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# The characteristic signs and symptoms of mania and depression according to Kraepelin circa 1905: a comparison with DSM-III

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## Original Article

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## Abstract

Although the rise of operationalized diagnostic criteria and the creation of DSM-III were influenced in the USA by a neo-Kraepelinian 'revival' of interest in psychiatric nosology, Kraepelin was only a distal influence on the specific diagnostic criteria proposed. The historical origins of the DSM-III criteria for mania and major depression (MD) are traceable back to the 1950s and contain no direct link to Kraepelin's writings. George Dreyfus, a student and assistant to Kraepelin, authored in 1907 a monograph on Involutional Melancholia which reviewed cases seen by Kraepelin in Heidelberg. In this monograph, Dreyfus presents the 'characteristic' symptoms for mania and depression 'as described by Kraepelin.' This historical finding provides the unprecedented opportunity to examine the resemblance between the criteria proposed for mania and depression in DSM-III, inspired by Kraepelin's nosologic vision, and those specifically suggested by Kraepelin 73 years earlier. Kraepelin's symptoms and signs for mania paralleled seven of the eight DSM-III criteria (except the decreased need for sleep), with two not included in DSM-III (increased mental activity and short bursts of sadness). Kraepelin's signs and symptoms paralleled six of the nine DSM-III criteria for MD, lacking suicidal ideation and changes in appetite/weight and sleep but including obsessions, reduced expressive movements, and decreased mood responsiveness. Although Kraepelin's overall approach to mania and depression emphasized their close inter-relationship in the cyclic course of manic-depressive illness, it is noteworthy Kraepelin's 'characteristic' symptoms for mania and depression as described by Dreyfus, bear substantial but incomplete resemblance to the criteria proposed in DSM-III.

In what has been termed the Neo-Kraepelinian 'revival' (Klerman, 1990) or 'revolution' (Compton & Guze, 1995), Emil Kraepelin (1856–1926) served as an icon for post-psychoanalytic American Psychiatry in the twentieth century and helped propel an increased focus on diagnosis, one key feature of which was the emergence and eventual dominance of operationalized criteria (Klerman, 1978). While an inspirational figure, Kraepelin was only a distal influence on the specific diagnostic criteria that were proposed, including those for mania and major depression (MD), the foci of this essay.

The 1980 DSM-III criteria for mania and MD closely resembled those proposed in the Research Diagnostic Criteria (RDC) (Spitzer, Endicott, & Robins, 1975) which were substantially influenced by those of the Feighner Criteria (Feighner et al., 1972). The Feighner criteria for depression were in turn influenced by two studies published in the 1950s (Cassidy, Flanagan, Spellman, & Cohen, 1957; Kendler, Munoz, & Murphy, 2010; Stone & Burris, 1950), while the only known precursor to the Feighner criteria for mania was a paper published in 1967 (Hudgens, Morrison, & Barchha, 1967). Then the trails go cold.

It was therefore of considerable interest when reviewing the German 329-page monograph published in 1907 by George Dreyfus entitled 'Melancholia: A Picture of Manic-Depressive Insanity. A Clinical Study (Dreyfus, 1907;Kendler, K. S., & Engstrom),' that I came upon sets of 'characteristic' symptoms and signs used by his mentor, Emil Kraepelin, in the diagnosis of mania and depression depicted in the original German in Figs 1 and 2. These symptoms and signs give us, for the first time to my knowledge, the opportunity to examine the resemblance between the influential criteria proposed for mania and depression in the landmark DSM-III, inspired in part by Kraepelin, and those suggested by Kraepelin himself more than 70 years earlier.

## Background

Georg Ludwig Dreyfus was born on 25 April 1879, in Frankfurt Germany and died on 6 March 1957, in Zurich Switzerland (Wikipedia, 2019). His father was a banker, active in the Frankfurt Jewish community. At the age of 20, he began the study of medicine in Freiburg, Munich, Berlin, and Heidelberg. After passing his state medical exams, Dreyfus took a position at the university psychiatric clinic in Heidelberg in 1904 where, in 1905, he received his



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Die der Manie eigentümlichen Symptome:

1. Euphorie (stille Heiterkeit bis zur unbändigen Fröhlichkeit).
2. Erhöhte Erregbarbeit, die sich von Empfindlichkeit bis zur Reizbarkeit und zu Zornausbrüchen mit wüstem Schimpfen steigern kann.
3. Ablenkbarkeit.
4. Betätigungsdrang (erhöhte Geschäftigkeit, Rededrang).
5. Gehobenes Selbstgefühl (Herrschsucht, Rücksichtslosigkeit).
6. Mangel an innerer Einheit des Vorstellungsverlaufs (Fadenverlieren, Gedankenunruhe, Ideenflucht).
7. Gesteigerte Aufmerksamkeit und geistige Regsamkeit.
8. Rascher, kurzdauernder Umschlag von trauriger Verstimmung in Euphorie.
9. Wahnideen (Größenideen, Eifersuchtswahn etc.).

**Fig. 1.** The original text gives Kraepelin's 'Characteristic Symptoms' for mania.

doctorate. Kraepelin directed this clinic from 1892 to 1903 before departing for Munich, succeeded in the Professorship by his close colleague Franz Nissl (made famous through his discovery of the Nissl stain) in charge. Evidence suggests that Dreyfus studied under Kraepelin in Munich, perhaps during the summer of 1904, before moving to Heidelberg to take up his official post.

Kraepelin received a great deal of criticism for the nosologic position he took in the famous 6th edition of his textbook in which involutional melancholia (IM) was not incorporated into his new category of manic-depressive illness (|MDI) (Kraepelin, 1899, 1990). He conceived of an empirical way to address the question of the relationship between these two disorders and soon thereafter asked Dreyfus to undertake the study. The investigation consisted of a detailed chart-review and personal follow-up of all the cases Kraepelin had diagnosed as involutional melancholia while working in Heidelberg. Kraepelin asked Nissl to facilitate the study. Dreyfus and Kraepelin were in touch with each other during the time Dreyfus was doing the study and writing it for publication. Kraepelin wrote a laudatory introduction to the monograph which began:

> My colleague Dreyfus has undertaken the equally difficult and rewarding task of researching the fates of the patients who, since 1892, were diagnosed with melancholia at Heidelberg. Even if only some of these patients are still alive, his research has in a decisive way largely brought clarity to the much-disputed question of the clinical significance of melancholia ((Dreyfus, 1907) p. v).

Of note, in other publications, Dreyfus has been referred to as 'a former pupil and assistant of Prof. E. Kraepelin (Karpas, 1908),' a 'former disciple of Kraepelin ((Palm & Moller, 2011) p. 319),' and Kraepelin's 'pupil and colleague' [(Marneros & Angst, 2010) p. xvi].

He worked at the University Hospital in Heidelberg until 1908, moving first to Berlin and then in 1910 to the University Hospital Frankfurt. During the First World War, Dreyfus became Deputy Director of the University Hospital and in 1921 an associate professor, and, later, also worked in the Municipal Hospital and became involved in the Zionist movement. As a Jewish university teacher, he was affected by the 1933 Law on the Restoration of the Civil Service issued by the Nazi government and was dismissed both as a professor and from the municipal service. He emigrated with his family to Switzerland, where he had a private practice until his death in 1957.

Die der Depression eigentümlichen Symptome:

1. Traurige Verstimmung, die sich bis zu Angst und Verzweiflungsausbrüchen steigern kann.
2. Depressive Vorstellungskreise (Mißempfindungen, hypochondrische und ängstliche Befürchtungen, Selbstvorwürfe, Wahnideen im Sinne der Versündigung. Phantastisch ängstliche Vorstellungen aller Art etc.).
3. Zwangsvorstellungen.
4. Rascher, kurzdauernder Umschlag von Euphorie in traurige Verstimmung.
5. Psychomotorische Hemmung:

A. Subjektive Hemmung:
   a) Gefühl der Abnahme aller intellektuellen Funktionen (Verlieren der Kenntnisse, des Gedächtnisses, Zerstreutheit etc.).
   b) Gefühl der Erschwerung des Denkens und der Auffassung.
   c) Gefühl der Abnahme der gemütlichen Ansprechbarkeit (Unvermögen irgendwelchen Empfindens, innerliche Verödung und Vereinsamung etc.).
   d) Gefühl der Hemmung des Willens und der Willenshandlungen (Störungen des Handelns, Mangel an Tatkraft, Arbeitsunfähigkeit, Unvermögen des Emporraffens zu irgend einer Handlung etc.).
   e) Entschlußunfähigkeit.
   f) Gefühl der Müdigkeit und Abspannung.

B. Objektive Hemmung:
   a) Die subjektiven Empfindungen sind objektiv feststellbar.
   b) Erstarren der Ausdrucksbewegungen.

**Fig. 2.** The original text gives Kraepelin's 'Characteristic Symptoms' for depression.

## Monograph

The results of Dreyfus's investigation into Kraepelin's cases of IM was published in 1907 as a 329-page monograph entitled 'Melancholia: A Picture of Manic-Depressive Insanity. A Clinical Study (Dreyfus, 1907; Kendler & Engstrom, 2020).' It contained a detailed clinical and follow-up study of the 81 definite cases of IM admitted to Heidelberg Psychiatric Clinic from 1892 to 1906. The monograph contained a section entitled 'The Delineation of Manic-Depressive Insanity' in which Dreyfus described Kraepelin's approach to MDI noting that he was the first to have 'emphasized the analysis of the clinical picture.'

After some introductory remarks, Dreyfus turns to explicitly outlining Kraepelin's diagnostic approach to the manic and depressive presentations that occurred within his broad concept of MDI. To be clear, his concept was not identical to what we would now consider bipolar disorder, as single or recurrent depressive episodes was also considered by Kraepelin to be part of MDI. In was in this context that, starting on page 29, Dreyfus listed the symptoms and signs 'as described by Kraepelin' that was 'characteristic' of each of the two phases of MDI, starting with mania (Figs 1 and 2).

## Kraepelin's characteristic symptoms of mania

According to Dreyfus, Kraepelin emphasized nine symptoms and signs that were particularly characteristic of mania which are translated, along with their parallels in the DSM-III criteria, in Table 1. To avoid confusion, I refer to Kraepelin's symptoms

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**Table 1.** Kraepelin's characteristic symptoms and signs of mania as reported by Dreyfus and their Parallels in DSM-III mania criteria

| # | Description | Parallel criterion in DSM-III | Summary of DSM criterion |
|---|---|---|---|
| 1 | Euphoria (quiet cheerfulness up to boundless merriment). | A | … periods with a predominantly elevated, expansive or irritable mood |
| 2 | Heightened agitation, which can increase from touchiness to outbreaks of rage with ranting. | A | ditto |
| 3 | Distractibility. | B6 | Distractibility |
| 4 | Pressured hyperactivity (heightened business, talkativeness). | B1 | Increase in activity (socially, at work or sexually) or restlessness |
| | | B2 | More talkative that is unusual |
| 5 | Heightened sense of self (pressure to dominate), recklessness. | B4 | Inflated self-esteem (grandiosity which may be delusional) |
| | | B7 | Excessive involvement in activities with high potential for painful consequences |
| 6 | Lack of inner unity of conceptual processes (losing the thread, mental unrest, flight of ideas). | B3 | Flight of ideas or thoughts racing |
| 7 | Increased attention and mental activity. | -- | |
| 8 | Rapid, short-lived change of sad disordered mood to euphoria. | -- | |
| 9 | Delusional ideas (grandiose delusions, delusional jealousy, etc.) | B4 | Inflated self-esteem (grandiosity which may be delusional) |

and signs as *symptoms* and the DSM-III items as *criteria*. The first two of Kraepelin's characteristic symptoms describe primary mood components of the manic syndrome with # 1 reflecting the elevated mood and # 2 both the subjective and objective manifestations of irritability. Both are components of the DSM-III criterion A for mania.

Symptom # 3, 'distractibility,' corresponds exactly with the DSM-III criterion B-6 for mania. Kraepelin's symptom # 4 describes increased activity with two examples. One of them, 'heightened business,' is analogous to one example in DSM-III criterion B-1 for increases in activity 'at work.' The second 'talkativeness' is closely related to the DSM-III criterion B-2 ('more talkative than usual ….').

Kraepelin's fifth symptom ('Heightened sense of self …') reflects the grandiosity common in mania, as assessed by criterion B-4 in DSM-III, but also the behavioral trait of recklessness captured in DSM-III criterion B-7 ('excessive involvement …'). Symptom # 6 is relatively abstract, describing cognitive disorganization. Of the three examples provided, one of them – 'flight of ideas' – corresponds directly to DSM-III criterion B-3.

Symptoms # 7 (increased attention/mental activity) and # 8 (short periods of sad mood) in Kraepelin's list have no clear parallels in the DSM-III criteria. However, the former is likely related to the subjective feeling of 'racing thoughts' included in DSM-III criterion B-3 and the latter is part of the mixed feature specifier for bipolar illness added in DSM-5. Finally, symptom # 9 (delusional ideas) with grandiose delusions as the first example, is, like symptom # 4, related to DSM-III criterion B-4.

## Kraepelin's characteristic symptoms of depression

Kraepelin considered only five symptoms as especially characteristic of depression but his fifth symptom had 8 'sub-symptoms' (see Table 2). Symptom # 1 – 'sad, disordered mood' corresponds closely to the DSM-III criterion A-1, except that Kraepelin adds the possible co-occurrence of anxiety. Symptom # 2 reflects what Kraepelin calls 'depressive conceptions' which might be currently considered 'cognitions.' This symptom is broad and includes self-derogatory beliefs of non-psychotic and psychotic intensity, but also unrealistic anxious and hypochondriacal fears. It is most closely matched by DSM-III criterion A-6.

Symptoms # 3 and # 4 for depression, which reflect obsessions and brief periods of euphoric mood, have no parallels with DSM-III criteria, but the latter is similar to criterion A-1 for mixed features for MD in DSM-5. Kraepelin's global symptom # 5 appears, from the numerous specific sub-symptoms, to be describing a broad range of clinical features that reflect psychomotor retardation at least some of which is analogous to parts of DSM MD criterion A-3.

The further sub-symptoms are divided into those that reflect subjective and objective manifestations of psychomotor inhibition. Sub-symptoms 5A.i ('decrease of all intellectual functions') and 5A.ii ('difficulty in thinking') both parallel DSM-III criterion A-7. Sub-symptom 5A.iii is quite different in content ('decreased mood responsiveness') and is closely related to DSM-III criterion B for melancholia and resembles, to some degree, MD criterion A-4.

Kraepelin's symptom 5A.iv ('inhibition of volitional activities') is not well captured by DSM-III criteria but may reflect processes that underlie some aspects of psychomotor retardation. 5A.v ('inability to make decisions') closely parallels parts of DSM criterion A-7 ('indecisiveness'). Symptom 5A.vi ('tiredness and fatigue') is nearly identical with DSM-III MD criterion A-6.

Kraepelin's final two characteristics 'symptoms' for depression reflect objective manifestations of psychomotor inhibition. The first of this 5B.i is rather vague in the description and implies that this covers all the signs that parallel the symptoms of 'inhibition' listed under 5A. One might expect several of these, especially A.iv and A.vi to be manifest as psychomotor retardation (DSM criterion A-5) but this is not explicitly stated. His final

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**Table 2.** Kraepelin's characteristic symptoms and signs of depression as reported by Dreyfus and their parallels in DSM-III criteria for major depression

| # | | | | Parallel criterion in DSM-III | Summary of DSM criterion |
|---|---|---|---|---|---|
| 1 | | | Sad disordered mood which can escalate to anxiety and outbreaks of despair. | MD A1 | Dysphoric mood, e.g. depressed, sad, blue, hopeless … |
| 2 | | | Depressive conceptions (misperceptions, hypochondriac and anxious fears, self-reproaches, delusions in the sense of sinfulness. Fanciful anxious notions of all kinds, etc.). | MD A6 | Feelings of worthlessness, self-reproach or inappropriate guilt (maybe delusional) |
| 3 | | | Obsessive thoughts. | -- | -- |
| 4 | | | Rapid, short-lived change from euphoria to sad disordered mood | -- | -- |
| 5 | | | Psycho-motor inhibition | MD A5 | Psychomotor retardation |
| | A | | Subjective inhibition | | |
| | | i | Feeling of decrease of all intellectual functions (loss of knowledge, memory, absentmindedness, etc.). | MD A7 | Diminished ability to think or concentrate, indecisiveness |
| | | ii | Feeling of difficulty in thinking and understanding. | MD A7 | Diminished ability to think or concentrate, indecisiveness |
| | | iii | Feeling of a decrease of mood responsiveness (inability to feel anything, inner desolation and isolation, etc.). | Mel B | Lack of reactivity to usually pleasurable stimuli |
| | | iv | Feeling of inhibition of volition and volitional activities (disturbances of action, lack of vigor, unable to work, inability to gather oneself up to carry out any action, etc.). | MD A5? | Psychomotor retardation |
| | | v | Inability to make any decisions. | MD A7 | Diminished ability to think or concentrate, indecisiveness |
| | | vi | Feeling of tiredness and fatigue. | MD A6 | Loss of energy, fatigue |
| | B | | Objective inhibition | | |
| | | i | The subjective feelings can be determined objectively | MD A5 | Psychomotor retardation |
| | | ii | Stiffness, a lack of expressive movements | -- | |

MD, major depression; Mel, melancholic features

symptom, which describes a depression-related reduction in emotionally expressive movements of the body, hands and face is not captured in DSM-III MD criteria.

## Features of DSM-III criteria for mania and depression missing in Kraepelin's characteristic symptoms

Only one meaningful clinical feature of mania emphasized in DSM-III, decreased need for sleep (criterion B-5), is missing entirely from Kraepelin's list. The DSM-III also provides a much more expanded set of potential adverse behavioral consequences of the poor judgment often associated with mania in criterion B-7 (e.g. buying sprees, sexual indiscretions…). Kraepelin's parallel symptom – recklessness – is more succinct and less descriptive.

More DSM-III criterion for MD are missing from Kraepelin's list than is the case with mania. Most strikingly, Kraepelin makes no mention of the 'neurovegetative' symptoms reflecting changes in appetite, weight or sleep (criteria B-1 and B-2). Recurrent thoughts of death or suicidal ideation (DSM-III criterion B-8) are also missing. Finally, Kraepelin makes no mention of psychomotor agitation as a characteristic feature of MD.

## Discussion

The most exciting consequence of the discovery of this list of Kraepelin's 'characteristic' symptoms and signs of mania and depression from the first decade of the twentieth century is to permit a comparison of the views of this most influential of all psychiatric nosologists on the defining criteria for two central psychiatric syndromes to those adopted at a key turning point in the modern history of psychiatric diagnosis – the creation of DSM-III. Our review indicates that the degree of similarity between Kraepelin's views circa 1905 and DSM-III published 75 years later is quite striking for mania. All but one of the key 8 DSM-III criteria (criterion A and B-1 through B-7) have solid parallels in Kraepelin's list. Only reduced need for sleep is missing. The Kraepelin-DSM-III homology for MD is not as strong as that seen for mania. Three DSM criteria are missing from Kraepelin's list: changes in appetite/weight, change in sleep and suicidal ideation. But Kraepelin's characteristic symptoms cover all the other key domains in the DSM including mood, self-concept, psychomotor changes, energy, concentration and anhedonia. He also included 'lack of mood reactivity' included as a criterion in DSM-III melancholia.

One feature of Kraepelin's characteristic symptoms missing from the DSM criteria for both mania and depression was brief periods of euphoria in depression and sad mood in mania – a symptom of mixed affective states. Stimulated by the 1899 monograph of Weygandt (Salvatore et al., 2002), Kraepelin paid increasing attention to mixed states as part of MDI in his later career, from his 6th to 8th edition. Furthermore, these symptoms were formally added to criteria for a specifier 'with mixed features' for both mania and MD in DSM-5.

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Were the contents of the DSM-III criteria missing from Kraepelin's list of characteristic symptoms because he did not observe them in his patients, or he was familiar with them but did not regard them as of sufficient diagnostic importance? This question can be answered definitively by a careful examination of his 6th edition textbook written a few years before he commissioned Dreyfus to write his monograph. In his section on mania, he notes that

> In the forms with strong excitement, sleep is always very disturbed; occasionally there is almost total sleeplessness which can continue for weeks … In the milder excited states too, the patients are late in finding repose and are awake again very early … ((Kraepelin, 1990) p. 291).

In the section on depression, he writes:

> Thoughts of death are very common. The patient would like to be out of this world… He also makes attempt to kill himself … The appetite is much reduced as a rule … the sleep is always great impaired … the patients lie awake in bed for hours…the body weigh usually drops significantly ((Kraepelin, 1990) p. 296, 298).

So clearly, Kraepelin was aware of these symptoms and signs but apparently judged them to be of limited diagnostic value perhaps because of their low specificity.

Eight subtler differences between Kraepelin's characteristic symptoms and DSM criteria are noteworthy. First, while both Kraepelin and DSM-III include the flight of ideas and distractibility as key signs of mania, only Kraepelin describes a broader view of cognitive disorganization (lack of inner unity of conceptual processes). Second, Kraepelin includes a manic sign of 'increased attention' lacking in DSM-III. Third, Kraepelin includes anxiety as a key 'mood' state for depression while DSM-III does not. Fourth, DSM-III includes both psychomotor retardation and agitation while Kraepelin only mentions retardation. This is in part due to Kraepelin's retention in his 6th and 7th editions of a category of involutional melancholia – which typically presented with psychomotor agitation – as separate from that of MDI. In his 8$^{th}$ edition, involutional melancholia is incorporated into MDI. Fifth, Kraepelin considered obsessive thoughts to be of diagnostic importance in depression, a position lacking from DSM-III or subsequent DSM editions. Sixth, Kraepelin's descriptions of the cognitive changes in depression (loss of knowledge, memory, absentmindedness) were broader than those contained in DSM-III. Seventh, Kraepelin emphasizes a subtle 'psychomotor' sign in depression ('a lack of expressive movements') lacking in any DSM criteria set. Finally, Kraepelin is much more specific about the broad volitional disturbances in depression than is DSM-III.

Kraepelin's diagnostic views on mania and depression can be placed into their historical context by two prior reviews of textbook descriptions of the symptoms and signs of mania and depression from 1900 till 1960 (Kendler, 2016, 2017). The review of mania concluded that consistent with our observations, this diagnostic construct has been relatively stable in western Psychiatry since the turn of the twentieth century (Kendler, 2017). So, in this historical context, the close agreement between Kraepelin's views and those of DSM-III is not surprising. The consilience across time for the essential features of depression was substantial but less pronounced than that seen for mania (Kendler, 2016). Congruent with our results, the review noted that compared to DSM-III criteria, earlier authors gave greater emphasis to cognitive and psychomotor and less to neurovegetative features.

Could the high homology between DSM-III and Kraepelin's characteristic symptoms have resulted from the developers of DSM-III directly studying Kraepelin's writings in general and/or specifically his summary views as described by Dreyfus? No definitive answer to this question is possible but this is unlikely for four reasons. First, the DSM-III criteria for mania and depression were very similar to those proposed in the RDC which in turn closely resembled those presented in the Feighner criteria. In 2008–2009, I extensively interviewed the then surviving members of the team who worked on the Feighner criteria – Drs. Rodrigo Muñoz and George Murphy – specifically querying them about the origins of the criteria. At no point was did they mention Kraepelin or any other classic text was used as sources for diagnostic criteria. Instead, they referred to the influence, largely via Eli Robins, of earlier work on criteria sets from the 1950s and 1960s. Second, I knew Bob Spitzer well and discussed psychiatric nosology extensively with him over the years. At no point did he ever suggest turning to Kraepelin or other classical texts as a source for diagnostic criteria. Third, I posed this same question to Janet Williams, Spitzer's close colleague, who served on the DSM-III advisory committee for 'Schizophrenia, Paranoid and Affective Disorders.' While Kraepelin was read and admired by several members of that committee, she wrote that 'I do not remember anyone working from Kraepelin's actual criteria, and I think I would have seen it if that were the case (personal written communication, 10/4/19).' Finally, with respect to the specific diagnostic views of Kraepelin presented by Dreyfus in his monograph, an extensive bibliographic search turned up many references to the overall monograph, only one of which – written in 1907 by George Kirby, then Director of Clinical Psychiatry, Manhattan State Hospital –refers to the list of the characteristic features of mania and depression according to Kraepelin (Kirby, 1907). My conclusion is that the homology we observe between Kraepelin's and DSM-III's diagnostic approach to mania and depression almost certainly arose from a variety of indirect paths that reflected the growing consensus in the field of Western Psychiatry over the twentieth century as to the clinical nature of these two syndromes, and not from a direct transmission of Kraepelin's opinions about specific criteria to the DSM-III.

It can be legitimately asked whether these characteristic symptoms of mania and depression reflected the views of Dreyfus or Kraepelin. Three arguments favor the view that these represent Kraepelin's opinions. First, given the prestige and authority of German professors at this time, and particularly Kraepelin who at this point in his career was among the most prominent psychiatrists in Europe, a junior physician like Dreyfus would be unlikely to misquote him. Second, Dreyfus had an apparently close professional relationship with Kraepelin being noted by multiple authors as his 'pupil,' 'disciple' and 'colleague.' Kraepelin specifically requested that he perform the major follow-up study of involutional depression on his sample. Third, it is inconceivable that Kraepelin did not read in detail the monograph. He wrote a glowing introduction. In the middle of the text, Dreyfus describes Kraepelin's diagnostic practices regarding the relationship between melancholia and MDI and then notes that his views have been 'verbally confirmed to me by Prof. Kraepelin ((Dreyfus, 1907) p. 42).' In this context, we can, with considerable confidence, take these characteristic symptoms of mania and melancholia to represent Kraepelin's views in the years around 1904–1907.

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Finally, this project should not be taken as evidence that Kraepelin shared the DSM world view of psychiatric nosology with its strong focus on symptoms and signs. In his conceptualization of manic-depressive insanity, Kraepelin's emphasis was more on the cyclic course of illness of mood episodes regardless of polarity with complete or nearly recovery between episodes (Trede et al., 2005). Kraepelin was not disinterested in symptoms and signs, as well illustrated by his clinical lectures (Kraepelin, 1904), but they played a more peripheral role in his nosologic thinking than has been the case with the recent DSM editions.

## Conclusion

Rediscovered lists of Kraepelin's views as to the key characteristic symptoms of mania and depression as reported by his protégé Dreyfus circa 1905 provide us with a unique opportunity to compare the views of this most prominent and important of psychiatric nosologists on these two key syndromes with those proposed in the most seminal document in the psychiatric nosology of the late twentieth century: DSM-III. Overall, the homology is reassuringly high, although greater for mania than for depression. A number of interesting differences, however, are seen, including Kraepelin's emphasis on mixed features missing from DSM-III and his apparent judgment that neurovegetative symptoms, prominent in the DSM-III criteria for MD, are of limited diagnostic value.

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