EDITORIAL

Protecting Peer Review: Correspondence Chronology and Ethical Analysis Regarding Logothetis vs. Shmuel and Leopold

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Abstract: Editors of scientific journals are ethically bound to provide a fair and impartial peer-review process and to protect the rights of contributing authors to publish research results. If, however, a dispute arises among investigators regarding data ownership and the right to publish, the ethical responsibilities of journal editors become more complex. The editors of *Human Brain Mapping* recently had the unusual experience of learning of an ongoing dispute regarding data-access rights pertaining to a manuscript already accepted for publication. Herein the editors describe the nature of the dispute, the steps taken to explore and resolve the conflict, and discuss the ethical principles that govern such circumstances. Drawing on this experience and with the goal of avoiding future controversies, the editors have formulated a Data Rights Policy and a Data Rights Procedure for *Human Brain Mapping*. *Human Brain Mapping* adopts this policy effective immediately and respectfully suggests that other journals consider adopting this or similar policies. *Hum Brain Mapp 30:347–354, 2009.* © 2008 Wiley-Liss, Inc.

Key words: ethics; research ethics; responsible conduct of research; peer-review; data ownership

INTRODUCTION

As the complexity of scientific investigation has advanced, bio-medical research has progressively adopted a team-based approach to research. In the life sciences, brain imaging is one of the most technically advanced and integrative disciplines. In this collaborative environment, scientific disagreements as well as inter-personal conflicts inevitably arise. Investigators may disagree, for example, on the adequacy of the data for publication, the most appropriate analyses to be performed, or the appropriate conclusions to be drawn from the accumulated experiments. In the context of such disagreements, more fundamental disputes often arise, including the right of individual investigators to publish data acquired cooperatively. When efforts are made to publish disputed data, journal editors necessarily become involved.

The editors of *Human Brain Mapping* were cocorrespondents in a widely publicized [Abbott 2008; Gawrylewski, 2008] data-rights dispute over a manuscript published in May 2008 [Shmuel et al., 2008]. The core conflict was between Dr. Nikos K. Logothetis, on the one hand, and Drs. Amir Shmuel and David Leopold, on the other. At

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the time the research was conducted and the disputed data were acquired, Shmuel and Leopold were both Research Scientists under the supervision of Logothetis, a Department Director of the Max Planck Institute (MPI) fur biologische Kybernetic, in Tübingen, Germany. At the time of manuscript submission, Shmuel was an Assistant Professor at the Montreal Neurological Institute and McGill University, Montreal, Canada; Leopold was a Unit Chief in the Laboratory of Neuropsychology of the National Institute of Mental Health, Bethesda, Maryland. In brief, Logothetis made two serious allegations against Shmuel and Leopold. First, Logothetis contended that data were used without his permission, thus being unethical. Second, he contended that the data were misrepresented in the manuscript submitted to *Human Brain Mapping,* and the interpretations were misleading. For these reasons, Logothetis contacted the editors seeking to block publication. Concurrently, Logothetis pressured Shmuel and Leopold through other channels to withdraw the manuscript. When these efforts to block the manuscript failed, Logothetis made public statements discrediting the authors and the editors. In our opinion, the accusations against both the authors and the editors are not supported by the facts of the case; rather, Dr Logothetis' conduct in this episode clearly fell short of widely accepted ethical standards.

In what follows, the generally accepted ethical standards that we consider applicable in this case are rehearsed. This is followed by a chronological account of the episode, based on the relevant correspondence. An analysis of the actions of the various parties and institutions, relative to the described ethical standards, is then offered. Finally, recommendations for the prevention of similar episodes in future, including explicit statements of a new Data Rights Policy and Procedure for Human Brain Mapping, are provided.

ETHICAL STANDARDS

The case at hand involved two distinct areas of research ethics: responsible conduct of research (RCR), and the ethics of peer-review. RCR is a rapidly evolving area of ethics, the development of which is being driven by the involvement of national governments in research funding. In the United States, the Office of Research Integrity (ORI) of the Department of Health and Human Services (http://ori.dhhs.gov) is responsible for ensuring the integrity of the research practices in the 4,000 institutions world-wide which are funded by the US Public Health Service. The ORI promotes research integrity through regulatory, investigational, preventative, and educational activities. Data-access and right-to-publish policies are important domains within RCR for which the ORI and other institutions provide guidelines. The ethics of peer-review for scientific publication, on the other hand, have evolved chiefly through the efforts of journal editors. Various associations have evolved to promote the development of formal ethical guidelines for journal editors, including the World Association of Medical Editors (WAME; http://wame.org), the International Committee of Medical Journal Editors (www.icmje.org), the Council of Science Editors (http://www.councilofscienceedtitors.org), the American Association for the Advancement of Science (http://www.aaas.org), and the Committee on Publication Ethics (http://www.publicationethic.org.uk).

RCR and Data-Management Ethics

Permission to acquire data in living subjects, either human or animal, can be granted only by institutional ethics committees, such as the Institutional Animal Care and Use Committee (IACUC) or the Institutional Review Board (IRB) for the protection of human subjects, which receive their authority from the national government. Ethics committee approval is granted on a case-by-case (protocol-by-protocol) basis, with an individual investigator being named as Principal Investigator (PI). Because violations of Ethics Committee policies, regulations and procedures can negatively impact an entire laboratory and, occasionally, an entire institution, it is not uncommon for laboratory directors to have senior investigators named as PI on protocols designed and carried out chiefly by more junior researchers, including post-doctoral fellows and students. In the absence of a policy or other adjudication to the contrary, authority for data management belongs to the PI. With this authority come a number of responsibilities. For example, it is the responsibility of the PI to make sure that data acquisition procedures are well documented, that all Ethics Committee stipulations and other applicable rules and regulations (e.g., regarding use of radioactive materials) are followed, that subject safety and comfort are maintained throughout, and that privileged information (e.g., protected health information for human subjects) remains confidential. Since the acquisition of data in academic institutions is typically funded by research grants from public sources, it is also a responsibility of the PI to ensure that the data achieve the intended public good, either through publication, or through data sharing, or through both.

When disagreements regarding data management and data publication arise between the PI and co-investigators, adjudication can be requested. Insofar as the rights to acquire and manage the data are granted by the institution and, ultimately, are the responsibility of the institution, the right to reassign any component of this authority resides with the institution. In ideal circumstances, academic institutions have policies in place to govern the management of research data, including procedures for dispute resolution. For example, the data-management policies of the University of Pittsburgh (http://www.pitt.edu/~provost/retention.html) and Stanford University (http://www.stanford.edu/dept/DoR/rph/2-10.html) are considered models in the field of RCR. In the event of a dispute, the

typical chain of adjudication rises through the institutional hierarchy, from PI, to Laboratory Director, to Department Chair, to Dean. Alternatively, the IACUC or IRB or an independent Ethics Committee may be appointed to adjudicate such disputes.

Dissolution of a research team, relocation of an investigator (principal or nonprincipal), and the participation of trainees (e.g. post-doctoral fellows and students) in research, are common occurrences, and should be explicitly addressed in any institution's data management and RCR policies. The most common policy is that all persons involved in data acquisition retain rights to the data, regardless of whether the team is intact or dissolved, whether the investigators are still on-site or have relocated, and whether the team member is the PI, a co-investigator, or a trainee. For example:

> *''When a collaborative team is dissolved, University of Pittsburgh policy states that each member of the team should have continuing access to the data and materials with which he/she had been working, unless some other agreement was established at the outset.''*

and,

> *''Trainees and students who are an integral part of the research project should be allowed continued access to all records and data which pertain to their part of that project. (http://www.pitt.edu/provost/retention.html)''*

Similarly, the ORI in its document entitled *Data Management and Lab Practices* recommends that:

> *''In general, each member of the team should have continued access to the data/materials (unless a prior agreement was negotiated). (http://ori.dhhs.gov)''*

Peer-Review and Publication Ethics

Peer-review of scientific manuscripts has been described as a "cornerstone of modern science and medicine" [Rockwell, 2006]. The International Committee of Medical Journal Editors (www.icmje.org) calls peer review "an important extension of the scientific process." The most fundamental premise of peer-review is that it is based solely on scientific merit. That is, peer review must be free of any ideological, political, financial, or personal biases or other conflicts of interest. Consequently, a fundamental responsibility of journal editors and reviewers is to avoid conflicts of interest that could compromise the impartiality of the review process. For this reason, as with grants, it is common practice in the peer-review of manuscripts to allow authors to identify persons whose reviews should not be solicited because of real, suspected, or potential conflicts of interest. However, it is equally the ethical responsibility of the reviewer to excuse himself or herself from the review process should a conflict of interest exist [Rockwell, 2006].

For journal editors, protecting the integrity of the peer-review process is a public trust and a responsibility both to the authors and to the members of the scientific community at large. Journal editors bear a particular responsibility to the authors because peer-reviewed publication is the building block of scientific careers. Publication in peer-reviewed journals is the primary metric by which academic careers are judged and upon which employment, promotion, tenure, funding, and status within the scientific community depend. Journal editors are responsible to the scientific community because the peer-reviewed literature constitutes the largest component of the collective corpus of scientific productivity.

This is not to suggest that peer-review is able to guarantee the validity of each and every published finding. The process of scientific discovery is not without error. Even the most rigorous, well-trained and well-meaning scientists can produce findings that cannot be replicated and advance theories that are later overturned. Reviewers can also miss fundamental flaws in submitted manuscripts. Hence, the value of the well-worn research adage, "Replication is the best statistic." The scientific enterprise is enormously powerful specifically because it is a collective undertaking. Errors eventually will be corrected. Thus, journal editors and reviewers should carefully assess each paper, but not discourage novel findings and new theories being presented to the community, trusting that replication will be the final judge of the validity of a finding or theory. Accordingly, scientists who disagree with a particular finding, details of a methodology, or a theory should convey their arguments in a formal, peer-reviewed forum, rather than attempting to impede publication.

CORRESPONDENCE CHRONOLOGY

The disputed data first came to the attention of the editors of *Human Brain Mapping* in an oral presentation, "Spontaneous fluctuations in functional MRI signal reflect fluctuations in the underlying local neuronal activity," by Dr. Amir Shmuel, Mr. Mark Augath, Mr. Axel Oeltermann, and Dr. Nikos Logothetis [Shmuel et al., 2007] presented at the 2007 meeting of the Organization for Human Brain Mapping (OHBM). Oral presentations at OHBM are very high in quality, being few in number and awarded based on rigorous peer review. Shmuel's presentation was of particular interest to the editors of HBM because of its relevance to the topic of the annual HBM Special Issue for 2008: Endogenous Brain Oscillations and Networks in Functional MRI [Bandettini and Bullmore, 2008]. On the basis of the quality of his presentation and its relevance to the upcoming HBM Special Issue, Shmuel was invited to submit this work for inclusion in the Special Issue. Dr. David Leopold was also separately invited to submit an article to this same issue. Subsequently, Shmuel and Leopold chose to co-author a single publication. It should be noted that invitation to submit did not guarantee publica-

tion. HBM Special Issues are subject to peer-review of rigor equivalent to that of noninvited submissions for regular issues. Production of HBM Special Issues is timed so that issues are released at the OHBM annual meeting, held in June of each year. Inclusion required a submission no later than November 1. The Shmuel and Leopold manuscript was submitted on October 17, 2007, went through two rounds of peer review, and was accepted for publication on March 6, 2008.

On April 25th, the editors of *HBM* were notified for the first time by Shmuel and Leopold of an unresolved data-ownership conflict that the authors were concerned might prevent publication. Unknown to the editors, this conflict had arisen prior to the submission of the manuscript and had remained unresolved throughout the review process. Logothetis had been a willing co-author of the original presentation of the data at OHBM [Shmuel et al., 2007]. But, once Shmuel and Leopold had left his laboratory, Logothetis was unwilling to allow the data to be published in a full-length manuscript. In an earlier e-mail correspondence with Shmuel, Logothetis acknowledged Shmuel's legal right to publish the data. On the basis of the initial permission, Shmuel and Leopold submitted the manuscript to *Human Brain Mapping*. Logothetis subsequently denied Shmuel and Leopold's right to publish the data. After the *HBM* editors accepted the manuscript, Shmuel and Leopold requested adjudication of the dispute from Dr. Peter Gruss, President of the Max Planck Society (MPS; http://www.mpg.de/english/). The MPS oversees more than 80 research institutes and research facilities, of which the Max Planck Institute (MPI) fur biologische Kybernetik is one. While the more typical approach for adjudicating a disagreement with a PI would be to appeal to the Laboratory Director or the Department Director, in this case, Logothetis held both of these senior posts. In making the appeal for adjudication, Shmuel and Leopold provided evidence that Logothetis had already demonstrated, in their opinion, a serious but not scientifically based professional conflict of interest, which must exclude him from participation in the adjudication process. Consequently, Gruss appointed Dr. Herbert Jäckle, a Vice President of the MPS, to adjudicate. While awaiting Jäckle's decision, production of the manuscript was halted by HBM, per request of the authors and decision of the editors.

On May 2, 2008, the *HBM* editors received a letter from Jäckle addressed to Shmuel and Leopold, confirming that the conflict had been resolved in the authors' favor and granting permission to proceed with publication. In the context of granting permission to release the paper for publication, Jäckle's letter contained four stipulations.

The first stipulation addressed support acknowledgement:

> *''Support of the MPI should be adequately mentioned in the Acknowledgement: 'The data analyzed in this study were obtained in the Lab of Nikos K. Logothetis (MPI fur biologische Kybernetik, Tubingen, Germany). The experimental part of this work was supported by NKL through personnel and funds of the Max Planck Society.'''*

The second stipulation related to authorship rights of the other investigators:

> *''Mr Augath and Oeltermann informed me that they...decided not to join the list of authors and that there is no mentioning of their names (including the acknowledgement section). They agree however, that their data can be used under the aforementioned conditions.''*

These two stipulations were viewed as binding both by the *HBM* editors and by the authors. Both were carried out exactly as requested.

The third stipulation requested that scientific criticisms made by Logothetis (and contained in Jäckle's letter) be addressed by the authors. This stipulation concluded with the caveat:

> *''However, if you in spite of this criticism feel that all the above points are scientifically unjustified, then standard scientific practice would still require that you address these points, for example, in the discussion section of your manuscript.''*

The *HBM* editors reviewed the scientific criticisms to determine whether they revealed new, scientifically crucial information that might have invalidated the prior review process; in our opinion, they did not. The only scientifically substantive issue was whether a uniform grey monitor being present during data acquisition should prevent characterization of observed effects as "spontaneous fluctuations". However, the stimulus conditions were explicitly stated in the manuscript and were not felt by reviewers or editors to invalidate the study. Furthermore, resting state is a condition allowing a wide range of definitions, easily including a uniform grey monitor presented to an anesthetized animal. Consequently, the editors concluded that there were no valid grounds for initiating a scientific re-review.

Another scientific criticism by Logothetis (contained in Jäckle's letter) was that Shmuel and Leopold [2008] made no fundamental scientific advance over a prior article by Logothetis [Logothetis et al., 2001]. This view was not shared by either of the reviewers, nor by any of the *HBM* editors. Most obviously, the earlier article did not seek to address multiregional network properties using resting-state acquisitions. Even if the new work merely duplicated the prior work, replication of such difficult and unusual experiments is of fundamental importance in science and would have justified publication. Further, we found it difficult to reconcile this criticism with the fact that Logothetis was the senior author on the abstract originally presenting these data [Shmuel et al. 2007].

The editors noted that the third stipulation did not specify that Logothetis had the right to approve any changes

made to the manuscript in response to this criticism. The authors also viewed this third stipulation as nonbinding. This interpretation was supported by the fourth stipulation, which gave Logothetis the right to respond in a subsequent submission.

> *''In the event that the scientific flaws (I hereby refer to Dr. Logthetis' comments above) are not adequately addressed in the published version, Dr. Logothetis reserves his right to address them in a scientific correspondence/ paper.''*

The reader should note that each of these stipulations specifically relates to the imminent publication of the already accepted manuscript. Stipulations 1 and 2 relate to authorship and acknowledgements. Stipulation 3 recommends editing the discussion section. Stipulation 4 provides a contingency should the "published version" not satisfy Logothetis. This is relevant in that some subsequent statements attempted to claim that permission to publish was not intended.

In closing, Jäckle extended the permission to publish the present manuscript to future manuscripts using additional data in alert monkeys.

> *''Finally, it is my understanding that additional papers from your time in Dr. Logothetis' lab are in the "pipeline". Dr. Logothetis hereby authorizes the usage of data you obtained from alert monkey experiments. They can be used - only by you - in the same way as the data were used for the present paper by simply acknowledging where the work has been done (see above for the present paper).''*

Having received confirmation from the MPS of the authors' right to publish and having accommodated the stipulations regarding authorship and acknowledgements, the *HBM* editors released the manuscript for publication.

Following the decision to release the manuscript for publication, the *HBM* editors received numerous communications from Logothetis. In all, he challenged the publication on both ethical and scientific grounds. In some, he argued that because the paper had not been modified sufficiently to address his concerns, *HBM* editors were wrong to release the manuscript and that it simply

> *''. . . must be retracted. (May 20, 2008).''*

In other communications, he requested retraction but if this could not be agreed to by the *HBM* editors, he requested

> *''. . . that you publish a commentary that my colleagues and I will submit immediately after the article goes to print. (May 12, 2008).''*

In reply, the editor-in-chief (Fox) sent Logothetis an e-mail (May 22, 2008) explaining the rationale for the decision to proceed with publication of the manuscript. The key points were,

> *''. . .there are two aspects to this decision: 1) scientific ethics and data management/ownership legalities; and 2) publication peer review.''*
>
> *''As regards the first, the critical issue is who has the right to own/mange the data that were reported.''*
>
> *''I understand that the data were acquired in your laboratory, but this is not necessarily sufficient to establish ownership. . ..''*
>
> *''If questions or disputes arise, they are most properly settled at the institutional level. In the present case, your institution has already reviewed the matter and determined that Shmuel and Leopold are entitled to use these data. . ..''*
>
> *''As regards the second, a standard peer-review process was done prior to manuscript acceptance.''*
>
> *''. . .the peer-review process is complete and I do not believe it is appropriate to over-rule this process, based on input from an investigator having a dispute with the authors.''*

After further correspondence, the *HBM* editors invited Logothetis to submit a commentary explaining his scientific concerns, including data re-analysis, if appropriate. The editors also requested that the MPS inform the editors of their position regarding republication of the data by Logothetis. Jäckle responded to the editors on behalf of the MPS (May 27, 2008); in doing so, he made several relevant points, including:

> *''According to the international standard, the data belong to the institute where they were obtained and funded. In this particular case, the corresponding representative is Dr. Logothetis (Director and PI).''*
>
> *''The Max Planck Society gave the permission to use the data (to Shmuel and Leopold) because the authors insisted that Dr. Logothetis holds the data because of personal, non-scientific reasons.''*
>
> *''Dr. Logothetis agreed to the use of data (by Shmuel and Leopold), although he had serious scientific concerns. . ..''*
>
> *''The Max-Planck-Society made the data available to be used by Drs Shmuel and Leopold as requested by them. No strings and no bias (were) attached.''*
>
> *''I would like to mention that re-analysis of data is a process inherent to science, and it is my understanding that not only Dr. Logothetis would have the right to re-analyze the data: every person in the field, who may have scientific doubts must have this right as a matter of course in order to allow the system to fix possible shortcomings.''*

Despite this clear confirmation of Shmuel and Leopold's right to publish the data, and despite the explanation of the *HBM* editors' conclusions regarding the ethics and legalities of the matter sent (May 22) to Logothetis, and despite the editorial invitation to Logothetis to submit a scientific commentary on the Shmuel and Leopold article, Logothetis did not accept the decision of the MPS or submit a commentary. Rather, Logothetis went outside of the accepted peer-review and adjudication processes. For example, Logothetis corresponded with the employers and colleagues of the authors at their newly adopted research institutions, accusing the authors of unethical behavior. Logothetis also continued to pressure *HBM* editors (by e-mail) to retract the manuscript and accused them repeatedly of unethical behavior. When a retraction was not forthcoming, Logothetis made public statements which discredited the authors and the *HBM* editors. These public statements began with a widely distributed e-mail (June 16) accusing Shmuel and Leopold of unethical behavior and accusing the *HBM* editors of ignoring his wishes and those of the MPS. This e-mail was followed up with a news article in *Nature* [Abbott, 2008] about the controversy, which included interviews with Logothetis and Jäckle and which portrayed Logothetis as the injured party. This story was subsequently picked up by *The Scientist* [Gawrylewski, 2008] and republished online.

The public statements by Logothetis and Jäckle did not provide an entirely accurate or consistent account of various facts of the dispute. One key aspect of the dispute that was repeatedly stated incorrectly was the outcome and terms of the MPS' adjudication. As is documented above, the MPS had adjudicated the matter and ruled in favor of the authors (Shmuel and Leopold). Further, the MPS had specified that MPS support should be acknowledged and gave the exact wording for the acknowledgement. Yet, in his public e-mail (June 16), Logothetis asserted,

> *''MPS has explicitly indicated that the accreditation is wrong, and that it does not want to be associated in any way with this particular publication.''*

The MPS' endorsement of the authors' right to publish was also incorrectly stated by Logothetis and Jäckle, claiming that the MPS only gave authority to "use the data," as distinct from publishing [Jäckle quoted in Abbott, 2008].

A third error regarded manuscript authorship. Jäckle had stipulated that two engineers associated with the experimental work, Mr Augath and Mr Oeltermann, were not to be included as authors. Yet, in his public e-mail, Logothetis represents this as solely Shmuel's decision,

> *''It is worth pointing out that he (Shmuel) had invited Leopold to act as a coauthor in this paper but excluded from authorship the collaborators who did the actual data acquisition for him.''*

To date, Logothetis has not submitted a commentary to *Human Brain Mapping*.

DISCUSSION

The case of Logothetis vs. Shmuel and Leopold is complex and challenging. Nevertheless, it can be effectively analyzed using the basic ethical principles presented in the Introduction.

Analysis of The Relocated Investigators' Actions

The present controversy arose, by their own account, when the Logothetis retracted his permission to publish and the authors did not accept Logothetis' authority to do so. In our opinion, Shmuel and Leopold were justified in submitting these data for publication for at least three reasons. First, Logothetis had acknowledged their right to publish the data by appearing as a co-author on the original publication [Shmuel et al., 2007]. Second, Logothetis acknowledged Shmuel's right to publish the data after their departure from his laboratory. Third, they were collaborators during protocol design and execution, giving them enduring rights to the data, in accordance with widely respected, published guidelines. Their right to use the data, including publication, was subsequently affirmed by Jäckle on behalf of the MPS.

On the other hand, the manuscript was submitted without informing the *HBM* editors of the unresolved conflict. This prevented the *HBM* editors from taking steps to resolve the conflict prior to manuscript review. Prior to manuscript publication, however, Shmuel and Leopold did appeal to the institution for adjudication, which was appropriate in our view. Shmuel and Leopold also followed the stipulations regarding authorship and MPS acknowledgements imposed by the MPS adjudication, which was also appropriate in our view.

Analysis of The Laboratory Director's Actions

In our opinion, Logothetis' conduct is difficult to reconcile with the RCR and peer-review standards described above in four ways. First, it did not accede to the basic RCR principle that authority over data ownership belongs to the institution, in that he repeatedly advocated against publication by the authors after the MPS had granted them the right to publish. Second, it did not conform to the basic precept that peer review be free of conflict of interest. The authors identified Logothetis as having a conflict of interest to the *HBM* editors and the MPS, requesting that he not be a party to any decision regarding their access to the data or its publication. The *HBM* editors notified Logothetis that they regarded him as having a conflict of interest. Despite this, Logothetis endeavored to influence the peer review process, repeatedly contacting *HBM* editors to criticize the manuscript, make accusations of unethical behavior and demands for retraction. Third, Logothetis' conduct did not properly correspond with the different domains of authority over the data-management process (the domain of the institution) and the data-publi-

cation process (the domain of the journal). In correspondence with the journal editors, Logothetis argued his case on both ethical (RCR) and scientific grounds. Subsequently, he accused the *HBM* editors of unethical behavior by complicity with the (perceived) ethical lapse of Shmuel and Leopold, simply by virtue of allowing the paper to be published. As the *HBM* editors clearly expressed in writing to Logothetis, the RCR concerns (i.e., issues of data ownership and access) are not the domain of the journal. Fourth, Logothetis moved this dispute from the proper domains of discourse and adjudication, i.e., the institution and the journal, into the public domain. Outside parties (supervisors, colleagues, the community at large, the news media) were appealed to repeatedly, none of whom had any proper role in resolving this dispute. In our view, the only appropriate manner in which the "higher authority" of community opinion should have been appealed to would have been by publishing a peer-reviewed article challenging the scientific status of the results published by Shmuel and Leopold [2008].

Analysis of the Journal Editors' Actions

As regards *Human Brain Mapping*, the RCR analysis is relatively straightforward. In general, RCR is the responsibility of the institution carrying out the research. Journal editors have a responsibility to ensure the integrity of data management and to ensure that the authors have institutional approval to use the data they seek to publish. However, in our view, editors have no charge to independently judge the ethical merits of a particular case reviewed by institutional authorities, having no direct access to the institutional approval process and documentation. Nevertheless, when the institution's RCR safeguards fail, journals can become unwittingly involved. At the time this case arose, *HBM* had no formal policy or procedures in place to protect the journal from an RCR issue arising despite the due process of an academic institution, such as the Max Planck Society. This omission is now corrected by the Data Rights Policy and Procedure presented below.

As regards peer-review ethics, the *HBM* editors carried out a rigorous peer-review. Once this was complete, Logothetis was viewed as a nonauthor named by the investigators as having a conflict of interest, and was not allowed to insert himself into the peer-review process. Logothetis' criticisms did initiate an editorial review, to judge whether scientifically crucial information might have been withheld which would have invalidated the prior review process. No evidence of this was found. Once the editors found no scientific grounds for withholding the manuscript and had confirmed RCR compliance with the MPS' ruling, we were ethically bound to publish the manuscript. In this regard, we followed the Code of Conduct for Editors of Biomedical Journals (http://www.publicationethics.org.uk/guidelines/code) published by the Committee on Publication Ethics (http://www.publicationethics.org.uk/) that specifically recommends:

> *''Editors should not reverse decisions when authors have been told that their papers will be published unless serious problems are identified with the papers.''*

Analysis of the Home Institution's Actions

The Procedures and Regulations of the Max Planck Society are openly accessible. These contain the MPS Rules of Good Scientific Practice (http://www.mpg.de/pdf/rules ScientificPract.pdf). Of these rules, Rule 4, Securing and Storing Primary Data, addresses data access rights.

> *''The (individual) institute management is responsible for regulating and setting out in writing all further details and responsibilities, in particular for detailing proper reporting standards and access regulations for the use of data.''*

That is, the MPS locates the responsibility for developing data access policy at the level of individual institutes, rather than promoting a single policy to cover the more than 80 institutes and research laboratories that the MPS governs. Despite this mandate from the central authority, no such policy or procedure statements are readily evident at the web site of the Max Planck Institut für biologische Kybernetik, Logothetis' home institute. Further, the web-posted MPS policy fails to dictate specific provisions regarding data access for dissolved teams, relocated investigators, or trainees, such as those provided by the policies of the University of Pittsburgh. Given the lack of necessary details in the MPS policy and the apparent lack of local compliance with an MPS-wide directive, it is arguable that the MPS might have been better served by having a detailed policy applying to all its subsidiary institutions.

In this instance, the MPS President assigned a single person to resolve the RCR-derived conflict, rather than passing the case to a standing ethics committee. In our opinion, some actions taken by this individual (Vice President Jäckle) on behalf of the MPS are also difficult to reconcile to the RCR principles stated above. For example, requiring Shmuel and Leopold to respond to Logothetis' criticisms inserted an RCR action (the institution's domain) into the peer review process (the journal's domain). Additionally, allowing Logothetis to publicly dissent from the MPS decision, once rendered, undermined the authority of the MPS as the sole and final adjudicator of RCR matters. Other actions appear mutually contradictory. His first letter, from Jäckle to the authors, grants Shmuel and Leopold the right to publish with some stipulations (listed above). His second letter informs the *HBM* editor that the right to publish was given "with no strings and no bias attached", i.e., with no stipulations. This same letter, moreover, concludes by attributing access to this data to "every person in the field". Yet later, Jäckle is quoted as asserting that he granted Shmuel and Leopold only the right to use the data, but not the right to publish [Abbott, 2008].

In general, the *HBM* editors respectfully suggest that RCR institutional adjudication of RCR issues should be

the purview of an ethics committee, rather than an individual, and that the committee should be guided by a well-developed, fully-specified body of policies and procedures.

Recommendations to the Community

In *Poor Richard's Almanac*, Benjamin Franklin wrote, "An ounce of prevention is worth a pound of cure." In our view, the scientific community can derive the most benefit from this unfortunate series of events by using them to guide the development of policies and procedures designed to prevent similar occurrences in the future.

As regards the RCR, we suggest academic institutions, at the very least, should develop policies similar in spirit to those of the University of Pittsburgh and Stanford University. Because schools, institutes, departments, centers, and laboratories may have individually varying circumstances that require more detail than an institutional policy, these organizational levels within the academic hierarchy may also wish to consider extensions of their institutional policies to govern their specific situations. Finally, all investigators (including students and post-doctoral fellows) entering into collaborations should consider implementing the option indicated in the University of Pittsburgh and ORI policies, i.e., a written agreement at the outset of any collaboration.

As regards journals and the ethics of scientific publication, the editors of *Human Brain Mapping* advocate that journals have written policies and procedures enforcing RCR compliance. To this end, the editors have formulated the following statements of Policy and of Procedure, hereafter applicable to all manuscripts submitted to *Human Brain Mapping*. For additional guidelines on policy development, the ORI website provides a wealth of information regarding laws, rules, regulations, guidelines, and common practices, as well as links to other resources.

Data-Rights Policy

For all manuscripts submitted to *Human Brain Mapping*, the authors must have legal rights to publish the data established in advance by their institution. In all matters regarding authorship and the right to publish, authority rests primarily with the PI in whose name the rights to acquire the data were granted by the relevant ethical review boards. PIs receiving their authority from the institution, this authority can be overruled or replaced by higher institutional officials. The editors and publisher of *HBM* do not assume the authority to arbitrate, moderate, or intervene in any manner in disputes concerning authorship, data ownership and publication privileges arising between investigators. Nor do the editors or publisher of *HBM* assume any authority to judge the ethics of any disputes, such judgements being the sole purview of the host academic institution. Once the right to publish is assured, the editors of *HBM* will proceed with peer review and publication in the usual manner, accepting no provisions, stipulations, conditions, or duties from any party.

Data-Rights Procedure

In all submitted manuscripts, it is required that the cover letter state that the authors have the authority to publish the data contained therein. If the PI is not an author on the submitted manuscript, a signed letter from the PI giving the authors permission to publish must be provided. Alternatively, a written statement from a higher institutional official can substitute for the letter from the PI. These higher institutional authorities may include laboratory chiefs, center directors, department chairs, or other officials senior to both the PI and coinvestigators.

In all manuscripts, the usual statement appearing in the methods section regarding institutional authorization to perform the investigations must be extended to include: naming the PI on the approved protocol, naming the approving institution, and citing the protocol approval number. As for example:

> *"The studies reported herein were approved by the Institutional Review Board (IRB) of the University of Texas Health Science Center at San Antonio (UTHSCSA) in protocol #12345, granted to P. Fox as principal investigator."*

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