A critical review of old ideas, with treasure hunt

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Computer Vision is a fairly "horizontal" field, where often ideas are proposed, forgotten, and then re-invented. This is typical of nascent fields and "high entropy" research environments. At various points, it is useful to revisit old literature, and try to read them in a modern key. What ideas survived? Have they taken "new forms"? What leads have turned into dead-ends? In this reading group we will attempt such a re- reading for two authors that influenced the field in its beginning, but whose influence has waned over the years.

Students will be asked to read two books: One is David Marr's 1980 book Vision. The other is James Jerome Gibson's 1986 book "The ecological approach to visual perception". More than 20 years have passed, which is enough time to reflect.

Students will be asked to compile a list of "ideas" or "leads" proposed or discussed by these authors. For each idea, they will be asked to evaluate it in relation to the current literature: Is this idea still valid? Is it reflected in the current literature? Has this idea been proven fruitless? Has it been forgotten but may still be worthy of pursuit? They will be asked to give a few examples from the modern literature (say ICCV/CVPR/ECCV proceedings from the past 4-5 years) where this idea is adopted or disputed.

The competition will then proceed as follows: Students will be called to present and describe these ideas, and discuss whether it is a "thumbs up" or a "thumbs down" idea. If the student manages to convince the audience, the idea is put into a bucket. If others have found the same idea, the number of people that found it is a "score" for that idea.

There will be two prizes for the competition. One goes to the individual or group that found the most number of ideas. The prize will be a bottle of Champaign to share among the winners. The second prize (1000$) will be for the treasure hunt, and will be given to the individual that will have found one idea that he/she can convince the audience is worth pursuing, and that nobody else in the audience has found.

Students will be asked to submit their list of ideas found on the first day of the school. This competition will require that students consult the library of their institution ahead of time, and plan enough time to read these books, possibly more than once, in relation to current literature.

The prize (1000$) was assigned to:
Mihoko Shimano, University of Tokyo, Japan