In 2010 the International League Against Epilepsy (ILAE) published a proposal for a revised “terminology and concepts for organization” of the epilepsies. (1) This classification was the result of four years of effort by the 2005-2009 ILAE Commission on Classification and Terminology. This classification was immediately adopted by some, shunned by others, and ignored by many. Discussions of this document flooded the pages of journals (2-6) including Epilepsy Currents (7). Most clinicians stood on the sidelines and waited.

It turns out that patience is a virtue. Now, four years later, the 2010-2013 Commission on Classification and Terminology have unveiled a revision of the original document. (8). This revision is an attempt to correct any aspects of the 2010 document that were confusing, misleading, overly controversial or unworkable. This document was available on-line at the ILAE website until January 2014, and is now closed for comments.

Likely most epilepsy specialists are quite confused about the current state of affairs. This review will attempt to briefly summarize some of the changes in the 2010 document, the suggested changes in the 2014 revision, and will then address possible issues that still might need work. Not all issues can be addressed in this brief review. For example, for issues related to re-naming of focal seizures (introducing the word “dyscognitive”), and etiologic subdivisions, the reader is referred to the 2010 document and subsequent reviews.

The last revision of classification of the epilepsies was in 1989, and that document remained a “proposal”, never officially accepted. (9) Despite this absence of official confirmation, most epilepsy specialists have been using this classification throughout their careers. They have treated patients based on it, used it as a template to approve new antiepileptic therapies, taught students with it, and used it as the underpinnings of scientific evaluations. In its most simplistic form, the classification identified patients as either having partial epilepsies (idiopathic, e.g. benign rolandic epilepsy, or symptomatic/cryptogenic) or generalized epilepsy (idiopathic, e.g. absence or juvenile myoclonic epilepsy, or symptomatic, e.g. Lennox-Gastaut syndrome).

The 2010 update arose from a frustration that science was marching forward, and this had not been reflected in the way we classify epileptic seizures and syndromes. The biggest scientific advance, and the one that led to the most important changes in classification, were our emerging understanding about epilepsy etiologies, and particularly the role of genetics. Since 1989, we have learned that epilepsies previously thought to be structural in nature actually may often have genetic etiologies, (for example familial focal epilepsies) (10) and epilepsies we presumed to be generalized actually could be terminated by focal resections (e.g. some forms of infantile spasms). This led to a general feeling by the commission that we were being too simplistic with our two categories (focal vs generalized) each divided into two domains (idiopathic vs symptomatic/cryptogenic).

The 2010 document specifically says: “The 1989 classification (9) was an organization built on concepts that no longer correspond to or accurately describe our increasing knowledge of seizures and the epilepsies. Consequently, the current organization and the concepts on which it is based are abandoned or revised. Specifically, what was “abandoned” was the concept of a focal epilepsy vs a generalized epilepsy as broad category structure, and what was “revised” were the concepts of “idiopathic”, “cryptogenic” and “symptomatic”. Instead, we were instructed to think first of electroclinical syndrome (these were largely untouched); second of seizure type (also largely either untouched or re-named), and last of etiology (now subdivided into structural/metabolic, genetic or unknown). One gaping problem with this new world order, was the fact that many patients (in fact the majority of patients over the age of 12) do not have an electroclimical syndrome. This is acknowledged in the following quote from the 2010 manuscript: “Henceforth, the use of the term ‘syndrome’ will be restricted to a group of clinical entities that are reliably identified by a cluster of electroclinical characteristics. Patients whose epilepsy does not fit the criteria for a specific electroclinical syndrome can be described with respect to a variety of clinically relevant factors (e.g., known etiology and seizure types). This does not, however, provide a precise (syndromic) diagnosis of their epilepsy.” Unfortunately, patients with what was previously known as “partial epilepsy” fall into those without an electroclinical syndrome.

These patients were left in a no-man’s land in which their epilepsy could be “organized” based on underlying etiology or seizure types, but not in a way that would easily communi-
cate from clinician to clinician the fundamental nature of the condition. As an example, consider two patients who have had traumatic brain injury at age 2. One has severe developmental delay, slow spike-wave on EEG, and stereotyped focal onset seizures as well as atonic seizures. A second patient with the same history has a normal IQ, focal motor seizures and focal frontal encephalomalacia. These two patients have fundamentally different epilepsy, and are treated in fundamentally different ways, that cannot be acknowledged without reverting to a conceptual framework that includes “focal epilepsy”.

The 2014 revision now takes a step back and acknowledges the concept of focal and generalized epilepsy, but only in a halfhearted way. They suggest “While the terms “generalized epilepsy” and “focal epilepsy” remain useful descriptors for many cases, there are, however, clinical settings in which a dichotomous approach is not supported by the electroclinical data. Therefore such an approach cannot form the basis of a biological classification.”

Of course, there is wisdom in these words. The concept of “focal epilepsy” and “generalized epilepsy” are probably not correct for determining a biological classification, nor are the terms “symptomatic, cryptogenic and idiopathic”. The problem is that for many other purposes they work exceedingly well. In fact, when teaching house staff, one of the fundamentals of training is: “before you treat the patient, figure out if their epilepsy is focal or generalized”. Now, this concept is de-emphasized. The 2010 document had also abandoned any grouping of the “syndromes formerly known as idiopathic generalized epilepsy” or “IGE”. These could be identified by individual syndrome (juvenile myoclonic epilepsy, absence epilepsy) but there was no category that acknowledged the fundamental similarities in this group. Now, the 2014 document suggests that we call these the “genetic generalized epilepsies”. This is problematic for several reasons. The first is that in a number of these patients there is no confirmation of a genetic syndrome to date, although there is a presumption that genes play a role. The second problem is that this will produce a great deal of confusion between these genetic generalized epilepsies, and other genetic generalized syndromes such as Dooses syndrome and Dravet syndrome. Just imagine the discussion with a trainee-“remember, JME is one of the genetic generalized syndromes”. Yes, Dravet syndrome is genetic, yes, it is generalized, but it is not “genetic generalized epilepsy”.

Clearly the new revision will need some “real world testing” to determine whether it is road ready, functional and usable. Probably, it is not yet time to include it in recertification and fellowship exams (as some are already suggesting), or require its use in papers and grants.

Will we ever have a “finalized” new classification? Perhaps classifications should always be a work in progress. Yet, to use two conflicting classifications simultaneously, could lead to they type of chaos that is the opposite of “organization”.

References
8. URL: http://www.ilae.org/Visitors/Centre/Organization.cfm
Instructions
The purpose of this form is to provide readers of your manuscript with information about your other interests that could influence how they receive and understand your work. Each author should submit a separate form and is responsible for the accuracy and completeness of the submitted information. The form is in four parts.

1. **Identifying information.**
   Enter your full name. If you are NOT the main contributing author, please check the box “no” and enter the name of the main contributing author in the space that appears. Provide the requested manuscript information.

2. **The work under consideration for publication.**
   This section asks for information about the work that you have submitted for publication. The time frame for this reporting is that of the work itself, from the initial conception and planning to the present. The requested information is about resources that you received, either directly or indirectly (via your institution), to enable you to complete the work. Checking “No” means that you did the work without receiving any financial support from any third party – that is, the work was supported by funds from the same institution that pays your salary and that institution did not receive third-party funds with which to pay you. If you or your institution received funds from a third party to support the work, such as a government granting agency, charitable foundation or commercial sponsor, check “Yes”. Then complete the appropriate boxes to indicate the type of support and whether the payment went to you, or to your institution, or both.

3. **Relevant financial activities outside the submitted work.**
   This section asks about your financial relationships with entities in the bio-medical arena that could be perceived to influence, or that give the appearance of potentially influencing, what you wrote in the submitted work. For example, if your article is about testing an epidermal growth factor receptor (DGFR) antagonist in lung cancer, you should report all associations with entities pursuing diagnostic or therapeutic strategies in cancer in general, not just in the area of EGFR or lung cancer.

   Report all sources of revenue paid (or promised to be paid) directly to you or your institution on your behalf over the 36 months prior to submission of the work. This should include all monies from sources with relevance to the submitted work, not just monies from the entity that sponsored the research. Please note that your interactions with the work’s sponsor that are outside the submitted work should also be listed here. If there is any question, it is usually better to disclose a relationship than not to do so.

   For grants you have received for work outside the submitted work, you should disclose support ONLY from entities that could be perceived to be affected financially by the published work, such as drug companies, or foundations supported by entities that could be perceived to have a financial stake in the outcome. Public funding sources, such as government agencies, charitable foundations or academic institutions, need not be disclosed. For example, if a government agency sponsored a study in which you have been involved and drugs were provided by a pharmaceutical company, you need only list the pharmaceutical company.

4. **Other relationships**
   Use this section to report other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work.
Section #1 Identifying Information

1. Today’s Date: 2/23/14

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3. Are you the Main Assigned Author? ☐ Yes ☐ No
   If no, enter your name as co-author:

4. Manuscript/Article Title:

5. Journal Issue you are submitting for:

Section #2 The Work Under Consideration for Publication

Did you or your institution at any time receive payment or services from a third party for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.)?

Complete each row by checking “No” or providing the requested information. If you have more than one relationship just add rows to this table.

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* This means money that your institution received for your efforts on this study.
** Use this section to provide any needed explanation.
### Section #3 Relevant financial activities outside the submitted work.
Place a check in the appropriate boxes in the table to indicate whether you have financial relationships (regardless of amount of compensation) with entities as described in the instructions. Use one line for each entity; add as many lines as you need by clicking the “Add” box. You should report relationships that were present during the 36 months prior to submission.

Complete each row by checking “No” or providing the requested information. If you have more than one relationship just add rows to this table.

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* This means money that your institution received for your efforts.
** For example, if you report a consultancy above there is no need to report travel related to that consultancy on this line.

### Section #4 Other relationships
Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?

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