

## Chapter 26

# Challenges for the Future

### Contents

|   |     |
|---|-----|
| 26.1 Genes and Memes – How to Achieve a Peaceful Coexistence . . . . .      | 275 |
| 26.2 Need for New Diagnostic and Therapeutic Approaches and Tools . . . . . | 276 |
| 26.3 Testable Hypotheses of Gene × Meme × Environment Interaction . . . . . | 276 |
| 26.4 Memes, Social Sciences, and Neuroscience . . . . .                     | 277 |
| 26.5 Ethical Considerations . . . . .                                       | 278 |
| 26.6 Post-human Evolution of Memes . . . . .                                | 278 |

### 26.1 Genes and Memes – How to Achieve a Peaceful Coexistence

Memes were created by genes in the service of better survival and replication of the organism, i.e., genes. Once memes achieved widespread portability and replicability, however, some memes evolved in a deviant path to come in conflict with the survival and welfare interests of the individual genetic organism, i.e., irrational memes, self-destructive memes.

Mental health may be achieved in a democracy of various memes in the brain which is possible only if the brain possesses the capability to process and manipulate memes in the service of the genetic organism (see Chapter 12). Education is the means through which meme-processing ability is learned and strengthened. An important challenge for the human race is then how to consciously design and implement educational methods specifically designed to enhance the meme-processing ability. This involves exposure to a variety of both salutary and harmful memes and teaching how to evaluate such memes and how to sort and filter incoming memes. Specific techniques of dealing with environments that are flooded with memes detrimental to the interests of the organism must be developed and taught, which may include both broad-spectrum anti-meme procedures such as relaxation and meditation techniques as well as specific anti-meme procedures yet to be developed (see Chapters 17 and 18).

Identifying individuals who are vulnerable to infection by detrimental memes through genetic testing and environmental evaluation is another important challenge. Once such individuals are identified in childhood, specific nurturing memetic environments could be provided for them that would mitigate the vulnerability (see Chapter 19).

Models of mental health that show how to deal with conflicting memes and achieve a memetic democracy in the brain should be developed and made available. This could include actual scenarios of conflict resolution, both interpersonal and intrapsychic. The use of avatars in virtual reality might be particularly useful in this regard.

## **26.2 Need for New Diagnostic and Therapeutic Approaches and Tools**

It should be clear that new diagnostic and therapeutic approaches and tools must be developed specifically designed for gene  $\times$  meme interaction. For example, an inventory of existing memes in the brain and their configuration, i.e., which memplexes are dominant, and which are dormant, and which are in rebellion with the dominant ones, would be a particularly useful diagnostic tool. For this purpose, computerized meme scans might be developed utilizing such techniques as time-limited free association and word association test. Existing projective tests, such as the Rorschach might be reinterpreted in terms of memetic content and conflicts.

A reclassification of mental illness taking into account the gene  $\times$  meme interactions, as I have attempted to do in this book, would naturally lead to rational treatment approaches that are both gene- and meme-oriented.

Broad-spectrum anti-meme therapies such as relaxation, massage, music therapy, etc., should be emphasized and practiced more widely in psychiatric treatment settings, not just as an adjunct but as a main procedure in combating noxious meme infections just like broad-spectrum antibiotics in bacterial infections.

Specific meme-oriented therapies geared to neutralizing specific toxic memes must be developed. Such therapies would include infusions of specific neutralizing memes in the form of words, and/or sounds, and/or visual imagery, or combinations thereof. Virtual reality and avatars may be of particular importance in specific memetic therapies. For example, seeing oneself as an avatar with the ability to solve specific memetic and/or meme  $\times$  gene conflicts would empower the patient to identify with the avatar and imitate it, resulting in the incorporation of the ability meme.

## **26.3 Testable Hypotheses of Gene $\times$ Meme $\times$ Environment Interaction**

The essence of our model of mental health and illness is that genes do not interact with environment directly, but through memes that enter the brain and are processed

by the brain in interaction with and filtered by existing resident memes. The nature and strength of the already existing memes, therefore, modify whether and how environmental stresses are perceived and thus interact with the genes. Some testable hypotheses that arise from this model would include:

1. Documentation of resident memes through meme scan or other means should predict how a specific stressor such as childhood abuse may have resulted in genetic change, i.e., which genes are turned on and off (*epigenesis*). This should be testable through DNA analysis. For example, what specific memes are associated with methylation or acetylation of the serotonin transporter promoter gene (SERT, 5-HTTLPR)? With MAOA? Does the proliferation of specific memes, e.g., suicidal ideation, occur in the presence of specific gene configurations, such as the activation of the 5-HTTLPR *s*?
2. The status of such genetic changes will be accompanied with differential brain and physiologic *arousal patterns to specific meme infusion*. The brain function should be measurable through imaging techniques such as PET and fMRI.
3. Evaluation of *current status of memes* in the brain, i.e., what the dominant memeplexes are, how much conflict or harmony there is between the dominant memeplexes and the nondominant ones, will predict the degree of mental health or illness of the individual.
4. Meme-oriented therapies will result in *changes in brain function*. Broad-spectrum anti-meme therapies should show a generalized change in the meme-processing activity of the brain, while specific meme-oriented therapies will show more specific and subtle changes. These should be demonstrable with imaging techniques.
5. *Immunization* against toxic memes will result in measurable differences in the susceptibility to later infusion of toxic memes.
6. There will be measurable differences in the state of mental health between those with high levels of *education* and thus high levels of meme-processing ability and those with low levels.

## 26.4 Memes, Social Sciences, and Neuroscience

The concept of memes received mixed, and often hostile, response from experts in such social science disciplines such as anthropology, sociology, and psychology. They claim, often rightly, that existing concepts in their disciplines are adequate in explaining the phenomena at hand without invoking memes.

The hostile attitudes seem to be mostly determined by a sense of stepping on the toes of the social scientists by biology as memes are ultimately based on biological replicators. The contribution of memetics to social sciences is not to usurp existing concepts but to provide an underlying mechanism for them. Just as the laws of physics are not nullified by the discovery of atoms or quantum mechanics, existing concepts in social sciences are not damaged by the concept of memes.

Rather, memes provide the basic mechanism of the interaction between culture and human brains, i.e., how social milieu may affect brains and how brains may affect social milieu.

It is in neuroscience that, I believe, the concept of memes can be most useful as it provides a bridge that connects the perceived environment, memory, and genes. As the quantum theory is most applicable and manifest in the microuniverse of subatomic particles, memes as memory and brain code provide a powerful model of gene  $\times$  meme  $\times$  environment interaction in the microcosm of the brain that results in mental health and illness.

## 26.5 Ethical Considerations

Ethical considerations may arise concerning some of the diagnostic and therapeutic techniques that are directed toward memes and memplexes. For example, certain specific and general anti-meme therapies might incorporate “brainwashing” techniques. Development of *meme scans* may be seen to be intrusions of privacy.

Just as cutting and excising tissue are intrusive but necessary parts of surgery, some meme-oriented intrusive techniques may be useful provided informed consent is obtained. An ethical dilemma may exist, however, when we posit competing selfplexes, and some of the selfplexes (i.e., parts of the mind) may object to the procedure while others consent. This would be particularly problematic in brains in which memetic democracy, and thus mental health, has not been attained (see Chapters 11 and 12). The solution to this problem may be found in the memetic collaboration between the therapist and the patient that will enhance the selfplex(es) geared toward the needs of the *organism* that is the individual patient.

Our model of the individual as a government of selfplexes is a deterministic model with a large degree of freedom (see Chapter 11). Free will, to the extent that it is the processing of memes representing choices important enough to reach consciousness, is subject to how the selfplexes are configured. In a memetic democracy, its exercise will be the result of a debate of conflicting sides. In an autocracy, free will may not exist as choices may be automatic based on irrational dogmas.

Ethics is itself composed of memplexes, derived from both genetic evolution and memetic evolution. Unlike certain religious and cultural prescriptions and proscriptptions that are runaway proliferations of toxic memes, ethics is universally accepted as serving the interests and needs of both genes and memes.

## 26.6 Post-human Evolution of Memes

It is with some wistfulness that we see memes, the offspring of our genes, have achieved an evolutionary life of their own in artifacts and cyberspace. Indeed, memes have flown away from the confines of the planet earth as in the voyager interstellar record (see Chapters 8 and 10).

Memes may have achieved, or will shortly achieve, the ability to replicate themselves and evolve independently of humans in both space and cyberspace. Memes may be seen to be a paradigm-shifting evolution of the human race in which genetic evolution, having reached a level of impasse (e.g., the birth canal is too narrow for the increasing size of the head), yields to an alternative mode of evolution in the form of memes. There is, after all, continuity in this as genes and memes are both packets of information, and in a broader sense, genes may be seen to be a subset of memes that are encoded in DNA.

Regardless of the evolutionary future of memes, they are currently mostly in a symbiotic relationship with our genes, and our mental health depends on the successful maintenance of the symbiosis through judicious processing of memes in the interest of ourselves, the result of our individual gene  $\times$  meme  $\times$  environment interaction.