamison (1994: 142ff) used the known dating of van Gogh's artistic output in order to see whether his periods of creativity correlate with the known periods of manic upsurge or depressive block: this is indeed the case – peak periods for manic artistic output occurred during summertime; November and February – purely depressive artistic output; December and January – “mixed” depressive artistic output. Also, we should point out that a research on patterns of musical composition in their correlation with mental disorder (viz. manic-depressive illness) was led by Slater and Meyer (1959) for Robert Schumann's entire creative life (cf. Jamison, 1994). On the striking quantitative relationship between Schumann's mood states (mania and depression) and his creative output, Jamison commented the following, pointing out that depression acts as a block of creativity, while hypomania as a stimulant (indeed, Slater and Meyer emphasize the “inhibitory effect” of depression and the “excitatory effect” of hypomania on Schumann's mental life):

When most depressed he [Schumann] produced least, and when hypomanic he produced at a remarkable level. The fluctuations in his musical productivity over the years were extreme. The relationship of his mood states to the quality of his productions is somewhat unclear, although both the quality and quantity of his work, as well as his psychological health, deteriorated in the final years of his life. (Jamison 1994: 145)

Thus, such attested correspondences between mental disease and creative output constitute a medical scientific foundation for the method we hereby propose, with margins of error pointed out in the above-quoted evaluation (by a widely recognized specialist) of the correspondences between mental disorder and artistic productivity. What we hereby propose to do is extend the research mentioned above (Slater's and Meyer's exploration of the correlations between musical composition and mental disorder; Jamison's observation of such correspondences also in the artistic output of painters) to the study of literature. Thus, such correlations being understood as naturally occurring not only in music and painting, but also in literature (and other forms of creativity), the present method proposes to derive poem dating from medical knowledge.

EMINESCU AND THE FIELDS OF GAMMA POWER

A final note of caution should be underscored in regard to manic language: it appears that, if we have no information telling us whether the subject suffers or not from distractibility (incapacity to concentrate), there is little we can do in the way of distinguishing between a manic (hypo-, hypermanic) episode and an episode where the so-called "gamma power" is activated. Gamma synchronization has been proved to appear as a result of meditation practices (see at least Andreasen 2006; Buzsaki 2006, 2011), and it is very active also in the (extraordinary) creative process. On the other hand, it has also been established that any artistic (and literary) creative process necessitates the presence of at least a hypomanic episode (Prisacariu, Stroe, Pîrvu 2015). In other words, the difficulty lies in the fact that artistic/verbal creativity in order to set in needs some dynamic motion of (artistic/verbal) language: such motion, or fluidity, can be mistaken for a hypomanic episode, just as it can be mistaken for a gamma power process (usually associated with sustained mental concentration). There is, however, a strong marker differentiating the two: while a manic episode sets in without any conscious control or will, being susceptible to last for long (even for a week, for instance), a gamma synchronous process is a controlled event (wilful concentration/meditation) – if gamma synchrony is activated for a long time, mental absorption can naturally occur, wherein extraordinary creativity may thrive. Thus, not having information in this direction (knowing whether a creative process occurs in a controlled or in an uncontrolled manner; knowing whether the subject suffers from distractibility) can prove to be a problem in deciding whether such is a pathological episode or a healthy manifestation of gamma power, i.e. the power of wilful sustained concentration. This question is the more relevant to our discussion, it being widely known that Eminescu was deeply involved in the study of India and its philosophy and spirituality which gravitate around various kinds of meditational practices of the yoga type. The best study to date on the influence of India in Eminescu's life

and works is Amita Bhoose's book entitled *Eminescu și India*, 1978, 2011 (see also her other works on Eminescu: *Dialoguri cu Amita Bhoose: Eminescu este magnetul care mă atrage spre România*, 2010; *Eminescu și limba sanscrită*, 2010; *Eminescu și Tagore*, 2013; *Cosmologia lui Eminescu*, 2013; *Proza literară a lui Eminescu și gândirea indiană*, 2015). In this sense, it may be that at least some of Eminescu's manic episodes might in fact have been manifestations of gamma power such as are known to emerge during the practice of (transcendental, yogic, Zen, etc.) meditation. The elements that speak against the gamma power hypothesis mentioned above for the concrete case of Eminescu's last years of life (viz. the three periods of acute illness registered in 1882–1883, 1886–1887 and 1889) are the medical reports according to which Eminescu was troubled, among others, by an incapacity to concentrate ("distractibility") (cf. Prelipceanu 2015: 101, 102) – this symptom is indeed incompatible with gamma synchrony. However, another point of caution is necessary here: Eminescu continued, nevertheless, to have intellectual activity during this final period (1882–1889), but it appears that it dealt more with non-artistic (i.e. non-poetic) productions, which seems to mean that his so-called "distractibility" had more to do with his loss of interest as regards poetry (so, artistic creativity), and less to do with a real loss of power to concentrate if there was genuine interest for such exertion. In brain science terminology, we could say that maybe Eminescu's right cerebral hemisphere simply shut down (at least partially – thus causing him to drift away from emotionality), while his left cerebral hemisphere (dealing with rationality and logical processes) was still dynamically active. From this perspective, the gamma power hypothesis may still prove to have some validity, after all.

With all these elements in mind, we can proceed to our investigation proper.

1. BIPOLARITY

Loosely segregated in the fourth century BC, when Hippocrates (1891) originated melancholia in the "black bile" and mania in the "yellow bile", the two syndromes were to live together for ever after, with Aretaeus of Cappadocia (1856) considering mania (characterized by "furor, excitement, and cheerfulness") to be a variety of melancholia (characterized as "loss of reason, insomnia, and despair"), with 19th century French psychiatry speaking about *la folie à double forme* (Baillarger 1854), with Kraepelin (1899) drawing the perimeter of "manic-depressive illness", with Bleuler (1924) including several subcategories into Kraepelin's differential diagnosis and labeling it all "affective illness", and lastly with ICD-10 (World Health Organization 1992) and DSM-3 through-5 (American Psychiatric Association 1980; 2000; 2013) formally opting for a bipolar-unipolar distinction: with or without manic episodes.

Falling into line with 2014 data, the bipolar spectrum disorder could be described as follows:

- A. At least one major depressive episode;
- B. No spontaneous hypomanic or manic episodes;
- C. Either one of the following, plus at least two items from criterion D, or both of the following plus one item from criterion D: 1) a family history of bipolar disorder in a first-degree relative; 2) antidepressant-induced mania or hypomania;
- D. If no items from criterion C are present, six of the following nine criteria are needed: 1) hyperthymic personality (at baseline, nondepressed state); 2) recurrent major depressive episode (>3); 3) brief major depressive episodes (on average, <3 months); 4) atypical depressive features (increased sleep or appetite); 5) psychotic major depressive episode; 6) early age at onset of major depressive episode (before age 25); 7) postpartum depression; 8) antidepressant tolerance (“wear-off”, acute but not prophylactic response); 9) lack of response to >3 antidepressant treatment trials (Ghaemi, Hsu *et al.* 2003: 222–226; Goodwin, Jamison 2007: 20).

Taken separately, there are significant differences between Bipolar-I and Bipolar-II (Goodwin, Jamison, 2007: 19), of far-reaching consequences in the matter of poem patho-chronology being values like:

BP-I > BP-II: severity of depressive episodes (Coryell, Endicott *et al.* 1985: 817–821; Vieta, Gasto *et al.* 1997: 98–101; Benazi 1999: 249–253); length of depressive episode (Coryell, Endicott *et al.* 1985: 817–821); interepisode intervals (Judd, Akiskal *et al.* 2003: 261–269); agitation, irritability (Dunner, Gershon *et al.* 1976: 31–42; Hantouche, Akiskal *et al.* 1998: 163–173; Serretti, Olgiati 2005: 159–166).
 BP-I < BP-II: time spent in depression (major and minor) (Endicott, Nee *et al.* 1985: 17–28; Vieta, Gasto *et al.* 1997: 98–101; Judd, Akiskal *et al.* 2003: 19–32); number of episodes (Vieta, Gasto *et al.* 1997: 98–101; Judd, Akiskal *et al.* 2003: 127–137); rapid cycling (Coryell, Endicott *et al.* 1992: 126–131; Maj, Pirozzi *et al.* 1999: 1421–1424; Baldessarini, Tondo *et al.* 2000: 13–22); suicide/suicide attempt (Dunner, Gershon *et al.* 1976: 31–42; Arato, Demeter *et al.* 1998: 454–456; Rihmer, Pestalily 1999: 667–673).

2. BIPOLAR LANGUAGE

Going deeper into the bipolar spectrum for colour and affect (Goodwin, Jamison 2007: 400–401), the artistic expression during mania is as follows: 1) vivid, hot, sharply contrasting (Zimmerman, Garfinkle 1942: 313–318); wild (Reitman 1950); highly coloured (Dax 1953); bright, warm, optimistic (Enăchescu 1971: 133–142); 2) positive, assured, contrasting (Zimmerman, Garfinkle 1942: 313–318); careless (Dax 1953); euphoric (Enăchescu 1971: 133–142). During depression artistic expression is as follows: 1) somber (Reitman 1950); usually

black with upper portion darkest (Dax 1953); dark, dirty, cold (Enăchescu 1971, 133–142); 2) useless, depressive, gloomy (Enăchescu 1971: 133–142). The manic patient sees himself as “upbeat”, “racing”, “full of energy”, “speeded up”, “wired”, “hyper”, “high as a kite”, “moving in the fast lane”, “ecstatic”, “flying”, the others being “too slow” and unable to “keep up”. Life is “effortless” for him, “charged with intensity”, and “filled with special meanings” (Goodwin, Jamison 2007: 30). By contrast, for the depressive patient life is a “burden”, there is “no point to living”, all is “meaningless”; everything is “hopeless”, “heavy”, “too much of an effort”, “drab, colourless, pointless”. The patient himself is “slowed down”, “in a fog”, “exhausted”, his life is “dull, flat, dreary” (Goodwin, Jamison 2007: 30).

One could finally find the following ratios within the bipolar spectrum:

Manic = **Depressed** for lexical diversity (number of words, number of different words) and syntactical complexity;

Manic > **Depressed** for colourfulness, action verbs, adjectives, concreteness, words reflecting power and achievement;

Manic < **Depressed** for vagueness, qualifying adverbs, first-person pronouns, overstatement. (Andreasen, Pfohl, 1976: 1361–1367; Goodwin, Jamison, 2007: 53)

3. MANIA AND MANIC LANGUAGE

At this point, mania must be given precedence over depression, for one thing because of the age-long trend in medical thought, for another because (hypo)mania is actually the syndrome/continuum that really counts in the creative process (Jamison 1993; Jamison 2004; Leoveanu, Stroe *et al.* 2015: 288–300). Small wonder about that, because the weighted mean for the mood symptoms during mania is as follows: 71% for irritability, 63% for euphoria, 49% for lability, 60% for expansiveness – not to forget about 46% for depression (Jamison 1993; Cosman, Pîrvu 2014). In parallel, the weighted mean for the cognitive symptoms during mania is as follows: 73% for grandiosity, 76% for flight of ideas/racing thoughts, 75% for distractibility/poor concentration, 29% for confusion (Goodwin, Jamison 2007; Jamison 1993). By comparison, the weighted mean for the mood and cognitive changes during intensive creative episodes (which may well imply the emergence of gamma power) is as follows: 80% for enthusiasm, 68% for energy, 65% for assertiveness, 63% for fluency of thoughts, 58% for ability to concentrate, 56% for sense of well-being, 53% for hyperesthesia, 21% for impulsivity, 19% for irritability, 13% for talkativeness, 10% for fantasy-proneness, 6% for anxiety (Jamison 1993; Cosman, Pîrvu 2012: 148–153).

4. MIHAI EMINESCU'S BIPOLAR-I DISORDER, GENETICALLY-BASED

Of the eleven children of Gheorghe and Raluca (a supposedly cyclothymic temperament herself) (Călinescu 1966), three died in infancy or early childhood: Ruxandra (b. 1845), Maria (1848–1855), Vasile (b. (?)–1858) – 27.27%. A fourth one, Ilie (1846–1862) died in his teens and we have no way of knowing what he may have developed in terms of psychopathology. A medical student, working under the supervision of dr. Carol Davila, he caught typhus from the soldiers at the Military Hospital in Bucharest (Crețu, 1968).

As for the other seven, a staggering figure (63.64%) by all means, they all have a psychiatric history (Cosman, Pîrvu 2013: 16–19)⁴.

With such a pedigree, small wonder that Titu Maiorescu (1883) found the reasons for Eminescu's illness in his "fateful heredity"; Ion Luca Caragiale (1892) did not think different when stating that the Poet was "born to die the way he died".

⁴ Șerban (1841–1874), the first-born, had a hard time going through high school in Czernowitz – much like his younger brothers Nicolae, Iorgu, Ilie and Mihai himself –, was a brilliant medical student in Vienna and, a few weeks away from a surgery free practice was hospitalized for his chest disease (*Brustkrankheit*) following severe mind disorders (*von Geistesaberration*), and died of an old tuberculosis (Crețu 1968; Pop 1962).

Nicolae (1843–1884) read law in Sibiu and then died of his own hand, perhaps losing confidence with Mihai's illness half a year before and his father's death a few weeks before (Pop 1962).

Iorgu (1844–1873), just "as handsome, shy, smoothly-mannered and odd" (Caragiale 1889) as Mihai, was a brilliant student at the Military Academy in Prussia and, "hours before being employed on General Moltke's major staff, went home, took a gun and killed himself" (Caragiale 1889) without leaving any suicide note. His old tuberculosis might have played a role in his unexpected decision (Pop 1962; Călinescu 1966).

Mihai (1850–1889) died in a mental hospital in Bucharest after a six-year agony, his literary friends watching helplessly all of this national ordeal (Nica 1972; Murărașu 1983).

Aglaiia (1852–1906), beautiful and very lonely, had a son who went from a madhouse to another, dying away with paranoid schizophrenia; she herself was killed in the end by the Graves-Basedow disease (Călinescu 1966).

Harieta (1854–1889), "a genius on her own, with a Napoleon-like memory and an unparalleled natural wisdom" (Ms 2255: 294, 311), was actually half-dead all of her life, with an apoplexy that made her unable to move her legs (Călinescu 1966). "Brain congestion" was the official version of her death on 14 October 1889, but we have sound reasons to believe, if we consider her letter to Aglaia two days earlier, on 12 October – "I can't go on with my life, my illness and my helplessness will make me kill myself" (Ms 2255: 294) – that she also committed suicide, raising the percentage of suicides in the family to 27.27%.

Matei (1856–1929) graduated from the Polytechnic Institute in Prague, was a captain in the Romanian Army for some time, but his unusually violent temper (actually a succession of manic episodes) made him incapable to keep his job. One of his sons died of Graves-Basedow disease.

To complete the picture, Iorgu Iurașcu, the Poet's maternal uncle, was "quite eccentric" and, indeed, "out-of-the-way" – he must have had cyclothymic disorder; Anița Florea, the Poet's first-cousin, had two sons, one of them "mad" and the other "idiotic."

5. POEM PATHO-CHRONOLOGIES

What with this genetically-based illness, and what with various precipitants (love affairs, political disputes) of the probably 4-month cycles (Angst 1978: 65–73; Angst, Preisig 1995: 5–16), Mihai Eminescu fared well under pressure. The average age at onset is approximately 25 (most likely 22 in the 19th century) (Judd, Akiskal *et al.* 2003: 261–269; Judd, Akiskal *et al.* 2003: 19–32; Goodwin, Jamison 2007), his was 33. His *Junimea* friends and mainly his mentor Titu Maiorescu must have had a say in the matter, not to mention that the illness had been running in the family – he was dealing with it as to the manner born, therefore. Judging by the poems themselves this time, spleen, if not downright melancholia, had always been there – which is why severe depression (Maj, Pirozzi *et al.* 1989: 237–241) rather than the more customary mania (Goodwin, Jamison 2007) came first, accompanied by a splitting headache as prodrome. In mid-October 1882 it all seemed to be a so-called “false” unipolar depression (American Psychiatric Association, 2000) that within half a year switched into a “hypomanic alert” (Jacobsen 1965: 295–299), with sleep disturbance as prodrome. With this hypomania or not, the severe manic episode (Russu-Şirianu 1969) followed suit, the change being twice as visible to his friends who committed him to Dr. Şuţu’s mental hospital. This first fit of acute mania took place between 28 June and 10 July 1883: he was thus first taken to the sanatorium of Dr. Şuţu, and afterwards, when the acute symptoms were alleviated, he was removed to Vienna, where he remained until February 1884 (cf. Prelipceanu 2015: 101, 102). By all means and purposes, the poet’s life was over, becoming a kind of *deja-vu*: he was recommitted to mental hospitals in 1886 and 1889, for identical symptoms occurring periodically, in a pattern (every three years or so).

If so, and ***if the intensive creative episode is what really counts***, the history of a long list of poems should be re-written. Poems like “Hyperion” (*Luceafărul*), “Love is gone and lost for ever” (*S-a dus amorul*), “Where poplars solitary grow” (*Pe lângă plopii fără soţ*), “Whenever” (*Şi dacã*), “Up to the star” (*La steaua*) whose dates on record are 1883, should be placed earlier, in 1882, before the mid-October 1882 depressive episode – given their highly melancholic philosophy (markers: solitude, coldness, sense of painful irremediable loss, sense of being lost in the infinity of space and time, etc.). As to poems like “I have yet one desire” (*Mai am un singur dor*), “If I should fall asleep” (*De-oi adormi*), “I won’t have a grave adorned” (*Nu voi mormânt bogat*), “When I am dust and ashes” (*Iar când voi fi pãmânt*) whose dates are traditionally 1881–1883, we ought to be more choosy and get 1883 out of the picture. With 1881 also unlikely to be the case, a more probable dating for these poems would be 1882, a period which is closer to the afore-mentioned depressive episode (the mid-October 1882) – given their intensely pessimistic philosophy.

As for *Doina* – which we first intended to translate as “Lament” thus to lovingly refer it back to an Anglo-Saxon tradition that might ring a bell with the

English-speaking readers – the date on record is 1883, simply because the poem was intended for the inauguration, that same year, of a statue dedicated to Stephen the Great. The medical records however, tell a different story, further inviting us to see that the poem itself is “bipolar”, that there is a radical change in tone halfway through it, in tune with the switch from depression to mania – which makes us opt for another, probably more appropriate, English title, “Lament and curse.” In other words, the first part of the poem (“From Tisa to Dniester’s tide/All Romanians to me cried,/That they could no longer dwell/Amidst the foreign swell... The foreigner is everywhere/Like you were no longer there...They as flooding waters are. Oh, the poor Romanians all/Like the crab they backwards crawl...Now all strangers in their land...Enemies in steady strew/ All, together, overcome you/As they arrive by railway/All our songs they drive away,/All the birds fly out of sight/From the wretched foreign plight”) may have been written also in 1882 (late summer, early autumn), whereas the second part (“He who loves the foes about/May his heart the dogs rip out,/May desert his home efface,/May his sons live in disgrace!...Rise, O’Stephen, mighty Prince...Rise, O’Stephen, from the ground...If you blow your horn one blare/All Moldavia will be there,/If you sound a second time/All the woods will fall in line,/If your horn is blown again/All the enemies will be slain/And our borders we regain,/That the crows may hear their cry/Above gallow trees so high”) will have been written during the hypomanic episode in late 1882 winter, early 1883 spring. The date for *Doina* should consequently be given as 1882–1883.

6. FURTHER LINGUISTIC CONSIDERATIONS

As a matter of fact, two existential levels come together in Eminescu’s poems. In *Doina*, the *feeling* of disquiet and uncertainty is graphically dealt with, and then the attitude to this situation takes the form of invocation and imprecation. In other words, both feeling and attitude take an objective shape in words and phrases whose meaning reactivates the two hypostases in terms of reception. This opportunity we are presented with shows that linguistic data are able to refer back to the mental states that eventually are most likely to have triggered them off, and ultimately to the poet’s intellectual condition – which is why one could get a glimpse, on the basis of this particular text, and beyond the creative process, into the creative mind.

The opposition between the glorious past represented by Stephen the Great and the trivial present the poet is confined to gets an antagonistic approach, with situations to illustrate suffering and discontent, with the aura of the illustrious prince to kill *all the enemies*. This poetic discourse is deeply romantic in nature, the disappointment and the growing solitude coming through indirectly, in the course of experiencing a suffering communicated by the social milieu (*tot românul plînsu-*

mi-s-a/all the Romanians to me cried), going through causes, the personal involvement in a curse to befall *him who loves the foes about*, the invocation to the prince (the ideal past, in good romantic tradition) and finally the curse called upon to visit all of the foes, for the benefit of *the crows that will hear their cry above gallow trees so high*.

The linguistic media Eminescu made use of were selected exclusively, and adapted to meet with the requirements of *doina*, an elegiac folk poem; prosody (beat, rhythm, rhyme, metre), to be sure, fell in line – which is not in the least surprising for this eminent poet who, in tune with all the romantics, just worshipped folk creation and did whatever it takes to stand by. Nevertheless, his personality found its full correspondent in the spirit of the poem, the feelings and the attitudes being precise, straightforward and uncompromising. In fact, the poet's persona-as-receiver is revealed as early as the second verse, with *plânsu-mi-s-a/all* Romanians to me cried. And the answer is not a proper answer but an extreme solution-as-punishment in a folk key involving the ultimate curse. The manner phenomena are experienced, the way to interpret them and change them into a poetic object, as well as the intensity of perception did not fail to catch the eye of Garabet Ibrăileanu (1980) and George Călinescu (1966), for example, who related the poet's sensibility and poetic violence to the poet's temperament and, in no less measure, to his genetic inheritance.

The linguistic activity involves the nervous system, central and peripheral, also the incumbent neural network – which is why neurolinguistics (inside neuropsychology) took it as its objective to study the relations between language and brain structures, going on the assumption that language (speech included) is based in the left hemisphere – the neurolinguistic approach to the language (much like cognitive or frame linguistics) taking over the 19th century interest in aphasia, in anatomic and clinical terms. The long-term consequence was the stipulation of a causal relation between the personality traits of the speaker and his speech acts, oral or written, as the expression of the relations between intellect and the brains.

7. CONCLUSIONS

Chapters 1–3, by design rather than by chance, could well be part of the conceptual framework for a computer program to describe bipolar language – with special references to the bipolar-I language which, if genetically based as most likely it is, provided the fundamentals of Mihai Eminescu's vocabulary. Chapter 4 makes the transition to the case of Mihai Eminescu and his poetic language, that we may gain ground for Chapter 5 which implies that medical records – especially when corroborated with memoirs and the like, with public records and eventually with well-balanced references extracted from literary works – will certainly be of much assistance to the biographer. Chapter 6 gives further evidence that, in our

attempt to sketch through a case study the method of linguistic patho-chronology, linguistic analysis can be quite an efficient feedback agent when used in conjunction with medical analysis, with a view to “triangulating” in our case the relevant data yielding a more accurate poem dating. In the modern context in which sciences like, for instance, genetics, linguistics and archeology tend to conjugate their efforts and ways into joint enterprises in order to better approximate the increasingly more highly complex scientific truth that is revealed in scientific interdisciplinary research, our approach shows that, in such difficult fields like literary dating, the interdisciplinary approach is a must, especially in those areas of research where biographical information is sparse, uncertain, controversial or altogether absent.

REFERENCES

- Abrams, M.H., 1971, *The milk of paradise: the effect of opium visions on the works of De Quincey, Crabbe, Francis Thompson, and Coleridge*, New York, Octagon Books.
- Andor, J., 2010, “Discussing frame semantics: The state of the art – An interview with Charles J. Fillmore”, *Review of Cognitive Linguistics*, 8, 1, 157–176.
- American Psychiatric Association, 1980, *Diagnostic and Statistical Manual of Mental Disorders*, 3rd ed. Washington DC, American Psychiatric Publishing.
- American Psychiatric Association, 2000, *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. Washington DC, American Psychiatric Publishing.
- American Psychiatric Association, 2013, *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. Washington DC, American Psychiatric Publishing.
- Andreasen, N. C., B. Pfohl, 1976, “Linguistic analysis of speech in affective disorders”, *Arch Gn Psychiatry*, 33, 1361–1367.
- Andreasen, N., 2006, *The creative brain: the science of genius*, New York, Plume.
- Angst, J., M. Preisig, 1995, “Course of a clinical cohort of unipolar, bipolar and schizoaffective patients: Results of a prospective study from 1959 to 1985”, *Schweiz Arch Neurol Psychiatr*, 146, 5–16.
- Angst, J., 1978, “The course of affective disorders: II. Typology of bipolar manic-depressive illness”, *Arch Psychiatr Nervenkr*, 226, 65–73.
- Arato, M., E. Demeter, Z. Rihmer, E. Somogyi, 1998, “Retrospective psychiatric assessment of 200 suicides in Budapest”, *Acta Psychiatr Scand*, 77, 4, 454–456.
- Aretaeus, 1856, *The Extant Works of Aretaeus, the Cappadocian*, London, Sydenham Society.
- Baillarger, J., 1854, “De la folie à double forme”, *Annales médico-psychologiques du système nerveux*, 6, 369–391.
- Baldessarini, R. J., L. Tondo, G. Floris, J. Hennen, 2000, “Effects of rapid cycling on response to lithium maintenance treatment in 360 bipolar I and II disorder patients”, *Journal of Affective Disorders*, 61, 1–2, 13–22.
- Benazi, F., 1999, “A Comparison of the age of onset of bipolar I and bipolar II outpatients”, *Journal of Affective Disorders*, 54, 3, 249–253.
- Bhose, A., 1978, *Eminescu și India*, Iași, Junimea.
- Bleuler, E., 1924, *Textbook of Psychiatry*, New York, The Macmillan Company.
- Buzsaki, G., 2006, *Rhythms of the brain*, Oxford, Oxford University Press.
- Caragiale, I. L., 1889, “În Nirvana”, *Constituționalul*, 20 June.
- Caragiale, I. L., 1892, “Ironie”, *Timpul*, 15 July.
- Călinescu, G., 1966, *Viața lui Mihai Eminescu*, București, Editura pentru Literatură.

- Coryell W., J. Endicott, N. Andreasen, M. Keller, 1985, "Bipolar I, bipolar II and nonbipolar major depression among the relatives of affectivity ill probands", *American Journal of Psychiatry*, 142, 7, 817–821.
- Coryell, W., J. Endicott, M. Keller, 1992, "Rapidly cycling affective disorder. Demographics, diagnosis, facility, history, and course", *Arch Gen Psychiatry*, 49, 2, 126–131.
- Cosman, D., B. C. S. Pîrvu, 2014, *Prețul poeziei*, Iași, Artistic Creativity Library.
- Cosman, D., B. C. S. Pîrvu, 2013, "The Poet's family", *Rom J Art Creativity*, 1, 4, 16–19.
- Cosman, D., B. C. S. Pîrvu, 2012, "Prețul artei. Purgatoriul poetului", *Convorbiri literare*, 199, 7, 148–153.
- Crețu, I., 1968, *Mihai Eminescu. Bibliografie documentară*, București, Editura pentru Literatură.
- Dax, E. C., 1953, *Experimental Studies in Psychiatric Art*, London, Faber & Faber.
- Dunner, D. L., E. S. Gershon, F.K. Goodwin, 1976, "Heritable factors in the severity of affective illness", *Biol Psychiatry*, 11, 31–42.
- Enăchescu, C., 1971, "Aspects of pictorial creation in manic-depressive psychosis", *Confin Psychiatr*, 14, 133–142.
- Endicott, J., J. Nee, N. Anderson, P. Clayton, M. Keller, W. Coryell, 1985, "Bipolar II: Combine or separate", *J. Affect Disord*, 8, 17–28.
- Fillmore, C. J., 1982, "Frame Semantics", *Linguistics in the Morning Calm: Selected papers from SICOL-1981*, The Linguistic Society of Korea, Seoul, Korea, Hanshin Publishing Company, 111–137.
- Fillmore, C. J., B. T. Atkins, 1992, "Toward a Frame-Based Lexicon: The Semantics of RISK and its Neighbors", *Frames, Fields and Contrasts: New Essays in Semantic and Lexical Organization*, Hillsdale, Erlbaum, 75–102.
- Ghaemi, S. N., D. J. Hsu, JY Ko, C. F. Baldassano, N. J. Kontos, F. K. Goodwin, 2003, "Bipolar spectrum disorder: a pilot study", *Psychopathology*, 37, 5, 222–226.
- Goodwin, F. K., K. R. Jamison, 2007, *Manic-depressive Illness. Bipolar Disorders and Recurrent Depression*, 2nd ed., New York, Oxford University Press.
- Greenberg, J. H., 2005, *Genetic Linguistics: Essays on Theory and Method*, Oxford, Oxford University Press.
- Hantouche, E. G., H. S. Akiskal, S., Lancrenon, J. F. Allilaire, D. Secher, J. M. Azorin, M. Bourgeois, J. P. Fraud, L. Châtenet-Duchêne, 1998, "Systematic clinical methodology for validating bipolar-II disorder: data in mid-stream from a French national multi-site study (EPIDEP)", *J Affect Disord*, 50, 163–173.
- Hippocrates, 1891, *The Genuine Works of Hippocrates*, New York, William Wood & Co.
- Ibrăileanu, G., 1980, IX, *Opere. Istoria literaturii române moderne. Epoca Eminescu*, București, Editura Minerva.
- Jacobsen, J. E., 1965, "The Hypomanic alert: A program designed for greater therapeutic control", *Am J Psychiatry*, 122, 295–299.
- Jamison, K. R., 2004, *Exuberance. The Passion for Life*, New York, Vintage Books.
- Jamison, K. R., 1993, *Touched with Fire: Manic-Depressive Illness and the Artistic Temperament*, New York, Free Press.
- Judd, L. L., H. S. Akiskal, P. Schettler, J. Endicott, J. Maser, D. Solomon, A. Leon, W. Coryell, M. Keller, 2003, "A prospective of the natural history of the long term weekly symptomatic status of bipolar II disorder", *Arch. Gen. Psychiatry*, 60, 3, 261–269.
- Judd, L. L., H. S. Akiskal, W. Coryell, P. Schettler, J. Maser, J. Rice, D. Solomon, M. Keller, 2003, "The comparative clinical phenotype and long term longitudinal episode course of bipolar I and II: a clinical spectrum or distinct disorders?", *J Affect Disord*, 73, 19–32.
- Judd, L. L., P. J. H. S. Akiskal, J. Maser, W. Coryell, D. Solomon, J. Endicott, M. Keller, 2003, "Long-term symptomatic status of bipolar I vs. bipolar II disorders", *International Journal of Neuropsychopharmacology*, 6, 2, 127–137.
- Kraepelin, E., 1899, *Manic-Depressive Insanity and Paranoia*, Edinburgh, E. S. Livingstone.

- Leoveanu, I. H. T., M. A. Stroe, B. C. S. Pîrvu, C. M. Borzan, 2015, "Art-generating stress in high-school arts students", *AARJSH*, 35, 288–300.
- Lowes, J. L., 1978, *The road to Xanadu: a study in the ways of the imagination*, London, Picador, Pan Books.
- Maiorescu, T., 1883, "Poetul Eminescu", *Poezii de Eminescu*, București, Socec.
- Maj, M., R. Pirozzi, A. M. Formicola, A. Tortorella, 1999, "Reliability and validity of four alternative definitions of rapid-cycling bipolar disorder", *Am J Psychiatry*, 156, 1421–1424.
- Maj, M., R. Pirozzi, F. Starace, 1989, "Previous pattern of course of the illness as a predictor of response to lithium prophylaxis in bipolar patients", *J Affective Disord*, 17, 237–241.
- McMahon, A., R. McMahon, 2005, *Language Classification by Numbers*, Oxford, Oxford University Press.
- Murărașu, D., 1983, *Mihai Eminescu. Viața și opera*, București, Editura Eminescu.
- Nica, I., 1972, *Eminescu. Structura somato-psihică*, București, Editura Eminescu.
- Pop, A. Z. N., 1962, *Contribuții documentare la bibliografia lui Mihai Eminescu*, vol. 1, București, Editura Academiei.
- Prelipeanu, D., 2015, "Eminescu și boala sa psihică: argumente din perspectiva psihiatriei actuale", in: E. Simion, I. Popescu, I.-A. Pop (eds), 100–105.
- Prisacariu, C., M. A. Stroe, B. C. S. Pîrvu, 2015, "The all-too-stressful creative process", *Asian Academic Research Journal of Multidisciplinary*, 2, 5, October, 131–146.
- Reitman, F., 1950, *Psychotic Art*, London, Routledge and Kegan Paul.
- Rihmer, Z., P. Pestaloty, 1999, "Bipolar II disorder and suicidal behavior", *Psychiatr Clin North Am.*, 22, 3, 667–673.
- Russu-Șirianu, V., 1969, *Vinurile lor*, București, Editura pentru Literatură.
- Serretti A., P. Olgiati, 2005, "Profiles of manic symptoms in bipolar I, bipolar II and major depressive disorders", *J Affect Disord*, 84, 2–3, 159–166.
- Simion, E., I. Popescu, I.-A. Pop (eds), 2015, *Maladia lui Eminescu și maladiile imaginare ale eminescologilor*, București, Fundația Națională pentru Știință și Artă.
- Slater, E., A. Meyer, 1959, "Contributions to a pathography of the musicians: Robert Schumann", *Confinia Psihiatrica*, 2, 65–94.
- Vieta, E., C. Gasto, A. Otero, E. Nieta, J. Vallejo, 1997, "Differential features between bipolar I and bipolar II disorder", *Comprehensive Psychiatry*, 38, 2, 98–101.
- World Health Organization, 1992, *The ICD-10 Classification of Mental and Behavioural Disorders. Clinical Descriptions and Diagnostic Guidelines*.
- Zimmerman, J., L. Garfinkle, 1942, "Preliminary study of the art productions of the adult psychotic", *Psychiatr Q*, 16, 313–318.

Acknowledgements. The authors wish to hereby thank Prof. dr. Alexandra Cornilescu for her support with valuable ideas and insights concerning the present research project – the linguistic implications and possibilities of practical application being ample, we are the more appreciative for her personal efforts implied in the work of evaluation and enhancement of the potential of the present research project.

