insensitive, and therefore, the word anesthesia fits with its original derivation (an = neg, aisthesis = Greek for sensation).

Conscious sedation is sedation that occurs without the loss of consciousness. Although some philosophers may have difficulty with the term consciousness, it is a common lay word that simply means the presence of self-awareness. If one is sedated but still conscious, then this is "conscious sedation." Finally, the patient who wants to have a regional anesthetic but also wants to be unconscious during the procedure can readily understand that a "combined anesthetic" can meet their needs, even though they would not have pain with a regional method alone. Patients having upper abdominal surgery with epidural anesthesia may be upset if they feel like they cannot breathe adequately. In these cases, I find it useful to have the patients asleep, with tracheal intubation and controlled ventilation. It would be ludicrous if I would refer to this anesthetic, as the authors suggest, as "epidural anesthesia with deep sedation."

If we say to our patients that we are now about to begin "the anesthetic," ask them to turn on their side, and begin to insert a 10-cm needle into their back, I think most people of average intelligence would ask for a more specific definition of what is meant by the term "anesthetic" in this case. I submit that, if we introduce the subject with the term "combined anesthetic" and proceed to define what advantages this technique offers (such as fewer systemic drugs used, painless emergence, and reduction of the "stress" response), we have distinguished this method from the ordinary "anesthetic." During the ensuing discussion, they will understand the reasoning behind the procedures that are performed and why they are recommended. Until a better phrase is advanced I see no reason to abandon the one that is in common use.

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In Reply:—We find it difficult to accept Larson's contention that he and his patients have a common understanding as to the meaning of these terms when, as evidenced by this correspondence, even we who are educated in the field cannot agree. Our experience is quite the opposite of his. We commonly receive patients who, based on hearsay, insist on one anesthetic or another with little concept of what they are talking about. They may grasp, for example, the term "general anesthetic" as to a life raft in the storm of their fears. In the ensuing discussion, it may become clear that the real issue is that the patient does not want to be aware during the surgery. Careful and empathetic explanation that this can be achieved without "general anesthesia" is not always successful in prying loose that grip. This is just one of many examples we could offer as to how these terms frustrate communication.

As to the definition of "general anesthesia," we do not agree that it is simply a drug-induced loss of consciousness where there is no awareness of pain and the patient does not move during cardiopulmonary bypass. Several percent of patients receiving "general anesthesia" may have awareness and recall of the intraoperative events—a figure not much different than that for patients undergoing rhinoplasty under "local anesthesia with sedation".[1] The latter, incidentally, are often adamant about not wanting a "general anesthetic," as if the avoidance of this term makes the procedure less intimidating.

We agree that nociception under inhalational anesthesia is not pain *per se*. This is why we introduced the issue speaking of "nociceptive afferent stimuli." "Pain is when it hurts" is the traditionally accepted definition. However, with recent advances regarding nociceptive hyperexcitability ("windup") perhaps we need to be more inclusive. The patient's consciousness may not remember the pain, but the nervous system does and is changed because of it. The patient also may not remember the surgery, but no one would suggest it was not performed.

Regarding the term "conscious sedation," we maintain our position that its self-contradiction makes it ridiculous. Does it refer to the sedated patient who speaks to you or only to the patient who remembers having spoken to you? Does it refer to the patient who is barely arousable or only to the patient who is spontaneously conversing. It would be more meaningful if we spoke of "sedation" to a described level. To this end, a universally accepted sedation scale would be useful.

It appears that Larson has confused our dissatisfaction with the terminology for a commentary on how to conduct an anesthetic. We agree that often it is desirable to add an inhalational agent to an epidural anesthetic or to administer a sedative-amnestic agent and an opioid analgesic before performing a regional anesthetic. However, what is an "ordinary anesthetic?" Are not most anesthetics "combined" in one fashion or another? Where we differ is that we would not tell patients they are to have "an epidural anesthetic and a general anesthetic." We would rather tell them they are to receive a general anesthetic but that, beforehand, we will be inserting an epidural catheter to help block any pain both during and after the operation. Or we might tell them they are to receive an epidural anesthetic but also other drugs so that they will sleep during the operation. It may be subtle, and it may be clumsy, but there is a difference.

In having raised the issue, we did not mean to suggest that we also had the solution to these problems of terminology. To the contrary, we are frustrated by them. It is our hope that useful suggestions will arise as a result of these communications.

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Flumazenil before Electroconvulsive Therapy: Outstanding Issues

To the Editor:—We were very interested to read Hanania's report of flumazenil administration before electroconvulsive therapy (ECT).[1] In his two cases, flumazenil, given immediately before ECT, reversed the sedative effects of benzodiazepine premedication; seizures of acceptable duration followed. This report raises several issues that deserve further consideration, regarding the seizures and the therapeutic outcome of ECT.

Regarding the seizures, the effects of flumazenil are unclear. In Hanania's cases, flumazenil was given before any ECT stimulus was delivered. We do not know what the outcome would have been without flumazenil in these two patients. Furthermore, in one case, extra flumazenil was given after an unsuccessful ECT attempt; however, Hanania does not note whether the stimulus current was increased at the same time, as is usually done when the first seizure is inadequate. So, we cannot surely attribute the subsequent success to the extra flumazenil. On the other hand, acute benzodiazepine administration has been shown to raise seizure threshold and shorten seizure duration.[2] (In this context, it is interesting that flumazenil did not cause unacceptably long seizures.) We may guess that flumazenil led to better seizure outcomes than otherwise might have occurred after benzodiazepine administration, but this remains to be demonstrated.

Clinically, of course, the most important issues concern the effects of flumazenil and benzodiazepines on the therapeutic outcome of ECT. Several questions arise here. First, do benzodiazepines affect clinical outcome, independent of seizure duration? Second, do acute *versus* chronic benzodiazepines have different effects? Third, does flumazenil reverse benzodiazepines' effects on ECT outcome? Finally, does flumazenil have relevant psychoactive effects of its own?

Several authors have raised the question of benzodiazepine interference with therapeutic effects of ECT. In one study in humans, the authors determined that unilateral ECT was less effective in patients who were receiving chronic benzodiazepines, despite adequate seizures.[2] A study in mice investigated behavioral responses to serial electroshocks. Behavioral changes that usually followed the shocks did not occur when diazepam was given, despite apparently identical seizures. This was noted whether diazepam was given before or after the shocks, suggesting that diazepam's antitherapeutic effects are independent of its effects on the seizures.[3]

The question of chronic *versus* acute benzodiazepine administration in this setting remains largely unaddressed. Hanania's patients received lorazepam only once, immediately before ECT. In contrast, the patients in the human study cited above received chronic benzodiazepine treatment. Because long-term psychoactive effects of medications often require chronic treatment, we might suppose that one-time dosing is relatively benign. However, the mouse study suggests that the presence of benzodiazepines after ECT, even from one dose of a long-acting agent, may alter the behavioral response.

The effects of flumazenil on ECT outcome remain unexplored. Of note, some authors have implicated benzodiazepine receptors and enhancement of the effects of γ-aminobutyric acid in recovery from depression.[4] Will flumazenil reverse benzodiazepine effects on ECT outcome? Will it turn out to have its own clinical effects in patients receiving ECT or in other depressed patients? Answering these questions may clarify the mechanism of ECT therapeutic effects and illuminate the biochemical features of depression as well.

In the meantime, we may consider benzodiazepine sedation and flumazenil reversal in ECT patients who will not otherwise accept treatment. However, we should be prepared for the possibility of a reduced clinical antidepressant response.

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In Reply:—Doering and Ball raise man
of which we can answer based on the
whether the stimulus current had been
inadequate duration occurred. Both
overcome the effects of benzodiazepines
parameters on the MECTA SR1 electroc
chine. Thus, there was no potential fo
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was given after inadequate seizure durat
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could interfere with the therapeutic
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Flumazenil reversal of benzodiazep
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To the Editor:—Painful
in 1920, consists of ipsilateral con
hemifacial spasm.[1] Fifty-five cases ha
initial report. In 7 of the 55 cases,
to be caused by a brain tumor.[2]
ipsilateral trigeminal neuralgia and
to have an undiagnosed brain tumo
decompression of the 5th and 7th

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After treatment with imipramine h
a presumed psychosomatic disord
perienced severe lancinating pain
surgery. Diagnosis of trigeminal
treated with pranoprofen and dicl
lief. After 1 yr, his pain increased