

The Rule of Experts: Academic Freedom, Professional/Academic Ethics & Disciplinary Science

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*"I would rather have questions that can't be answered
than answers that can't be questioned."
Richard Feynman*

Abstract

The structure of Academia and the shortcomings of disciplinary science are discussed by critically analyzing professional and academic ethics, as depicted during the fierce controversy in Israel (2017-2018) regarding academic freedom and the academic code of ethics (which was supposed to demarcate proper academic expressions from political ones), whose draft was proposed by Prof. Asa Kasher. This paper vindicates Kasher's analysis (as accurate description of Academia) and criticizes it (as demonstrating the perils and shortcomings of professional ethics and disciplinary science). The article considers Kasher's characterization a credible description of Academia and of professional ethics, and their limitations. The paper

shows how attempts to distinguish valid or “pure” academic expressions from “politicized” discourse, eventually portray ‘science’ as inherently discipline-based, thus making debatable presumptions regarding Science and the way Academia should work. Such presumptions conforms the way Academia is currently structured: assigning excessive power to “experts”, which nest in semi-feudal inherently subdivided system of disciplinary science. This system is based on *logically fallacious arguments* such as *arguments from authority* (reputation, consensus), both to impress outsiders and to undermine heretical views from within the discipline, and *ad-hominem arguments* (e.g., critics are “unqualified”, if they are not considered “experts” in a given discipline). This system is inherently inhospitable to criticism, doubt or skepticism (refutation). Professional ethics cannot overcome these shortcomings since, according to Kasher, it is “wider” than plain morality as it include also the professional part, which relies on disciplinary presumptions and values. The professional (amoral) part give experts the power to establish alleged-truths (regarding reality). Since experts have the power and authority to define Truth, they ipso-facto receive the power to establish the Good, making professional ethics a tool of disciplinary power hierarchies and experts, inadequate to challenge established practices, even if seemingly unethical (vices) or logically unfounded (errors). This system makes technocracy and experts-technocrats nearly immune to criticism, undermining the ability of professional ethics to provide checks and balances in professional settings, and thus undermine democracy and basic human rights and freedoms. Implications include rejection of scientism, and the endorsement of epistemological ethics, as expressed in the Hebrew notion of DAAT.

Keywords: Academic freedom, Professional Ethics, Academic Ethics, Bioethics, Philosophy of Science, Applied Philosophy, Academia, Epistemology, Controversies, Technocracy, Ecology, Biohacking, DAAT.

Introduction: Debating Academic Freedom

On May 2017 erupted a fierce controversy in Israel concerning "academic freedom", following a draft of "An ethical code of proper conduct in areas of overlap between academic and political activity" (7.5.17), published by Prof. Asa Kasher, at the request of the then Israeli Minister of Education. This Code of Ethics dealt with the question (limitations) of the freedom of speech and expression of academic staff members, in political contexts.

Opponents claimed that the ethical code violates "academic freedom", which academic staff members supposedly enjoy (commonly, only tenured Full Professors enjoy full academic freedom [Mishori, 2012]). Kasher (and other proponents) argued that the Code secures academic freedom, within the proper activities of academic units and disciplines, while restricting only misusing of "academic freedom" for political purposes.

After months of public and academic debates, the Israeli Council for Higher Education (CHE, the Regulator) decided on 25 March 2018 to recommend institutions of higher education to adopt abridged principles¹ of Kasher's code of ethics in their guidelines. The CHE also recommended the inclusion of a controversial clause: "Prohibition of lecturers from misusing the teaching platform for systematic and undeserved preaching of political positions that clearly goes beyond what is required to teach a topic in its broad context, in its domain" [i.e., academic discipline].

The heated controversy on academic and social networks and in the press focused on the question of freedom of political expression in the academy, but ignored altogether the principles of professional and academic ethics, as described by Prof. Kasher. Implicitly, these

¹ CHE's abridged principles: (1) Prohibition of call for academic boycott (on Israel).....

(2) Prohibition of discrimination, for good or for worse, of students due to their political views.

(3) Prohibiting the discrimination, for good or for worse, of a faculty member or nominee, in initial or gradual promotion processes, and in the process of appointing or electing an academic or administrative position, due to his or her political views.

(4) Prohibition of party propaganda in the framework of teaching.

(5) Prohibition of misleading presentation or publication of personal political opinion as if it were an institutional position.

were the *uncontroversial* sections, allegedly *unproblematic*, seemingly defending academic freedom.

This paper focuses on these seemingly uncontroversial sections. The paper argues that Kasher's characterization of Academia and his principles of academic and professional ethics pose greater risk to democracy, the progress of science and to scientific and academic freedom than the sections concerning attempts to restrict academic freedom of speech and expression.

According to the argument presented here, Asa Kasher *correctly* describes the structure of Science today, as institutionalized in Academia: an essentially discipline-based system, inhospitable to extra-disciplinary criticism, interdisciplinary research and holistic, systemic or ecological outlook.

This system *feudalizes* science, surrendering it to "experts", i.e. senior hierarchy professionals in their respective fields. The experts, which have the power to exclude "non-experts" from the academic/professional discourse, are given the power and the authority to determine the "truth" in their respective fields, and thus to infer the "good", making professional ethics captive of disciplinary biases (explicit, implicit or tacit presumptions). This system reinforces group thinking and professional hierarchies in science and medicine, and reinforces the authority of professional bodies such as the AMA, regulatory agencies such as FDA or CDC, international organizations such as WHO, etc.

The paper's argument then *confirms* and *refutes* Kasher's professional ethics. It confirms Kasher's accurate description of contemporary academia; and also refutes, by criticizing the negative ramifications of the disciplinary system, and by showing the inadequacy of Kasher's professional ethics to remedy these shortcomings.

Kasher's Draft (7.5.17)

Kasher's draft was intended to distinguish between appropriate academic statements and political preaching. Therefore, it was necessary to characterize appropriate ("kosher") academic behavior. Kasher quotes from CHE's statement (21.12.10), which emphasized "recognition of the paramount importance of academic freedom and academic excellence", as well as "total negation" of "any attempt to politicize academia."

Therefore, Kasher suggested a code of ethics "for cases in which academic and political activity might overlap". According to Kasher:

The following recommended rules are intended to preserve the nature of academic activity in the various disciplines against the permeation of practices and norms of a different nature, which is inconsistent with the nature of the academic activity in the various disciplines.² (ibid)³

In other words, in order to distinguish between the (academic) appropriate and the (political) inappropriate, Kasher needs an intermediary tool: "The nature of ... the academic activity in the various disciplines" (ibid.). Thus, *academic disciplines became the standard of proper academic activity*. For example, when Kasher discusses "preserving academic freedom," he states:

A higher education institution will retain the freedom of research and publication of its academic staff members, individually and of their research groups, in the field of their disciplines, as a constituent element of their identity as a higher education institution.

Hence, academic freedom is supposedly preserved only within the boundaries of academic disciplines.

Academic Freedom in the Disciplines

The disciplinary bias is repeated throughout the document, as clearly shown in the quotes below:

(1) Preserving the disciplinary unit and its boundaries

An academic unit shall conduct academic research, publishing and teaching activities in a particular discipline, in matters related to the field and methodology acceptable to the international academic community of the discipline, or in some

² All underlines in the quotations are mine (D.M.).

³ All original quotes in the 1993 and 2018 papers were in Hebrew, and translated by the author (D.M.).

such areas, in accordance with the constitution of the institution, statutes and decisions regarding its discipline or disciplines, and regarding the boundaries of academic activity of the unit.

An academic unit will lead innovations in research, publication and teaching, in subjects and methodology, based on accepted or acceptable considerations of the international academic community of the discipline.

(2) Cultivating variety

An academic unit will conduct an academic activity of teaching, in a particular discipline, in a wide variety, as far as possible under existing circumstances, of subjects and curricula accepted in the international academic community of the discipline.

An academic unit conducting academic activity in a particular discipline in a narrow selection of subjects or streams [of thoughts] will explicitly and conspicuously state this in its curricula, which are published for each academic year. ...

(3) Academic appointments

An academic unit will consider a candidate for an academic faculty position, either on a tenure-track or another, on a senior or another level, solely on the basis of considerations required in evaluating the research and publishing ability of the unit's discipline and teaching ability in that particular discipline, ...

(4) Conferences

An academic unit will hold academic conferences designed to promote research and publication in its discipline, based on accepted or acceptable considerations by the international academic community of the discipline....

An academic unit will hold academic conferences designed to educate students or the general public, in its discipline, in a wide variety of subjects and streams [of thought] in the discipline, through an appropriate range of lecturers...

(5) Publications

An academic unit will publish academic publications designed to promote research and publishing in its discipline, based on accepted or acceptable considerations by the international academic community of the discipline, concerning the promotion of research, subject matters, authors and publication features ...

In other words, Kasher's code of ethics uses the rules of the discipline, its methodologies, and its accepted and acceptable considerations, to distinguish between proper and improper (here, political) academic pursuits. In cases where there is overlap between the political and the academic, Kasher requires appropriate expression (proper disclosure) of the diversity of views within each discipline, *implicitly presuming that Science and Academia are the aggregate of disciplines*.

Kasher elaborates on these principles in several papers that reveal the dimensions of disciplinary biases, and thus the shortcomings of the ethical code which was partially enforced on Israeli Academia.

"When Ethics Escape the Academy"

Kasher's paper, "When Ethics Escape the Academy" (2018), was intended to answer his critics, in the aftermath of the heated debate regarding his academic code of ethics, in which some of his critics used improper ad-hominem arguments against Kasher in person. In this article he elaborates his views on professional ethics (see also Kasher, 1993; 2002; 2005), in which he is a leading authority in Israel for many years (Including the prestigious Israeli Prize, 2000). According to Kasher, the article deals with "practical ethics", which is "a systematic perception of proper behavior... ..in fields of profession, organization, job or occupation" (Kasher's own examples are "medical ethics, military ethics, managerial ethics and business ethics"). According to Kasher:

It is customary for every community of professionals to have a code of ethics. The Code of Ethics introduces a set of values, principles and rules that must be presented to every individual

who is active in the field regarding their proper behavior in the field. (73)

Kasher argues that:

...A proper code of ethics is not an arbitrary collection of values, principles and rules. It expresses the given identity of a profession, including the designation of the activity in that profession and the methods used in its realization. (ibid)

For example (medicine):

The purpose of the medical activity is to protect human life and health from certain dangers. Among the methods of the medical profession to realize this vocation are the dedicated personal care, in accordance with the patient's personal data and solid scientific knowledge. Medical ethics require the physician to do his best to realize the purpose of the medical activity by the methods of the profession. Therefore, the physician must be very dedicated to the patient under his / her responsibility, to diagnose his condition as systematically as possible and to provide him with treatment which the scientific knowledge in the background and his personal data justify as optimal treatment under the given circumstances. (74)

In other words, proper realization of the vocation of medicine is defined by the "methods" of the profession, on the basis of alleged "solid scientific knowledge". The "ethics" presupposes the "methods", and that "scientific knowledge" is "solid". *Systematic order becomes the virtue and quality of disciplines-based science and of professional ethics* (below).

Anthropocentric Bias

According to Kasher,

The practice of morality is different from the practice of [professional] ethics, because the moral preoccupation is with a human as a human [Adam], while the ethical preoccupation

in any field of activity is with a person who is active in that field. (74)

The definition of morality as "preoccupation with a human as a human" makes an anthropocentric *implicit assumption*, unsupported in Kasher's paper (no explicit argument), that morality does not include Animals or Nature. This assumption is neither natural nor necessary for those versed in animal ethics or environmental and ecological philosophy.

Clearly, an "anthropocentric" morality is less comprehensive than a moral theory which attributes moral standing also to Animals and Nature (e.g., Gandhi's moral philosophy, or bioethics, according to VR Potter, 1970), and thus may be less adequate to serve as moral guidance to a world haunted by multidimensional ecological crisis.⁴

Kasher's position displaces animals from the moral realm and surrenders them to various "ethics" professional committees (e.g., animal experiments committees), which make professional "ethical" decisions based on accepted premises in their respective disciplines (e.g., that animals are not "persons" and could therefore be subjected to procedures which Helsinki committees forbid regarding humans).

Ethics as "Wider" than Morality

According to Kasher:

... Medical ethics includes morality, because the physician is a human and the patient is a human — but it is wider, because

⁴ According to the philosophy of "Firmness" (Mishori, 2018), body = consciousness (this does not mean that consciousness is nothing but the body); the body enable us to experience, sense and perceive the world, i.e., to be conscious of the world. Since all animals have bodies, they all, by definition, have consciousness. Therefore, they are all persons, which should be entitled to moral consideration. This argument is not anthropomorphic, since animals have different bodies (different forms), and are therefore different than humans, and have different *umwelt* (experience of reality/life). Nevertheless, animals should enjoy all rights associated with bodies (e.g., freedom from pain; freedom of movement and of exercising their natural powers and skills, etc.). See also Mishori, D. (May 2019): "A Corporeal (Embodied) Theory of Animal Rights", unpublished paper, presented in: the 6th Conference of the European Association for Critical Animal Studies (EACAS), Barcelona.

medical ethics has aspects that are not derived from morality.
(74)

That is, the field of ethics is described as "wider" than morality, because ethics also includes the professional part, which only experts understand or master. This is a *second* implicit assumption on the part of the author: that professional ethics *includes an amoral component*, beyond morality, which is the professional-scientific part. This distinction implies that various professional aspects are "beyond" morality.

It also follows (a) that a person may act in accordance with his or her conscience (morality), and still undergo a "transgression" in terms of professional ethics (for example, believing that there are flaws in certain "standard" practices or beliefs of the profession/discipline). It also follows (b) that (professional) ethics may contradict (or fail to conform) more basic rules of morality, on questions in which (seemingly) the decision is based on the "professional" part. It also follows (c), that the ethical part of professional ethics is defined by the discipline itself, by virtue of professionalism of the experts, thus subjecting the "Ethics" to the (group thinking) views shared by experts in that discipline, thereby making academic and professional hierarchies in control of "Ethics", through their control of professional presumptions and disciplinary world view.

Academic Professional Ethics

Kasher's academic ethics presupposes the principles of his professional ethics, i.e., disciplinarity and expertise.

The author rightly points out that "in order to properly engage in the ethics of a profession, its identity must first be clarified," and thus describe four characteristics of the "complex" vocation of higher education institutions:

- (A) Conduct research to expand and deepen knowledge of world aspects;
- (B) Training the next generation of research personnel;
- (C) Training certain professionals (e.g., engineers, lawyers, physicians);
- (D) Instruction, to "raise the intellectual tone of society." (74)

What's missing here? There is no mention of critical thinking, skepticism or doubt. This is *another hidden assumption* of this applied ethics, that critical thinking, doubt and skepticism are not an essential part of science, medicine or academia, so they need not be *explicitly* mentioned, even when describing the "complex vocation" of the academy (not even once throughout this article; nor in other papers quoted here). This, as we shall see, is due to the great importance given to the principles and methods of disciplines and the disciplinary system in general.

The author assumes that scholars at the academy are committed to "expanding and deepening knowledge." so:

An institution of higher education realizes the first element (a) of its vocation by allowing its faculty members or their groups to conduct research to expand their knowledge and deepen their understanding of one aspect or another of reality. The research will mainly include presenting theories and conducting experiments and observations. (76)

If research only "expand" knowledge and "deepen" understanding, it follows that science progresses mainly through the accumulation of efforts and knowledge, not by debunking or refutation, as an explicit method of science.

Research and Training Professionals and Students

As all other academic practices, Kasher describes instruction as inherently disciplinary:

An institution of higher education conducts the research within many, different and independent units. This decentralized format is not based on administrative or economic efficiency considerations, but expresses an essential component of the identity of each higher education institution: different aspects of reality give way to different research methods. ...

Each has its own methodology, distinct from other research areas. All research conducted at a higher education institution is conducted within a specific discipline, according to its

methodology. Each discipline is defined by the field of questions that researchers face, regarding certain aspects of reality, and by its methodology. (76-77)

If each discipline is defined by "the field of questions", it follows that *some questions are never asked*, or that some preliminary questions may have received *partial or false answers*, which become part of established methodologies.

Questions not asked: Paracelsus' Maxim

Physicians learn as part of their training Paracelsus' (1493-1541) maxim, "sola dosis facit venenum" (only the dose makes the poison), and its corollary, that in certain dosage, poisons become cures (medical drugs), and vice versa. This makes the identification of proper dosage of various substances, which are known to be hazardous in certain dosages, part of the expertise and methods (toolbox) of medical professionals. However, this claim is true only of certain elements (water and apples, for example), not for toxic hazardous substances, which accumulate over time in biological and ecological systems (e.g., heavy metals, dioxins, asbestos, phthalates, etc.), which pose risks of *long-term* non-acute exposures at miniscule doses. Paracelsus wasn't aware of this distinction, revealed by environmentalists in the 1960th. Medical "experts" commonly ignore this distinction, and regard Paracelsus' maxim an *Axiom* of "science", and therefore regularly confuse two types of poison: (a) depending on dosage (Paracelsus); and (b) systemic accumulation of hazardous substances, toxic even in miniscule quantities (environmental exposure). The outcome is that external reservations regarding usage of potentially toxic substances is commonly regarded by medical experts as misunderstanding science, overlooking the fact that Paracelsus' maxim is not universal in its application. Presently, Medicine *has no theory* which distinguishes between cases in which Paracelsus' maxim apply and cases in which Paracelsus maxim is irrelevant or utterly wrong. It is an example of questions not asked within a given disciplinary framework (medicine), despite the fact that another discipline (environmental science) already debunked this maxim since Rachel Carson's *Silent Spring* (1962).

Methodology

"Disciplinarity" presupposes the idea that modern science become too complex to be mastered by individual scholars, who can nevertheless master disciplines and areas of specialization and expertise. In each such field of scholarship, different methodologies were created to decipher different aspects of reality. This view of science *preclude a unified, systemic or holistic outlook, which is allegedly unachievable, and seemingly unnecessary*. In this system, *interdisciplinary or multidisciplinary research is an exception to the disciplinary rule, and thus implicitly discouraged*. Regarding methodology, Kasher argues:

In essence, methodology is the tool by which research, within a particular discipline, attempts to reveal or approach the truth about a particular aspect of reality. Because of this, the methodology can be hardened or flexed to perfect. The methodology can require the researcher to put his test results into severe statistical tests, on the one hand, and to allow the researcher new types of experiment, on the other. The methodology is not under the control of the individual researcher nor [under] the control of an institution. Methodology is the interest of the community of researchers in the discipline, expressing their approaches, among other things, in presenting the results of their own research and in their opinion of articles submitted for publication in the discipline's professional journals. Thus, each study is conducted within a particular discipline, in light of the methodology used in the international community of the discipline. (77)

In this description, the author makes the *fallacy of inferring from "is" to "ought"* (the so-called "*naturalistic fallacy*"). This is how Academia is currently structured; however, disciplinarity is not necessarily the *ideal* of science, which currently is unfit (but not incapable) of developing proper interdisciplinary approaches, for example in the fields of health or ecology.

The author assumes that science is divided into isolated disciplines, which do not interact with one another: the discourse is purely internal, within the international communities of different disciplines, because:

The results of the research are to be published in publications and in professional conferences, in a way that enables anyone working in the international community of the discipline to know the [research] products and to use them for further research.

This description does not mention multidisciplinary or interdisciplinary research or interaction: there is no unified science, in which all (certified or uncertified) scholars participate and form critical arguments; research products are primarily of interest to colleagues within each discipline.

Training Researchers & Professionals

According to the author, "an institution of higher education has come to realize the second element (b) of its vocation by the fact that researchers in some field consider themselves responsible for training the next generation of researchers in the same field" (77). It follows that today's experts have been trained by the previous generation and are instrumental in training the next generation, thus creating propensity for conservative hierarchical disciplines and group thinking. The same rhetoric is used regarding training professionals. According to Kasher:

An institution of higher education comes to realize the third component of its vocation by providing unique frameworks for training professionals in areas of significant social importance, such as teaching, medicine, psychotherapy, engineering, social work, accounting, law, and so on. ...

... An institution of higher education plays a vital role in training socially essential professionals by instilling in students the majority of professional components at the highest level. In addition to mastery of knowledge and skill, constantly updated, a professional should understand his or her activities and know what justifies the methods used. (78)

In other words, there is no doubt about the practices, research or methods in the discipline. The training process is reminiscent of *indoctrination*, at the end of which the young professional should

understand why the methods used in the field, and the definition of the field itself, are basically correct, though deserve expanding and deepening, to raise them to an even higher level. Then come the fourth mission (D): instruction.

An institution of higher education comes to realize the fourth element of its mission, to maintain high-level teaching, in order to expand each student's education and to strengthen his or her ability to recognize and understand aspects of reality, to discuss them responsibly and to draw conclusions from valid arguments. To this end, an institution of higher education establishes curricula within its disciplinary units. Every course that takes place within an entire curriculum should be organized around a particular subject ... with the help of supplementary professional literature, which students are supposed to use and even master if necessary. (78)

In 2018, the author acknowledges only disciplinary curricula. Teaching is training within the disciplines, without mention here or anywhere else in this essay of interdisciplinary curriculum or research. In this, again, Kasher portrays Academia accurately, as most students and faculty will readily confirm.

The Legal Threshold and the Ethical Shelf

Kasher's position regarding disciplinary science and professional ethics, based on the above texts (2017, 2018), conforms principles of professional ethics, as developed by Kasher over decades (1993 [Hebrew], 2002, 2005). A key distinction Kasher makes, which is valid, is between the legal "threshold" and the ethical "shelf":

There are two lines along such a spectrum of possible courses of action: one at the top of the scale, albeit not quite at its upper extremity, and one at the bottom of the scale, although also not quite at its lower extremity. We will call the upper line the "shelf." In this picture, it represents the ethics. We will call the lower line the "threshold." In the current picture, it represents the law.

These lines, the "shelf" and the "threshold" divide the entire spectrum into three natural parts: the section from the shelf

and above, the section between the shelf and the threshold, and the section from the threshold and below. In order to properly understand the relationship between the realm of ethics for a certain profession and the realm of the law, as it appears in the professional world, it is important to understand the essence of each of these three sections.

E.1 The shelf represents professional ethics, the practical ideal of professional behavior. It is the "yardstick" of right behavior from a professional point of view. An action at the height of the shelf or above is within the bounds of right behavior, in accordance with the practical ideal of professional behavior.

E.2 The threshold represents the law as it pertains to the realm of the profession, that is, the binding conception of legal behavior or the threshold of the behavior permitted by law from the legal point of view. An action at the height of the threshold or below is within the bounds of criminal behavior, because it violates the binding conception of legal behavior (2002: 107-8).

Regarding individual professionals, Kasher's distinction here is valid. It should be noted, however, that just as ethics is determined by high-ranking experts, through their control of Truth, they often control the law (the legal threshold) in the same manner. This is the case in all instances when laws incorporate the experts' point of view.

The Systematic Structure of Professional Activity

Kasher depicts disciplinary science and professional ethics as characterized by their *systematic order*:

The professional framework differs profoundly and decisively from any other framework of special human activity. Professional activity is conducted on the basis of a systematic body of knowledge... The physician has a systematic body of knowledge about human body structure and function. ... The therapeutic psychologist has a systematic body of knowledge about the human mind and mental distress (1993: 2).

This perception of science and Academia is explicitly non-holistic and non-systemic (and therefore not ecological). The

disciplines deal with "certain aspects of reality" *separately*, despite the fact that two types (or more) of "systematic" bodies of knowledge may overlap, at least in part, for example, between physicians and psychologists, (e.g., embodied emotions; physiological and psychological stress, etc.). The "well-organized, systematic body of knowledge" of the physician and the psychologist, separated by the well-defined disciplinary walls, prevents any such synergy, since it is the very logic of disciplinary science and of professional activity. Moreover, medical doctors are not supposed to understand or practice (as professionals) Yoga or Tai Chi, for example, because these are not part of the practices and "systematic" "toolbox" of the discipline, as if proper posture or correct breathing are seemingly irrelevant to Medicine and to Health experts. Such practices simply do not fit the internal (possibly erroneous, at least imperfect) logic of the systematic order:

Professional activity is done through a systematic "toolbox", a skill set that enables one to successfully solve professional problems... .

Professional activity is done against the backdrop of an updated body of knowledge and through a constantly improving toolbox. Professional activity is an activity that involves constant learning, not only from one's own experience or another's, but also from innovations by researchers, who create new knowledge, or from development people, who create "new tools" (1993: 2).

C.1 Professional activity is conducted on grounds of a systematic body of knowledge without which it does not exist. A doctor possesses a systematic body of knowledge pertaining to the structure and functioning of the human body.

C.2 Professional activity is conducted by means of a systematic "tool box," a set of skills that makes it possible to successfully resolve professional problems.

C.S Professional activity is conducted on an ethical background, which involves a systematic conception of the practical ideal of behavior, within the context of professional activity. Thus, ethics in scientific research involves an orderly conception of the practical ideal of the scientific investigator's behavior within the context of his professional activity (2002: 101).

Again, science is described as the accumulation of knowledge, the refinement of tools. Everything is new or incremental, there is no elimination of mistakes or debunking errors—only improvement and perfection of capabilities; external (extra-disciplinary) knowledge and ideas do not enter the disciplinary discourse, everything is within the boundaries of the discipline; There is no contact or cross-disciplinary exchange of ideas or discourse. Systematic order, according to Kasher, is a core value of professional practice and of professional ethics:

...professional ethics is a systematic conception of the practical ideal of behavior within the framework of the activity of a particular profession. In this context, 'practical ideal' is a set of values or principles that lends grounds to reasoned decisions, that are practical, not just in the sense that these are actions and patterns of behavior but also in the sense that these are decisions that are not beyond the capacity of any normal individual, in a standard situation, within the professional context of his activity (2002: 102).

...series or lists are liable to be perceived as arbitrary since they take the form of a "catalogue" of values or principles. If an ethical code is a collection of dozens or hundreds of successive rules, it creates the impression of an arbitrary "catalogue":

Thus, an ethical code and any other presentation of a practical ideal of behavior appear arbitrary as long as they are not presented along the lines of a systematic conception, expressed in such a way as to dissipate the impression of an arbitrary "catalogue." An appropriate presentation provides an explanation of the practical ideal in terms of a correct theoretical method—a systematic conception (2002: 101-102).

A systematic conception of the practical ideal of behavior within the context of a given profession will present the components of the profession's practical ideal—the very same set of values or principles at the core of reasoned arguments pertaining to right behavior, within the context of professional activity. To present the components of the practical ideal is to present the internal structure of that system of values or principles and its internal logic (2002: 103).

Systematic order (a *conservative* ideal) is also the value of axiomatic models of science. This makes disciplinary science *semi-axiomatic*. However, the axioms themselves are typically *implicit*, and

therefore *rarely discussed*. For Kasher, philosophy creates systematic order, which is apparently the work of philosophers (Kasher does not specify here other roles for philosophy in the context of disciplinary science), which is Kasher's only barrier against the risk of "arbitrary" professional science or ethics. This is another assumption, this time explicit, that arbitrariness could be eliminated, in the context of a given discipline, through the systematic organization of knowledge, in terms of a suitable theoretical framework. According to Kasher,

The professional must base his or her professional decisions on the body of knowledge ... Since professional knowledge and skills develop, expand, deepen and update, the professional must strive to integrate the body of knowledge and the "toolbox", as the profession develops.

...Every professional, such as an engineer or therapist, must master a particular body of skills, which is one of the foundations of his professional field. Every professional, such as a commander or a social worker, must base his or her professional decisions on a body of knowledge, which is one of the foundations of that field of professional activity (1993: 5).

Experts must base their professional decisions on the body of knowledge (i.e., not on intuition, personal experience, or other bodies and forms of knowledge), a fact which makes medical ethics a tool to control the behavior of medical doctors, preventing them from experimenting with therapies which were not authorized by disciplinary conventions and hierarchies.

Another *hidden assumption* suddenly emerges, *that a professional body of knowledge already includes the best available answers*, or the best methods for arriving at such answers; that the unknown will fit nicely into the current body of knowledge, improved primarily through the tools of the discipline. As long as professionals adhere strictly to what is accepted or acceptable in the discipline, they are practically infallible, at least ethically, since the "good" is always deduced from the "truth", in that systematic "body of knowledge".

Another corollary of the "practical ideal" of the discipline is potential counter-reaction against "heretics", those who question conventional disciplinary wisdom. For example, in 2019 Israeli physicians who published their reservations regarding vaccine safety ("heresy") were summoned by the Ministry of Health to disciplinary committees ("Inquisition"?), which have the authority to revoke

license to practice medicine (and therefore the status, dignity and livelihood of "heretics"). Even when no disciplinary action is taken, the details of the complaints appear on the MoH's webpage, and all other physicians get the message: better not discuss vaccines, or even acknowledge vaccine safety issues. The primary dogmas of the discipline must not be questioned.

Medical students beginning their studies in 2019 will not take a single course in movement or body awareness (Yoga, Tai Chi, Chi Kung, Alexander's Technique, Feldenkrais Method, etc.); They will not undergo even the briefest training in proper posture, meditation, or proper breathing; they receive a single course in nutrition, which does not encompass the knowledge that currently exists outside of the Faculty of Medicine (not including sprouts, natural shakes, natural herbs and plants, the value of organic foods, and the like); they will not learn about medical cannabis (or the importance of the endocannabinoid system), or of any other natural remedies.

Students will receive powerful professional tools, very impressive — but imperfect and incomplete. Together with their professional "toolbox" students learn something else — incorrectly — that the toolbox they receive (viewing the body as a machine; pharmacology as an exclusive source of cures/drugs; etc.), is warranted, despite the fact that other disciplines may question some of the tools or the presumptions underlying them (e.g., Paracelsus' maxim). Instruction thus becomes uncritical indoctrination.

Democracy, Liberty and Technocracy

According to Kasher, the third component of the practical ideal of a profession is the "societal envelope" (Kasher, 2005), which (with the other components) enables "full and correct" answer to the question of "right behavior" of a nurse in a hospital:

The third component of the practical ideal of the profession is basic values of the social setting. The full and correct response to the question "what is right behavior" for a hospital nurse, under certain circumstances of professional activity, is based not only on the known fact that nursing is a profession or on the professional identity of nursing as a certain therapeutic profession, but also on other values for which the nurse is required to reveal loyalty, such as the value of the patient's

privacy within the context of medical treatment, or in other words, the value of medical confidentiality.

...Not only must the nurse carry out, with professional skill, any treatment activity involving medications or instruments; she must also maintain the patient's privacy and the confidentiality of the data pertaining to his medical status because that is what is right from the point of view of the principles of a democratic regime in which the hospital operates and in which the nurse carries out her professional activity. Within the context of the democratic regime, its basic values are central to the social setting and they form an essential part of the full and correct response to the question "what is the nurse's right behavior," within a certain context of professional activity (2002: 104-5).

When carrying out a nurse's professional activity, her professional duties include special duties derived from the democratic state principles... such as the duty to maintain medical secrecy, both with respect for the citizen's privacy and also for the concern of a citizen that, without guarantee the confidentiality of medical treatment, might refuse treatment, even if it endangers his life or the quality of his health (1993).

Kasher does not elaborate in this context (professional ethics) on the values of the "democratic regime" beyond "privacy" and medical "confidentiality". In doing so, another tacit assumption emerges: a rather thin content of the idea of democracy and its leading values, as they manifest in issues related to professional ethics, as if democracy is nothing but the autonomy of the individual, whose only practical manifestation is "privacy" and "confidentiality".

We shall not attempt to analyze here Kasher's position on democracy, except discussing two quotes. In the first, Kasher defines democracy:

In a democratic country, the arrangements for organizing the common life of citizens are fair arrangements, or in other words, just arrangements. If there is a point in presenting a brief fundamental formula for characterizing the democratic state, then it will be "the rule of fairness" or "the rule of justice."

In any democratic state's regime - but not in a non-democratic state's - there are fair arrangements for two types for resolving

conflicts between citizens: civil rights arrangements, which allow the citizen to behave largely as he sees fit, in the face of conflict between him and others; And the collective decision-making arrangements, which allow to elect representatives, to hold votes and decide public conflicts (2012, 331).

Clearly, these two types of “resolving conflicts between citizens” *do not include conflicts between technocrats (professionals with state authority) and citizens*. Moreover, in a recent internet publication (2019), “Three comments on legislation in a democratic state”, Kasher wrote (First comment):

Bills are currently coming from Knesset (parliament) members of the future coalition, claiming "the people said their word."

It is important to remember: There are many issues that do not matter what "the people" think:

The people will not tell the professor of mathematics what mathematical proof is.

The people will not tell the physician surgeon the right professional way to surge patients.

The people will not determine to the commander how to capture a fortified target of the enemy.

Logical as this remark may seem at first glance, it precludes any argument between a professional and an ordinary citizen, in matters regarding the profession. Hence, democracy halts in the face of expertise and science. In technocracy, the State conjures with the authority of Science, and thus certain aspects of technocratic actions become almost immune to criticism, except claims regarding "due process". In Kasher's thin democracy, there is no doubt regarding the intentions of the government or the quality of its technocratic decisions; There is no doubt in the professional judgment of experts. There are only individuals who need confidentiality and privacy (justified in utilitarian terms—otherwise citizens might refuse essential health care); There is no need, for example, to talk about freedom. And freedom is relevant, in a seemingly-democratic technocratic state, when experts receive state's authority to act in their areas of expertise, in ways that may threaten freedom. For example, the chairman of the Israeli Medical Association's Tribunal argued that "public health" considerations require restricting the freedom of speech of "vaccine opponents".

Freedom of expression and freedom of speech are fundamental rights in any democratic society, but recently there are too many cases of physicians who not only publicly speak out against vaccines but also recommend homeopathy as a defense against disease. Such physicians are endangering not only their patients, but society as a whole (Reches, 3.6.19).

Prof. Reches is the editor of the Medical Ethics Guidelines in Israel (2009, 2014), on behalf of the Israeli Medical Association. His professional position, which could be described as consisting a "professional conflict of interest" (a claim that cannot be raised in disciplinary professional ethics), rules out homeopathy (a competitor of conventional medicine) and freedom of speech regarding vaccines. And what about the power of psychiatrists, authorized in certain cases to enforce psychiatric medication, or order forced hospitalization? Are "welfare" experts (social workers) always right when it comes to removing children from their homes and families? In the present system, the *"freedom" of citizens is threatened by "experts"*, who are mostly trained in Academia, and are accustomed to un-critical group thinking (regarding the principles of their profession / discipline).

Professional experts enjoy not only prestige, but also the power to determine what is right and proper in their area of expertise (as a rule, courts rarely intervene in their considerations, especially if they are State's experts). This is when *professional ethics loses its edge, and become tool of the establishment*.

Professional Ethics as "Understanding" (Epistemology)

As we have seen, professional ethics is bounded by disciplinary presumptions, the *amoral* part which is "wider" than plain morality. This view is tantamount to equating understanding the professional principles (truth) with ethics (good). In fact, that is exactly what Kasher is saying:

Ethics. Understanding, as we have just portrayed it, is of a local nature. To understand a procedure is to know why it is effective or even the most effective, under the circumstances of its usage.

Another important element of the context of professional action is also an element which has to do with understanding, but rather of a global nature. One cannot regularly act in a proper way, in any professional area, unless one has gained an adequate understanding of the nature of the whole area of one's professional activity, not just some parts of the related knowledge or proficiency, or even each of their parts. Global understanding pertains to the nature of a whole professional practice (2005: 72-73).

I take the subject matter of professional ethics to be an understanding of the whole of professional practice. Rules of conduct are products of such an understanding, not its constitutive ingredients. A sufficiently profound understanding of a professional practice gives rise to practical constraints imposed on the related professional activity. A systematic family of such constraints, which stems from a conception of the essence of the professional practice under consideration, constitutes a conception of the practical ideal of professional activity, which can be couched in terms of the basic values of that professional practice and then also in terms of principles and rules of proper behaviour within the framework of that professional practice. Following professional norms is tantamount to embodying professional values. Thus, the professional ethics of an engineer is expected to portray the essence of the practice of engineering, i.e. the spirit of the profession, which determines principles and rules of conduct (2005: 74).

Kasher's views portray beautifully the dependence of ethics on the professional disciplinary principles. Physician will prescribe pharmaceutical medications (pain killers), or invasive surgery for a back pain (caused by an improper posture), as part of their toolbox; it is the ethical thing to do (ethics follows and expresses understanding). The boundaries of their discipline preclude other options (e.g., recommend barefoot walking, or mind-body practices and techniques). Hence, *Epistemology ("understanding", including disciplinary presumptions regarding reality) controls Ethics*.

DISCUSSION

The New Tower of Babel

In the book of Genesis (11) appears the story of the Tower of Babel, according to which, at first, "...the whole earth had one language and the same words". Then people said to each other, "Come, let us build ourselves a city, with a tower that reaches to the heavens, so that we may make a name for ourselves [reputation]; otherwise we will be scattered over the face of the whole earth.". Then it is said that The LORD came down to see the city and the tower, and "confuse their language there, so that they will not understand one another's speech"... "Therefore it was called Babel, because there the LORD confused the language of all the earth; and from there the LORD scattered them abroad over the face of all the earth".

The idea that there once existed a single universal language, able to represent reality perfectly and unambiguously, unlike our imperfect natural languages, intrigued the minds of scholars and mystics for millennia. According to Umberto Eco (1986), philosophers and theologians believed that the language spoken in the Garden of Eden was just such a language, and that all current languages were its decadent descendants, after the Fall from Eden and after Babel.

Modern Science was supposed to provide a new such coherent universal language for all rational people. This language is supposedly shared by the community of scholars, which rely on logic and mathematics, innate, inner and external ideas and notions, and on facts and evidence. Disciplinary science breaks this universal language into separate dialects and sub-languages, thus impeding cross-disciplinary communication.

For this reason, Academia became enslaved to extra-logical supposedly-objective ranking and quantification (of publications, grants, etc.), as clearly demonstrated by the very logic of the operation of academic promotions committees, which heavily rely on "reputation" (Impact Factor, citation Indexes, etc.), since qualitative evaluation (subjective understanding) is precluded from the outset in Babylonian disciplinary science.

Moreover, during the Enlightenment era, the cradle of contemporary science, many prominent philosophers and scientists were independent scholars (e.g., Descartes, Spinoza or Leibniz), not affiliated with Academia (while Newton and Galileo were academics).

Their preferred way of communication and advancing ideas was correspondence of letters ("republique des lettres"), in which arguments were made and answered according to purely logical or dialectical principles, which excluded arguments from authority (which were the rejected rhetorical tools of the Church, Science's adversary during the enlightenment era). The prevalence of arguments from authority make modern science and medicine church-like institutions, which portray themselves as practically infallible, if consensus supports a certain claim, or if a practice is backed by professional organizations or regulatory agencies.

Presently, Science is dominated by disciplinary Academia, and therefore has the tendency to exclude non-affiliated scholars and extra-disciplinary ideas, often on grounds that certain ideas are "unscientific", meaning they are formulated in concepts foreign and alien to their dialects. For example, presently the medical establishment and scholarship largely disregard concepts from Chinese Medicine, such as Chi or Meridians; often regarding them as unscientific, since they challenge the current biomedical paradigm. Science, then, becomes a practice of exclusion of ideas and insights (from sister-disciplines or from non-affiliated scholars), instead of inclusion, refinement and self-criticism.

Reputation and Refutation

Since Francis Bacon (1561-1626), science appeared as a methodology of debugging and eliminating errors and prejudices (tribal, cave, market, and theater "idols"). Without debugging errors, any systematic study of reality (science) might be flawed, or contain deep-rooted fallacies and errors within its many triumphs, accomplishments and achievements. Science philosopher Carl Popper (1902-1996) argued that science work through the refutation mechanism (Falsificationism), not confirmation. Popper based his philosophy of science on the principle of logical asymmetry: to prove that "all crows are black" we need infinite observations; To disprove this claim, a single non-black crow would suffice. Therefore, induction and statistics, designed to provide positive information about the world, will provide less reliable knowledge than refutation, empirical (counter-examples) or logical (including conceptual and theoretical consideration). This argument enabled Popper to solve another problem of delimiting science (what makes a particular activity

"scientific"?). According to Popper, an idea is "scientific" if, in principle, it can be refuted, using an empirical or logical test.

According to Kasher, however, "science" is the sum of recognized disciplines, with accepted methodologies, experts, journals, etc. Their virtues and qualities are characterized in terms of the *systematic* organization within disciplinary nests (semi-feudal autonomous fields of professionalism and scholarships), in ways which undermine criticism and refutation.

Since Popper's science is not enslaved to the "accumulation" of knowledge, but first and foremost to the removal of apparent errors, it provides protection of truth and liberty, thus integrating his philosophy of science with social criticism of premises that underlie various versions of totalitarianism (Popper, 1945). For this reason, Marcelo Dascal (1998a,b) emphasized the importance of debates and controversies in science, which by their nature (as he described them) are interdisciplinary and multidisciplinary.

For this reason, Dascal described Academia as being torn between academic *reputation* and the logical ideal of *refutation* (Dascal, 2001). Kasher's science is incapable of doing so, (a) because it avoids disputed "political" issues, and (b) because it uncritically endorses expertise and disciplines, which often refrain from engaging in controversies regarding supposedly established disciplinary ideas (e.g., vaccines safety or water fluoridation; Mishori, 2019).

Science and Rationality

Kasher's science relies on a "thick" model of rationality, as opposed to a "thin" model. The thin model is bound by the rules of logic, coherence and consistency; the law of contradiction and its derivatives. The "thick" model of rationality (Brown, 1988) assumes that the entire scientific community is guarantor of the validity of modern science. This thick model regards rationality as socially mediated judgement, an ability to arrive at conclusions which are fallible, but not arbitrary, and without guidance from rules. Brown argued that "thick" rational conclusions are the results of the interplay of judgements and critical analysis by the community of individuals who have the required expertise. In this, Brown surrendered the thin criteria of logic to the greater community of informed scholars.

In many respects, Brown's argument is correct. A community of informed individuals need not invent science anew; we rely on past

achievements in order to create an edifice of cumulative aggregate knowledge and insights, as in all scholarly traditions (including yoga or marital arts). However, scientific advances are formed of judgements and opinions (*doxa*, as contrasted with *episteme*—knowledge), and should thus be subjected to continuous refinement and criticism. Disciplinary science, however, is structured in ways that impedes criticisms regarding established disciplinary semi-axiomatic conventions.

For example, most scientific information is published in disciplinary and sub-disciplinary journals, with experts serving as editors and reviewers. These experts may hold conservative views regarding novel ideas which challenge established paradigms, or threatens their life's work or prestige.

It seems that Brown's model of "thick" rationality collapses because he presumes a broad unified community of scholars that does not exist anymore, because of the branching and sub-branching of science into the disciplinary system of Academia.

In technocracy, where professionals and experts are given the power to set policies (e.g., medicine), Kasher's democracy is inadequate to oppose state decisions in "professional" matters. For instance, despite ongoing external criticism, the medical establishment largely ignores (or explain away) reservations regarding water fluoridation (Mishori, 2019), or the proper inclusion of Medical Cannabis (Mishori, 2019a).

Moreover, since professional hierarchy is part of ethics, as Kasher describes it, it is impossible to doubt or challenge the hierarchy and its experts; The only qualified challengers are trainees who have completed their training, and are considered experts in this or another particular field. Then, the challenge comes from within, using the concepts of the discipline, in ways that often mitigates criticism (e.g., only medical doctors are considered eligible to challenge or criticize health policies; all others are regarded as unqualified non-experts, whose criticism supposedly reveal their own misunderstandings).

Scientism

Presently, scientists often collectively endorse concepts, values and claims of facts which are neither true nor logically-founded. "Science" is no longer only the methodology and critical outlook on

Nature and Society, but an institutionalized structure of social power, on par with that of the Church before Enlightenment Era. Science has the social power to establish “Truth”, and therefore the “Good”.

Moreover, the belief in Science becomes *Scientism*, an orthodox ideology according to which, “Science” and scientists are agents of knowledge and rationality; in Health related topics, Scientism is represented by conventional Medicine.

Scientism is the belief that Science already deciphered the basic principles of reality, e.g., reductionist materialism (nature as merely mechanistic; rejection of purposefulness [telos] in nature; the certainty there is no consciousness in matter; mechanistic medicine, etc.).

Rupert Sheldrake (2012) criticized this popular assumption that science today understands the world (which is material, with unchanging laws of nature, etc.), leaving only to fill the many gaps in our knowledge of it; that present theories regarding the world, humans and health will not be refuted but only refined and improved. Sheldrake argued that such tacit assumptions of science should themselves be subordinated to scientific inquiry. Hence, if the assumption is that the world is more like a machine than an organism, then the question ought to be “is the world really more like a machine than an organism?” etc.

Scientism is the belief that established dogmas in science and medicine will never be refuted or disproved. This assurance is based on the power of scientific “consensus”, especially when professional and regulatory organizations supposedly supervise and therefore allegedly guaranty scientific facts and theories.

Even regarding Climate Change, the argument is that 97% of climate scientists believe that anthropogenic global warming is scientifically proven.⁵ Consensus could affirm truths, but also errors. We lack logical criteria for settling scientific controversies, besides “consensus”, and besides arguments from authority made by experts, regulatory agencies and professional organizations.

The failure of disciplinary science is manifested in Economy and Medicine (the most salient cases of disciplines with power to determine public policies). Present Market economy is utterly

⁵ Even regarding Climate Change, the argument is that 97% of climate scientists believe Global warming is scientifically proven. See NASA: “Scientific Consensus: Earth's Climate is Warming” (updated: September 10, 2019). <https://climate.nasa.gov/scientific-consensus/>

unsustainable (in simple ecological terms) and socially imbalanced (entirely inequitable); conventional Medicine is still being mostly illiterate regarding the environmental, behavioral and nutritional causes of health and disease. Being preoccupied primarily with diseases and pharmaceutical drugs, Orthodox Medicine is ignorant regarding key health topics such as right posture, breathing (pranayama), energy channels (meridians), vital energy (chi, prana), energy centers (chakras), etc.

[This ignoring (or ignorance) is tantamount to arguing that the human body has no energy channels or centers, a claim never demonstrated scientifically. This claim contradicts physics, according to which, *every* physical body (starting with the atom) generates an electromagnetic field. It tantamount also to claiming, that evolution never harnessed this logic of energy fields in biological bodies—claim which was never demonstrated scientifically too. The same argument applies to quantum mechanics, which presently has no application in orthodox medicine.]

Moreover, the structure of experts-disciplinary science often delays, inhibits and sometimes actively obstructs revision of outdated theories and correction of scientific and medical errors (e.g., water fluoridation, cf. Mishori, 2019).

Moreover, current Science and Academia are biased for objective quantifiable knowledge and data; the unquantifiable is often regarded as unscientific (and therefore, the inherent inferiority of the humanities and the social sciences). Even Quality (e.g., scholars' *merit*) is inferred almost exclusively from quantifiable data (publications. Etc.). The bias for the objective and quantifiable makes disciplinary science inherently *unphilosophical*, and therefore *uncritical*.

The basic characteristics of Scientism is the belief that present structure of Academia fulfils (albeit imperfectly) the Mertonian Norms and values of the academic community: KUDOS (Communalism—the community of science; Universalism—single science and therefore replicability of results; Disinterestedness [regarding findings and results]; Organized Skepticism) (Merton, 1942).

The myth of the realization of Mertonian Norms implies that “Disinterestedness”, for instance, prevails over researchers' ambitions, desire for positive reputation, appreciation, etc. “Disinterestedness” is implicitly ascribed also to disciplines and regulatory agencies, despite the fact that people and institutions often prefer not to admit mistakes, certainly not grave or harmful ones, which may have prevailed for decades.

The basic axiom of disciplinary Science and Academia is that compartmentalization is necessary and natural, in the face of the great advances in science in the past century (allegedly prevents the uninitiated to understand sub-disciplines); another axiom is that science lost nearly nothing in its compartmentalization, despite the fact that the alleged scientific community (Merton's Communalism) has been hopelessly disintegrated.

The real price paid by science is never acknowledged: the loss of Organized Skepticism, diminished into the power-hierarchies realm of editorial committees and anonymous peer reviews, which replaced the former Enlightenment Era scientific and philosophical controversies (Dascal, 1998a,b).

There is no "scientific community" which reviews critically scientific and medical theories. All critical work is supposedly conducted behind the great walls of disciplinary science, in scientific journals and in academic promotion committees, where academic power hierarchies, arguments from authority, group thinking and the verification fallacy (cherry-picking facts and argument in favor of established convictions) prevail.

Academic faculty are commonly *overworked*, running on the treadmill of "publish or perish"; many of which are employed as irregular or "adjunct" faculty (Mishori, 2012); regulars are busy securing their tenure and promotion; academic politics makes non-tenured faculty (presently, the majority of academic personnel in most "developed" counties) cautious in expressing unorthodox views, making "academic freedom" mostly the benefit of tenured full-professors; Most are too exhausted to translate their experiences and insights into social or political activism.

Meanwhile, Market values and industrialization of academic management (academic capitalism; Slaughter & Rhoades, 2004) transforms the "ivory tower" into corporate-like organization, whose output is certified students, publications and patents (monetization of knowledge).

In Academia, academic promotion committees are in charge of the *alchemy* process by which quantifiable criteria regarding scholars' achievements is transforms into allegedly "objective" and therefore accurate assessment of merit.

This structure of Academia makes science inherently *conservative*, despite the constant emphases on innovation, novelty and advances in research. Disciplinary Science' conservativeness is visible in topics *not* included in science or academia, and in the

definition of research. Tai Chi, Yoga or Meditation are not practiced or instructed in schools of Psychology or Medicine; Consciousness is an interdisciplinary subjective topic hardly discussed in Academia; self-research is considered a valid method in anthropology, but regarded as unscientific in Medicine (a fact Kasher's model of science cannot overcome); Pharmacology is utterly disinterested in plants medicine, Traditional Chinese Medicine or in Homeopathy.

The advancement of science, which seems to accelerate, actually slows down frequently in many sub disciplines. The fact that cannabis-based treatments proved successful for numerous indications, but still are not regarded as one of Medicine's tools, is just one salient example for this phenomenon.

Medical cannabis exemplifies two more characteristics of the reactionary nature of disciplinary science and in particular of orthodox conventional medicine:

First, based on advances in research and on personal experiences, ordinary citizens began hacking their own health and to experiment with cannabis, and thus achieved alleged positive results (biohacking). Their cumulative insights and experience is largely unacknowledged by medical orthodoxy.

Second, the medical establishment attempts to "medicalize" cannabis, and thus to control this rival of pharmacology. In Israel, an unethical and unscientific "clinical method" was invented, in order to surrender cannabis to pharmacies and to pharma industry, based on a new "systematic body of knowledge", published in the "Green Book" of the MoH, unsupported by clinical evidence, and contrary to the accumulative experience of patients and physicians (Mishori, 2019a, Mishori & Klein, 2016). Proponents of the "medicalization" reform have ignored all criticisms regarding the clinical method and other components of the reform, thus providing evidence for the thesis of this paper, that disciplinary science is incapable (or incompetent) of responding to criticisms, especially if coming from "non-experts", or from unorthodox medical doctors (deviants, heretics) from within.

CONCLUSIONS

True philosophy is inherently rebellious, as prominent criticism and systematic skepticism characterize its approach. ... The philosophy of morality will not stand ideological domination, nor will it obey the power of social conventions, nor go on beaten courses, while all of these fail to meet philosophical tests that emerge from the distinction between justice and injustice. (Kasher, 1985, 7)

Overall, Kasher accurately describe modern science, in its appearance as "Academia"; Science today is a multitude of disciplines, allegedly accumulating, expanding and deepening understanding and knowledge in infinitely accelerating branching and subdividing of science, in ways which preclude holistic integrative outlook.

Disciplinary Science attributes epistemological superiority to "experts", at the expense of free unbiased critical scientific discourse. This epistemology, sometimes regarded as the "thick" notion of rationality, amounts to the belief (or better, faith) in scientists, scientific and regulatory organizations, and the rationality of technocracy and of the disciplinary system of Academia. Furthermore, this system is inherently compartmentalized and subdivided into fields of expertise, inadequate for systemic, interdisciplinary, holistic or ecological discourse—a fact which explains in part the absence of academic environmental leadership.

Current disciplines-based science and academia is inherently flawed, because of its bifurcation into disciplines and sub-disciplines which threatens the unity of science and transforming the Ivory Tower into a Babylonian Tower, consisting of isolated autonomous theoretical dialects, relatively opaque and thus immune to external criticism. The branching of science into disciplines and sub-disciplines, and special expertise, relies on presumptions which justify this very compartmentalization—the disciplinary system itself—and on presumptions regarding given disciplines or their subdivisions, including presumptions on reality. These presumptions, and the very structure of Academia, were never scientifically (empirically or logically) tested; nevertheless they exert significant influence (biases) on scientific debates and progress.

These biases are apparent in the way Academia works (including the standards of evaluation of scientific works and the way academic promotion committees operate). Often, these presumptions

or their corollaries serve to demarcate science from non-science, and thus (a) obstruct overcoming established errors within disciplines and (ipso facto) scientific progress; these presumptions (b) serve as barriers fencing off alternative scientific theories and paradigms. The most salient feature of disciplinary science is the prevalence of arguments from authority (logical fallacy) and consensus. Reputation, group thinking and justification biases overcome Poper's criterion of scientific theories: refutation. This system is inherently conservative, hierarchical and therefore authoritarian; regulatory (technocracy) and professional organizations receive the power to establish Reality (assertions of alleged scientifically-proven facts or theories), and may create hazardous Fake-Science (e.g., Water Fluoridation: Bryson, 2004; Connett et al, 2010; Mishori, 2019).

Academic activity is described as being conducted within disciplines only, subjected to the methodologies of each, as agreed by the international community of the discipline. Under these circumstances, hierarchical, conservative and group thinking flourishes in semi-feudal system, in which "experts" creates theoretical conformisms within disciplines through the disciplinary mechanisms: journals and the reviewing process, promotion committees, professional organizations, conferences, etc.

The outcome is overriding the Mertonian norms of science (KUDOS) by disciplinary norms and presumptions. "Universality" becomes an ideal commonly realized only within the international communities of given disciplines (i.e., not in an interdisciplinary community of scholars); "Disinterestedness" (in results of research) is overridden by "professional conflict of interest" (interest that research results will not risk established theories and authorities). Such conflicts of interest multiply in cases of State (technocracy) or business (academic-private sector partnerships and cooperation) involvement.

Professional ethics is inadequate to overcome these biases, and actually exacerbate them; the ethical setting presumes the professional part, which includes assertions regarding reality (Truth), from which professionals infer the Good and the appropriate.

Ethics

Kasher makes two questionable ethical presumptions: (1) that Morality is basically anthropocentric. Morality is defined by Kasher as concerning only human-to-human relationships, and thus excludes animals or nature; (2) Professional (and thus, Academic) Ethics is depicted as “wider” than plain morality, since it incorporate also the “professional” part (technical, scientific and consequently *amoral*), which only experts allegedly master.

In doing so, professional “ethics” becomes enslaved to experts, in all disciplines, especially professions (medicine, law, etc.), who have the authority to determine Truth in their field (the professional part), and therefore the “Good”, as derived from alleged “Truth”.

Academic practice is described as the deepening of the understanding and the expansion of knowledge, without explicit mention of skepticism, refutation, doubt or criticism. Without the mechanisms of criticism, the sheer force of experts can threaten freedom and democracy.

This system is inherently biased for conventional and therefore conservative orthodox views, making “science” the belief (or faith) in the system of experts and disciplinary knowledge. This system is based on arguments from authority (a logical fallacy), and consensus (among the community of experts in a given field, often a sub-discipline or sub-expertise) and is often degenerated to *justification biases* (preferring evidences in support of one's views), especially in Medicine and health related issues.

In this system, cross or trans-disciplinary communication is hindered by the high walls of disciplines and expertise, solidified by institutions such as peer-reviews journals and publishing houses, a hostile environment for non-paradigmatic ideas. The inherent unsustainability of Science—demonstrated by Society’s inability to use science in order to mitigate or reverse multi-faceted eco-crisis (including climate change)—is a direct outcome of this system, which views holistic and system-oriented (non-reductionist) considerations as “unscientific”.

In debates between experts and “non-experts”, the legitimacy of opponents is denied from the outset, making them ‘anties’ (e.g., anti-science, anti-vaccines, or anti-fluoridation), describing them as inherently unscientific, emotional, irrational, etc. This system is reminiscent of playground bullying, excluding from the outset any legitimacy of skeptical arguments, making “science” a matter of faith in

the scientific establishments, hopelessly biased in numerous corporate and technocracy interests.

Skepticism is forcefully denied especially when personal experiences (e.g., re vaccines injuries or EHS) are denied based on certified experts science, making “science” a game of power, in which Truth and the ethics of scientific discourse is routinely being undermined, a global threat to freedom and democracy in current technocratic regimes.

Redemption of Science and Academia should regard the two horns of the problem: *epistemology* and *ethics*. Credibility should be given to scientifically informed personal subjective experiences and insights (eco/biohacking); science should be framed according to Potter’s ideas of Bioethics, as integrating both holistic system-based and ecological outlook with disciplinary and experts insights, aiming to create a science of survival, especially regarding health and environmental issues.

Ethical Knowledge (DAAT: דעת)

According to Kasher (and in reality), disciplines exist individually as part of the academic system, and thus become immune to external criticism. Such a position cannot serve as a basis for professional ethics, or for a democratic society in our technocratic era, for three simple reasons:

- (1) The field of morality is supposed to be wider than professional ethics, and not narrower;
- (2) Ethics and ethical decisions cannot rely on *amoral* components (the professional part);
- (3) The broadest definition of morality is ecological, which includes everything that lives, including ecology itself (the system in which economy, society and humans are subsystems). Any narrower (anthropocentric) definition removes parts of reality from the realm of morality, sterilizes it, and creates undesirables consequences of policies without proper ethical and scientific checks and balances.

However, Kasher made (above) an important observation, linking ethics to understanding (epistemology). This observation is valid, as presumptions regarding reality form part of our ethical and moral judgments.

In Hebrew, there is a word designating exactly this fusion of Ethics and Epistemology, which cannot be translated to English: DAAT

(דעת). This word appears in the Bible in the well-known story of the Garden of Eden, in which there were two sacred trees: of Life and of Knowledge (DAAT):

But of the tree of knowledge of good and evil, thou shalt not eat of it: for in the day that thou eatest thereof thou shalt surely die. (Genesis,2:17)

Knowledge of good and evil is ethically-informed epistemology: DAAT, knowing right from wrong, good from bad. Hence, the "Tree of Knowledge" is actually the "Tree of Moral knowledge."

Judaism also informs us of the principal criterion: "And you've chosen life" ("ובחרת בחיים") :

This day I call the heavens and the earth as witnesses against you that I have set before you life and death, blessings and curses. Now choose life, so that you and your children may live.⁶ (Deuteronomy 30:19)

Therefore, if Kasher is right, and ethics presupposes understanding, the highest form of understanding is distinguishing between good and evil, just and unjust, life and death. All other formulations of knowledge make science inherently *amoral*, and therefore *dangerous*. This principle conforms Bioethics, as depicted by VR Potter (1970).

Science without morality cannot be true — its understanding of the world is necessarily partial. Moreover, morality is not only a duty, but also a right, which enables personal growth, self-realization, and expansion of consciousness and understanding—an inherent part of integrative (objective and subjective; disciplinary and systemic-holistic ecological) science.

⁶דברים 19: " העידתי בכם היום את השמים ואת הארץ: החיים והמוות נתתי לפניך, הבחירה והקללה; ובחרת בחיים, למען תחיה אתה ונרצוך "

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