

Medical Journals: Active or passive change agents?

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INTRODUCTION

This question was posed to me at the symposium held in April 2018, to mark 30 years of the *National Medical Journal of India (NMJI)*. The topic seemed particularly pertinent at a time when some medical journal editors have been both praised and criticized for making their journals campaign platforms for policy changes in public health. It also posed a major challenge in defining the responsible role of medical journals at a time when great scientific advances and powerful technologies are rapidly transforming healthcare, but wide health inequities exist in populations across and within countries. My perspective is that of a clinician-researcher who has moved into the arena of public health through the gate of epidemiology. I have also reflected on my past association with the *NMJI*, as a member of the editorial team.

Are medical journals like the *NMJI* to be mere chroniclers of science? Are they expected to catalyse policy by hoping to expose policy-makers to new knowledge, without articulating a clear position on whether and what policy change is needed? In such a case, the role is passive, with the impact depending on the receptivity of the policy-makers to recognize, register and respond to the messages that lie layered within the cautiously neutral jargon of scientific reporting.

Or is it the role of scientific journals, especially in the domain of health, to go beyond the technical reporting of science, to crystallize key messages for crisp communication and campaign for policy interventions to reduce health inequity, by acting as conscience-keepers of society? In such a case the role is one of an active change agent.

Conventionally, most medical journals have adopted the stance of 'objectivity' and stayed away from the presumed polemics of policy debate. To venture into the terrain of opinions, viewpoints, calls to action, and sharply critical editorials was seen as deviating from the studied objectivity that represents unbiased science and retains the reader's trust. Even evidence-informed advocacy was taboo to the credo of scientific writing in technical journals. That was left to the lay press, whatever be the level of understanding and accuracy in that medium.

However, was objectivity being confused with neutrality? Is it acceptable to refrain from policy advocacy when the scientific evidence clearly calls for it, especially when the recommendation can open the path to reducing health inequities and advancing social justice? 'Let the readers judge for themselves; we only provide the facts' is the plea often taken, despite the awareness that rapid reading does not often evoke a reflective reader response and that status quo has strong vested interests who compete for the same mind space. Facts gleaned from robust research need to be connected to policy, with the clarity that the scientific method can provide. Is that not also a part of the journal's job?

In the past, editors of medical journals would recoil from even editorially taking a position on policy issues. 'We are scientists, not advocates, activists or agitators' would be the indignant response if asked to stimulate policy debates through the editorial pages of their journals. They would contemptuously dismiss the

idea of a journal becoming the platform for advocating a health policy, declaring that a good journal should remain a strictly academic publication and not morph into a shrill pamphlet. However, that view has been changing with editors of some leading scientific journals boldly acting on the conviction that journals must not only report on scientific advances but also enable social transformation by pointing the direction in which the intellectual and technological products of science must be guided for the greater good of humanity. Who is right?

SOCIAL VALUE OF SCIENCE

Science, exciting as it is in its intellectual firepower and dazzling array of discoveries and inventions, must serve a social purpose. It must not only provide us a better understanding of the world but also help us to create a better world. It must advance human civilization to attain both higher levels of development and achieve better social dividends of development, such as health equity. Scientific journals must, therefore, become instruments of desirable social change.

For this to happen, science has to engage with public policy. Just as science is sterile if it lacks social relevance, public policy will crumble on clay feet if it does not stand on the strong base of sound science. This is true of life sciences, social sciences and engineering sciences—indeed of all sciences. It is especially true of health sciences. Most often, public policy on health has to be informed and influenced by multiple streams of knowledge, fused through interdisciplinary research. Medical journals should provide the pathway for connecting relevant science to reasoned public policy.

While undertaking research to advance knowledge that can guide impactful action, which can improve health for all, scientists should recognize that many actors are involved in that pathway. While they may be good at generating knowledge, application of scientific knowledge is a political process. This is especially so in public health. Even in clinical care, which tests and treatments get covered for whom in a universal health coverage programme is decided on the basis of several considerations, including cost-effectiveness and budgetary limits. In many cases, the political process whereby scientific knowledge is integrated into policy and implemented through programmes hinges on an assessment of the balance of expected societal good and anticipated harm. The debate on genetically modified foods is an example. Whether mid-level health workers should be empowered to administer treatments in primary care is another. Journals cannot disengage from this process, as they are among the best judges of the quality of evidence which must guide such decision-making.

THE CULTURE OF SCIENCE: OPEN OR CLOSED?

According to western historians, the scientific method originated from the Greeks. Thales of Miletos (around 600 BC) is credited with being an early exponent, insisting that a commitment to free and critical discussions is essential for science to flourish. While he was probably influenced by the flow of intellectual thought from contemporary Egyptians, Babylonians and Ionians, Thales was among the first to seek explanations beyond myths and invite an open discourse. That has developed into an established

tradition where science combines curiosity with scepticism in its enquiry into any question, and blends assertion with challenge while debating its findings and conclusions. That science twinned with metaphysics in much of its history made such debates necessary and possible. Even in the ancient Indian philosophical tradition, *Shastrartha* featured different forms of discussion and debate in attempts to unravel the mysteries of the unknown. Attempts to find causal relationships, through systematic experiments, gave fillip to the scientific method at the time of the Renaissance, which itself was a bold call for open communication on new ways of thinking.

Should such debates be confined within the community of scientists or should the scientists also engage the public in matters of societal concern? There is a telling instance when a distinguished scientist like Edward Teller felt that the public must be informed. When the atomic bomb was being developed, several scientists who contributed to that effort developed serious misgivings. Leo Szilard, who had first conceived the idea of neutron chain reaction, persuaded Einstein to convey his concerns about the bomb to President Roosevelt. When Roosevelt's successor Truman pressed on with the project of making atomic weapons, Szilard organized a petition, signed by 67 scientists. Edward Teller, who refused to sign, wrote to Szilard: 'First of all let me say that I have no hope of clearing my conscience. The things we are dealing with are so terrible that no amount of protesting or fiddling with politics will save our souls. Our only hope is getting the facts of our results before the people.' Sadly, neither did the petition reach Truman nor did the facts reach the public, before the bombing of Hiroshima and Nagasaki.

Reaching out to policy-makers as well as the public must, therefore, become part of the culture of scientific communication, especially in areas where health policy involves the lives and well-being of millions. Even as scientists engage in honest, open debates among themselves, they cannot obscure their findings and the implications of those findings from the wider community. At present, there are many open channels of fast communication to do so and we do see them being used and misused for communicating science. However, scientific journals remain best suited for the initial reporting as well as for commenting, armed as they are with the incisive instruments of rigorous scientific scrutiny.

In these days of growing anti-science stridency among the opponents of rationality, who sadly include some policy-makers across the world, scientific journals should defend sound science and contest fake science. In a world where social media have become major purveyors of news and views on health, a high volume of incorrect information gets disseminated at incredible speed to flood the public mind and lobby public policy. Scientific journals should clarify misconceptions and categorically contradict fake news because the lay public respects their credibility. When myths are propagated on measles vaccination as cause of autism or the reality of anthropogenic climate change is denied, scientific journals should not remain neutral.

To retain their credibility, scientific journals must encourage open debates within their pages, even inviting critical rebuttals of their stated positions. They must distinguish between principled advocacy of a well-argued position and overzealous marketing of a rigid opinion. They must undertake self-correction promptly if any viewpoint has been proved to be invalid or outdated. Only such transparency will win trust. However, reluctance to engage in debate must never mute their voice in espousing the right cause.

WHY MEDICAL JOURNALS MUST ENGAGE

There are many challenging issues in health that are currently being debated in the wider policy arena. These span all domains of science which relate to health: biomedical, clinical and public health. In biomedical sciences, such debates are taking place on issues such as cloning, artificial life and genetic modification. In clinical medicine, intense public discussions now cover subjects such as access to healthcare and drugs, inappropriate care, non-physician healthcare providers, ethics of clinical trials and right to end life. In public health, the topics of discussion include the right to health, intersectoral policy actions on the social and environmental determinants of health, gender divide in health, antimicrobial resistance, regulation of unhealthy foods, health effects of climate change, global health inequalities and intergenerational effects of malnutrition. Medical journals cannot stay aloof as society debates such issues. They need to offer their perspectives to society as it wrestles with the complexity of these issues. They can take up public positions through editorials and media communications. That will serve to mobilize professional communities and inform public opinion.

Responding to the need for reducing global health inequities, medical journals should also provide more space to original research and commentaries related to the health problems of the low- and middle-income countries. The largest fraction of global health burden is accounted for by these countries and scientific journals would be remiss in their commitment to the health of humanity if the most populous regions of the world receive scant attention. The call by the World Association of Medical Editors, to correct this asymmetry, is welcome.

CONCLUSION

'If we do not create the future, the present extends itself'

—Toni Morrison
(*Song of Solomon*)

Science is a decoder of knowledge and scientific journals are disseminators of that knowledge. Both the generators and disseminators of knowledge also have a responsibility to advocate, if not ensure, that the knowledge is appropriately used for human welfare. Since that knowledge is relevant to all of society, scientific journals should communicate more openly with policy-makers and the wider community on important issues of our time where the validity of scientific findings and their policy implications need to be subjected to critical scrutiny. The journals also have a role as honest debaters of emerging scientific knowledge and as defenders of good science when it comes under the onslaught of bad science and fake news. By playing all of these roles, they have to become the drivers of change for creating a better world. This is especially true of the role that medical and public health journals must play.

We are living in times of great challenge, where there are ongoing battles of sharply polarized ideas and values. The outcome of those battles will have a profound influence on the future of human civilization. All of society must, therefore, engage in these debates. Scientists and their journals are no exception. We must shed stale positions that cling to status quo and stop thinking of journals as existing in a sterile bubble. Instead, journals must engage with the real world as responsible global citizens. Of course, in doing so, it would be useful to heed the good advice that Louis Pasteur gave his young research fellows: 'Keep your enthusiasm, but let strict verification be its constant companion.'

Conflicts of interest. None declared