

**Max Wertheimer MINERVA Center for Cognitive Processes and Human
Performance**

Report of the Ninth Advisory Council Meeting

Haifa, 14 – 16 October 2012

The ninth Advisory Council Meeting took place in Haifa from 14 – 16 October 2012. The date was chosen to allow the council members and the principal investigators (PIs) of the center to attend the first Minerva Festival, which took place on 16 - 17 October in Jerusalem.

The council meeting started on Sunday, 14 October with a scientific colloquium at the University of Haifa. During this colloquium, former center students from University of Haifa who recently have got their PhD presented their research. A second colloquium was held on Monday, 15 October 2012 at the Technion, and included scientific presentations of all PIs from the Technion, supported by doctoral students. Both colloquia were supplemented by lab visits and additional brief presentations of research projects provided by doctoral or graduate students supported by the Center.

The Council's formal meeting took place on Tuesday morning, 16 October 2012. This meeting comprised an internal discussion of the members of the Council, as well as a closing meeting with the directors of the Center, Prof. Dr. Ruth Kimchi (Haifa University) and Prof. Dr. Ido Erev (Technion). The three German members of the Council,

- **Prof. Dr. Dietrich Manzey** (Council Chair, Department of Psychology and Ergonomics, Berlin Institute of Technology),
- **Prof. Dr. Reinhold Kliegl** (Department of Psychology, University of Potsdam),
- **Prof. Dr. Pienie Zwitserlood** (Department of Psychology, University of Münster),

and the Israeli member, **Prof. Dr. Arie Melnik**, participated in the symposia and the lab visits at University of Haifa and Technion, as well as the internal discussion and closing meeting. Because of other obligations, **Prof. Dr. Hillel Pratt** attended the two colloquia but was not able to participate in the internal discussion and closing meeting. However, his comments and advices were communicated to the chair of the board and taken into account in preparing the report. **Prof. Yaakov Kareev** (School of Education, Hebrew University of Jerusalem) could not attend any of the events because he was on a sabbatical outside of Israel.

This report is based on the following sources:

- The Center's Report of Activities 01/10/2002 – 09/2011 (see attachment). This report also includes the fiscal reports for the periods 10/2008-09/2009, 10/2009 – 09/2010, 10/2010 – 09/2011, as well as the budget proposals for the periods 10/2011 – 09/2012, and 10/2012 – 09/2013. The report had been prepared with respect to the upcoming external Cluster Evaluation in order to provide the board members with an overall picture of the center's activities during the last decade. However, because the period 2002-2009 was addressed in former reports by the board, the current report only addresses activities of the center during the past 2.5 years since the last board meeting in March 2010.
- Impressions from the symposia and site visits at University of Haifa and Technion.
- Extensive discussions with the two directors of the center (Prof. Ido Erev, Prof. Ruth Kimchi) and all other active principal investigators including the former directors (Dr. Morris Goldsmith, Prof. Daniel Gopher, Prof. Asher Koriat, Prof. Joel Norman, Prof. Eldad Yechiam, Dr. Yaffa Yeshurun) during the symposia and the lab visits.
- Additional information on recent publications and projects (not yet included in the center's report), which were provided in written format after the meeting.

Based on these sources, and further considering the upcoming external evaluation of the Center, the Council agreed on the following conclusions.

1.

The *Max-Wertheimer Center of Cognitive Processes and Human Performance* represents a scientific center with an international reputation in the field of cognitive psychology and human factors. As in the previous years, the sub-center at the University of Haifa has focused on research on attention, perception, and meta-cognition, with an emphasis more on basic than on applied research. The research conducted at the Technion mainly has comprised basic research on human decision-making, as well as theory-guided human factors research.

The scientific activities and projects of the different PIs of the center have now been grouped under four main research themes, which communicate the scientific profile of the center in a transparent manner:

- (1) Metacognition of Learning and Memory (Prof. Koriat and Prof. Goldsmith)
- (2) Visual Perception and Attention (Prof. Kimchi, Dr. Yeshurun, Prof. Goldsmith, Prof. Norman)
- (3) Decision Making (Prof. Erev, Prof. Yechiam, Prof. Norman)
- (4) Skill Acquisition and Training (Prof. Gopher, Prof. Erev, Prof. Yechiam, Prof. Norman)

The research grouped under these themes comprises a number of sub-projects which are directed by one or two members of the center, often in collaboration with a post-doctoral research fellow. The scientific output of the different projects in terms of publications varies dependent on its focus on more basic or applied research, with the latter sometimes published in Technical Reports or Conference Proceedings. Yet, all of the projects are performed at a high scientific level, with a strong foundation in psychological theory.

2.

The scientific output of the PI's of the center during the past 2.5 years again confirms that the center is a very productive scientific institution in the field of cognitive psychology and human factors. Considering only articles that have been published since the last report, the eight PIs

of the center have published a total of 58 articles in scientific journals, and this list is complemented by a number of book chapters, as well as numerous contributions to international conferences. The advisory board has particularly been pleased to see that the young PIs, Eldad Yechiam and Yaffa Yeshurum, have contributed significantly to this output. Among the publications are a number of articles published in some of the most prestigious journals in the field of psychology, and of science in general. These include several publications in *Psychological Bulletin* (Ruth Kimchi, Eldad Yechiam), *Psychological Review* (Asher Koriat) and *Science* (Asher Koriat). In addition, Ido Erev has published three articles co-authored by Alvin E. Roth who was awarded the Nobel Prize 2012 in economics for his achievements in game theory—incidentally coinciding with the last meeting of the Advisory Council. Although not all of these publications can be fully attributed to the research activity within the center alone, they nevertheless document the excellent scientific level and productivity of the center's members and PIs.

In addition, the members of the center were again successful in raising additional funds. This is reflected in a total of thirteen projects conducted since the last report (six of them still ongoing for at least one more year), based on funding acquired from diverse institutions (e.g. Israel Science Foundation, Israel National Institute for Psychobiology, Israel Anti-Drug Authorities, Foundation of Insurance Matters). The seed money provided by the center contributed significantly to the acquisition of most of these projects.

Overall, this scientific output provides clear evidence that the Max-Wertheimer Minerva Center makes very efficient use of the money provided through the Minerva Foundation and fulfils any expectations associated with this type of funding in a commendable manner. The written report and the scientific presentations at the colloquia documented that all of the different projects are well under way, and provide a good basis for the further development of the center. Based on this evidence, the Council is convinced that the center will continue to constitute a highly recognized center of excellent research in the area of cognition and human performance.

3.

In our report of the eighth advisory council meeting in 2010, it was recommended that the PIs of the Max-Wertheimer Center should try to make the specific scientific and programmatic profile of their center more visible by structuring their report of activities according to the main research topics instead of structuring it by the contributions of the individual PIs. This recommendation was particularly made with respect to the upcoming cluster evaluation. The Council is pleased to see that the currently provided report has been revised in order to match this recommendation.

4.

Only few of the publications of the past 2.5 years represent collaborative work of two or more members of the center. However, the attendance and discussions during the symposia and the number of common projects has provided evidence for a lively cooperation within the two sub-centers at Haifa University and Technion. Moreover, the different lines of research in the sub-centers, that is, fundamental research in the area of cognitive psychology at Haifa University, and basic as well as applied human factors research at Technion, complement each other nicely. Both sub-centers' research is committed to a similar approach, based on an understanding of psychology as an experimental science. This has again become evident in the fruitful scientific discussions during the symposia, which made clear that both sub-centers benefit very much from being part of a common Minerva Center. The close link between the two sub-centers is also evident on a personal level. For example, one of the former doctoral students of the center, Rakefet Ackermann, started to work with the center at Haifa University, where she also has gained her PhD. Now she is continuing her academic career, again closely related with the center, in an academic position at the Faculty of Industrial Engineering and Management of Technion, where she recently was granted tenure.

5.

Both sub-centers have continued to successfully incorporate master and doctoral students in their projects. This is reflected most directly by a total of 14 doctoral students (Haifa: 6, Technion: 8) who work in the center supported by scholarships from the Minerva funding. During the past 2.5 years, six of these scholarship holders completed their PhD successfully. Most of the doctoral students at the two sub-centers are supported by master students contributing to the research. As in the previous years, the Council was impressed by the open and cooperative spirit within the center, which provides a very motivating and stimulating atmosphere for research. The Council was also pleased to see that the senior researchers of the center obviously put much effort in educating and coaching young scientists.

6.

As has already been reported above, members of the center are very successful in acquiring grants from other sources. A total of eight new projects have been launched since the last Council meeting, and two other proposals (one for an ERC and one for a GIF grant) are currently under way. The Council is pleased to see that at least one of the recently submitted proposals includes a project proposal which has cooperatively prepared by one of the center's PI (Ido Erev) with a German colleague (Ralph Hertwig, MPI Berlin). This represents a continuation of formal collaborations between members of the Max-Wertheimer Center and German scientists, which is also reflected in some recently published articles co-authored by members of the center and German colleagues. The Council is convinced that these collaborations can even be enlarged, and encourages all PIs of the center to strive for establishing new contacts and cooperative efforts in this respect.

6.

In 2010 Prof. Ruth Kimchi (University of Haifa) and Prof. Erev (Technion) were appointed as new directors of the center. This was due to the fact that the two former directors, Prof. Koriat and Prof. Gopher, who had directed the center since its establishment, have been retired. The Council was very much in agreement with this decision, as both new directors are highly recognized scientists and have an excellent international reputation in their specific areas of research. The current visit confirmed that the new directors have taken full responsibility, have successfully continued the work of their predecessors, and have already put much effort in further developing the center and maintaining its high scientific standard. Prof. Koriat and Prof. Gopher are still very active members of the center and support their successors very cooperatively.

8.

The Advisory Council took the following formal decisions:

- The Report of Activities 1/10/2002 – 30/09/2012 is fully approved
- The Fiscal Reports for the periods 1/10/2009-30/09/2010 and 1/10/2010-30/09/2011 are fully approved
- The Budget Proposal for 1/10/2011-30/09/2012 is fully approved (pp. 233-234 of the report).
- The Budget Proposal for 1/10/2012 – 30/09/2013 (pp. 235-236 of the report) is fully approved
- The upcoming fiscal report 1/10/2011 – 30/9/2012 shall be approved on a written basis in due time.

These decisions were taken in accordance with all Council members who participated in

the Council meeting.

10.

The Advisory Council gave its unanimous consent to this report.

Berlin, 22/11/12

A handwritten signature in black ink, appearing to read "Dietrich Manzey". The signature is written in a cursive style with a large, sweeping flourish at the end.

Prof. Dr. Dietrich Manzey