In my earlier paper, I shamelessly embraced the role of devil's advocate, hell-bent, one might say on marshalling some of the most damning arguments against interdisciplinary studies. I noted that I had checked the urge to respond to these arguments, not for want of inspiration, but in the interest of scaring up some serious efforts to rethink the case for interdisciplinary studies. Now, with the admirable papers of Professors Newell, Petr, and Miller, it is clear that the desired process is well under way. In this brief paper, I shall comment on some of the most general features of the three papers, wielding, alternately, the harp and the more familiar pitchfork.

Among the many appealing features of these papers is the balance they strike between realism concerning the constraints facing interdisciplinary studies programs and confidence regarding the future and worth of such endeavors. It has been said that a pessimist is simply a well-informed optimist. The papers by Newell, Petr, and Miller suggest, however, that in the case of interdisciplinary studies, an optimist might well be viewed as a well-informed pessimist. It is also gratifying to note the close attention that these papers give to the substance of the criticisms of interdisciplinary studies. The process of sorting out valid complaints from those objections based on prejudice and misinformation is as painful as it is important. Newell, Petr, and Miller recognize that a proper defense of our work must involve not only the correction of misperceptions, but also the rehabilitation of the theory and practice of interdisciplinary studies.

Each of the papers responds to the harsh challenge of my first argument, viz., that practitioners of interdisciplinary studies lack a coherent, defensible sense of their purposes. Newell, Petr, and Miller agree that however embattled interdisciplinary studies may be, it cannot be avoided. As Jerry Petr observes: "Life is interdisciplinary; students of life must be interdisciplinary." An important task for those who seek a satisfying theory of interdisciplinary studies is the development of a clearer understanding of the relationship between the interdisciplinary structure of experience and the forms and methods of interdisciplinary study. With respect to this project,
the papers by Newell and Miller provide some promising leads, but, alas, not much more. Their suggestive and closely related analyses of the role of the interdisciplinarian in tapping and juxtaposing the distinctive, often parochial, perspectives of the disciplines constitute, at best, a modest down-payment toward a more general theory of interdisciplinary studies.

We can agree with them that on all sides there are both practical and theoretical problems incapable of resolution within the confines of any one discipline. And it makes sense to interpret interdisciplinary studies as the larger arena in which such problems can be rigorously examined. So far, so good. We need more help, however, than either Newell or Miller has provided in understanding such things as the means by which the interdisciplinarian locates his problems, the characteristic structure or logical form(s) of the interdisciplinary problem, and the method(s) used by the interdisciplinarian in resolving such problems. With respect to the first of these concerns, Newell and Miller both recommend that the interdisciplinarian specialize. According to Newell, this may involve a focus as diffuse as the modernization process or as narrow as U.S. energy policy. Miller, on the other hand, appears to have broader themes in mind. In his own case, it is human behavior as seen in the diverse perspectives of the social sciences. There is something puzzling about this counsel to specialize. It appears to assume that one is first, for whatever reason, an interdisciplinarian and then only later, after due deliberation, a specialist. We need not be deeply troubled, however, by this somewhat odd arrangement. If it doesn't fit the facts of our own professional lives, it may, nevertheless, be a proper sequence for the next generation of interdisciplinarians. Having been imbued with a resolve to take a larger view of things, to avoid the "blindered" approach of the solitary discipline, the fledgling interdisciplinarian will move on to a decision concerning that area or aspect of life that will be his special interest.

There is another puzzle that cannot be brushed aside so easily. Here the question is: "What principles should guide the would-be interdisciplinary specialist in selecting his particular focus?" Obviously, personal interests and talents will play a large role; but is it also, ideally, a matter of finding an unusually complex interdisciplinary theme, one that engages a large number of disciplines? Or is it a matter of finding an especially significant, yet manageable problem, an apple ready to fall given the appropriate interdisciplinary maneuvers? Are there still other concerns that have a proper role in shaping the decision, e.g., social utility, pedagogical value, academic reform? If we are serious about the training of interdisciplinarians, especially at the graduate level, we must develop a better understanding of the nature of and motives for the movement from a "free floating" commitment to interdisciplinarity to a specific interdisciplinary focus.

A minimally adequate theory of interdisciplinary studies must also provide insight into the logical form of the inter-
disciplinary problem. Is it a problem posed within a specific discipline that demands 
extradisciplinary light for proper resolution? Is it a problem that is posed within several 
disciplines, albeit from different perspectives, but satisfactorily resolved within none of 
them? Or is it the "homeless" problem, the concern too broad to be posed, much less 
resolved within the limits of any particular discipline? Are there still other interpretations 
of the interdisciplinary problem? With respect to this matter, Newell and Miller offer only 
broad impressions. My guess is that Miller would accept each of the three interpretations 
as touching a distinctive kind of interdisciplinary problem. For Newell, however, it is 
apparently only the second and third interpretations that represent the essence of the 
interdisciplinary problem. Given the significant differences among the three 
interpretations, and their diverse and uncharted implications, not to mention the 
possibility of additional forms of the interdisciplinary problem, it is clear that we are still 
a long way from home in our quest for an adequate theory of interdisciplinary studies.

Having provided only casual guidance in locating interdisciplinary problems 
and in defining their structure, Newell and Miller prove equally sparing in their 
comments concerning the method(s) for treating interdisciplinary problems. Miller 
claims that the interdisciplinarian seeks something more than the combination of 
disciplinary fragments and something less than a "single, unified holism." Beyond 
this general information, however, he tells us little concerning the specific goals and 
methods of interdisciplinary study. If Newell is no more helpful in this matter, he is at 
least frank: "...it is not so clear what principles guide the interdisciplinarian in 
constructing a coherent response to the question out of the mutually incoherent 
disciplinary insights." It would be, of course, both dishonest and useless to contrive a 
step-by-step procedure, a recipe, for treating interdisciplinary problems; but we owe it 
to ourselves to develop at least a general account of the method or family of methods 
that are characteristically interdisciplinary.

The papers by Newell, Miller and Petr contain a wealth of persuasive ideas and 
recommendations with respect to the remaining four arguments in my paper. 
Particularly impressive is Newell's argument that interdisciplinary studies is not only 
possible for the undergraduate, but, indeed, indispensable if the student is to develop a 
proper orientation within the disciplines. Newell's allusions to his own apparently 
successful experience with a combined disciplinary/interdisciplinary approach to a 
social science course reminded me of the old farmer who when asked if he believed in 
infant baptism, replied, "Believe in it? Hell, I've seen it done." The publication and 
discussion of innovative approaches to interdisciplinary study, an important function 
of AIS meetings and publications, may accomplish as much or more than theoretical 
arguments in overcoming resistance to interdisciplinary programs.
The comments by Newell and Petr concerning the practical consequences of interdisciplinary studies for the student are also valuable. They note, for example, the unique potential of interdisciplinary studies in fostering such pedagogical values as tolerance for ambiguity and openness to multiple perspectives. As we develop a more precise and satisfying account of the nature and purposes of interdisciplinary studies, we can expect to discover many more such advantages and dividends. The realization of most of these benefits will depend, of course, upon a methodologically deliberate and explicit approach to interdisciplinary studies.

Both Miller and Newell are to be commended for their thoughtful remarks concerning strategies for the advancement of interdisciplinary studies. They have provided a number of fresh and stimulating ideas that deserve serious attention. The suggestions concerning graduate programs and the training of interdisciplinary faculty, for example, are especially compelling. Miller's "political solution" for what ails interdisciplinary studies is a case in point. Miller proposes a definitional capture of "a substantial proportion, if not the majority of faculty at most multi-purpose institutions of higher education" through a broad interpretation of the term "interdisciplinary." While Miller is correct in noting that the traditional disciplinary lines are widely and routinely breached throughout the university and that "de facto" interdisciplinary programs abound, his "co-option" strategy is, nevertheless, unpromising. What sets us apart from the traditional disciplinarians and most of those who work in the politically secure "interdisciplinary" fields, e.g., business administration, social work, nursing and criminal justice, is our explicit and generalized interest in the methods and values of interdisciplinary study. If the disciplines express distinctive world views, so too does the "discipline of disciplines." We believe in the power and worth of an approach to learning that is critically free and able to integrate insights from as many disciplinary areas as a given problem requires, we have earned our notoriety, for the most part, through being what we are--challengers of outmoded conventions, and advocates of a new academic order. Miller's broad umbrella ploy is unlikely, therefore, to fool anyone. It may, however, distract some of us from the demanding task of articulating and promoting our unique, if inchoate, vision of interdisciplinary studies.