

# WHO OWNS KNOWLEDGE?

Knowledge and the Law

EDITED BY  
**Nico Stehr**  
and **Bernd Weiler**



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# Contents

Preface	vii
<i>Nico Stehr</i>	
Introduction: Knowledge and the Law: Can Knowledge be Made Just?	1
<i>Nico Stehr and Bernd Weiler</i>	
<b>Part 1</b>	
<b>The Social Contexts of Knowledge and the Law</b>	
Introduction to Part 1	17
<i>Steve Fuller</i>	
Warwick University	
1. The Law and Economics of Rights in Valuable Information	25
<i>Edmund W. Kitch</i>	
University of Virginia, USA	
2. Scientific Norms, Legal Facts, and the Politics of Knowledge	67
<i>Alfons Bora</i>	
University of Bielefeld, Germany	
3. Is a Just System also Fair? Traversing the Domain of Knowledge, Institutions, Culture, and Ethics	87
<i>Anil K. Gupta</i>	
Indian Institute of Management, Vastrapur, India	
<b>Part 2</b>	
<b>Major Social Institutions, Knowledge and the Law</b>	
Introduction to Part 2	101
<i>Steve Fuller</i>	
Warwick University	
4. Fundamental Ignorance in the Regulation of Reactor Safety and Flooding: Risks of Knowledge Management in the Risk Society	107
<i>Michael Huber</i>	
London School of Economics, UK	
5. Science in Whose Interest? States, Firms, the Public, and Scientific Knowledge	125
<i>Renée E. Marlin-Bennet</i>	
American University, Washington, USA	
<b>Part 3</b>	
<b>The Social Context of Knowledge and the Law: Who Owns Knowledge</b>	
Introduction to Part 3	153
<i>J. Rogers Hollingsworth</i>	
University of Wisconsin, Madison, USA	
6. The Difficult Reception of Rigorous Descriptive Social Science in the Law	169
<i>Christoph Engel</i>	
Max-Planck Institute for Research on Collective Goods, Bonn, Germany	
7. Inexplicable Law: Legality's Adventure in Europe	215
<i>Alexander Somek</i>	
University of Iowa, USA	
8. In Search of the Story	237
<i>Viktor Mayer-Schönberger</i>	
Harvard University, Cambridge, MA, USA	
9. Does the Category of Justice Apply to Drug Research Based on Traditional Knowledge? The Case of the Hoodia Cactus and the Politics of Biopiracy	255
<i>Wolfgang van den Daele</i>	
Wissenschaftszentrum Berlin, Germany	
10. Profiles and Correlatable Humans	265
<i>Mireille Hildebrandt</i>	
Free University Brussels, Belgium	
11. Research Ethics as the Latest Moral Panic in the Governance of Scientific Knowledge	285
<i>Steve Fuller</i>	
University of Warwick	
12. Concluding Observations	307
<i>Ralf Rogowski</i>	
Warwick University, U.K.	
Contributors	315
Index	321

## Is a Just System also Fair? Traversing the Domain of Knowledge, Institutions, Culture, and Ethics<sup>1</sup>

Anil K. Gupta

What is a fair system of knowledge attribution and utilization when norms of an institution celebrate extraction, and unfair exploitation? Should institutional justice take precedence over fairness of means versus fairness of outcomes for individuals? How do we create a fair way of treating asymmetries in pricing the knowledge produced by corporations and the unattached citizens? When researchers document people's knowledge (as ethnobotanists have done for ages) and bring it into the public domain without any prior informed consent (PIC) of communities or individuals, they are being *just* because they are following the norms of their profession. But is that exchange also *fair*?

The fairness in any knowledge exchange can be defined in terms of the equality of opportunities among different actors involved in the exchange to seek, provide, acquire, interpret, share, disseminate or critique the knowledge without fear of being excluded or reprimanded for the views one has (it is obviously more than just the procedural justice). Therefore, fairness is the measure of access, ability to interpret, freedom to disseminate or critique and capacity to deny the right to acquire or use or share one's knowledge. The justness in the exchange would depend upon the compliance with the existing norms of profession, organization and society. It is possible that just norms at one level may become unjust at another level. For example, an organization may demand

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1 Invited Presentation at the International Conference on "Is Knowledge Justicia-ble?" Essen, Germany, 21–23 March, 2005. I am grateful to Ms. Riya Sinha, a senior colleague in the Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) and Honey Bee Network for comments on the earlier draft, particularly the section dealing with Prior Informed Consent. I also acknowledge useful critical suggestions made by Dr Rekha Saraswat, Editor, *The Radical Humanist*. I also appreciate the help of my secretary, Mr. Baskaran, who, as ever, helped me in putting everything together.

2 Humphrey (2006) while discussing implications of distributive justice stresses that situations of objectively unfairness in resource exchange may be considered under certain social conditions as morally fair.

confidentiality and compliance with the organizational norms even if certain practices are contrary to the societal norms. In the absence of a legitimate whistle-blowing function, any act which jeopardizes the future of the organization may be called unjust by members of the organization. But, if someone blows the whistle and her stand is vindicated at societal platforms such as courts, then her so-called unjust action within the organization becomes a just action in societal terms. Therefore, compliance in a fair manner (without discriminating among various members of the group) with norms which are not justified at the larger level, in the larger context, may lead to unjust actions.

Suppose that one asks a community for its consent and the community gives it, believing that knowledge could be shared without restriction. But the products based on that knowledge are covered by intellectual property (IPRs) and are not accessible to the community whose knowledge made those products possible. The system is just but not fair.

Justice may be derived by prevalent models of ethics and institutions. After all, apartheid institutions had courts, which dispensed justice, but in what many would call an “unfair” manner.

If the rules (according to which distribution of gains by adding value to traditional knowledge takes place), are so designed that they favor organized sectors over unorganized, articulate over tacit, literate over illiterate, and written-word-based systems over oral tradition, then norms of fairness will depend upon the ethical and cultural values of a given society. In several institutions of higher learning, a case method is used for teaching concepts of management or operational efficiency. When such case studies are based on the knowledge or the data provided by formal sector organizations, then the institutional norms require that these cases be cleared or authorized by the organization providing data for that purpose. Without written permission and “no objection” from the organization providing data, the case cannot be registered and is not formally authorized for use in the class. However, if a case is based on the oral knowledge of people in the unorganized, informal sector, then this same institution of higher learning does not require an informed consent from the knowledge providers. This is an example where the norms of fairness are biased in favor of the organized sector as compared to the knowledge from the unorganized sector, though both kinds of conduct are just, given the norms.

We argue that we can not address the issue of fairness in knowledge systems without bringing into question the very basis on which justice is defined by institutions regulating and monitoring the interface between formal and informal knowledge systems. Once we do that, we can indeed move towards a theory which will give priority to fairness vis-à-vis contemporary justice. It may also help in bringing in the issue of intergenerational justice requiring intragenerational fairness. The former implies the ability and willingness of a society to

respect the rights of the unborn and those who cannot vote in the current decision making system, such as non-human sentient beings.<sup>3</sup> The latter refers to fairness in exchange of goods and services among different sections of society living at present, especially equality of opportunity and enabling arrangements to give the disadvantaged a reasonable chance of gaining access to resources.

The National Innovation Foundation (NIF) was set up by the Department of Science and Technology, Government of India in 2000 to scale up the Honey Bee Network approach to scouting and documentation of a grassroots network covered by the prior informed consent, build a value chain, protect intellectual property rights, and ensure a fair distribution of benefits, if any. We provide an operational framework in which NIF and Honey Bee Network are trying to address these dilemmas. The Honey Bee Network<sup>4</sup> started the dialogue 19 years ago on the issue of fairness and justice-in-knowledge exchange among local communities, individuals, professionals attached to institutions, state and markets.

Knowledge is produced when people observe, analyze, abstract, assort, assimilate, or just feel. It is obvious, therefore, that there is considerable variation in the way knowledge is produced, validated, abstracted, and disseminated. For some, prior feelings and beliefs cannot be separated from subsequent knowledge that is gained. For others, it is possible to gain knowledge as an objective fact without bringing feelings into the picture.<sup>5</sup> However, both these perspectives may converge on at least one issue: the interpretation, use, and consequences of the knowledge gained through emotive or instrumental means are certainly influenced by our values, past experiences, and future expectation about the social order. Therefore, if we believe that we can and should use

3 They are also called perfect strangers, i.e., unknown and unknowable. We cannot find out the preferences of a generation unborn. Likewise, we do not know what the ant on the wall or a bird in the window thinks about us. Justice towards the next generation is defined as intergenerational justice.

4 The Honey Bee philosophy refers to primarily four principles: (a) connecting people to people by encouraging knowledge exchange in local languages so as to facilitate cross pollination of ideas; (b) the knowledge providers must be acknowledged and sourced while referring to their knowledge; They should not become anonymous and should not feel short changed while sharing their knowledge. This is akin to the flowers not complaining when bees collect their nectar; (c) attributing not only the knowledge provider but also those through whom we identify the knowledge provider and (d) if any wealth is generated, a reasonable share goes back to the people whose knowledge enabled the wealth generation.

5 Rummel (1981) criticizes the Rawlsian concept of “veil of ignorance” for assuming that separating personal preferences or feelings will lead to fairer norms of societal allocation of resources. The notion that people receive what is their due, he argues, strongly depends upon what different groups of people believe is their “due” (emphasis mine).

knowledge for the larger social good, then both the *means* through which we gather that knowledge and the *ends* for which we use that knowledge may get connected.

In Gandhian philosophy, the *means* often are considered more important than the *ends*. If knowledge is collected through unfair means, no matter how just the distribution of that knowledge is, the problem will not go away. This is the problem that we wish to address in this paper.

While working through the Honey Bee Network, we realized that the prevalent norms of knowledge exchange, governed by the rules created by institutions of state and civil society at that time, did not find any unfairness in the extraction/collection of peoples' knowledge (traditional as well as contemporary, tacit as well as explicit) without any attribution, acknowledgement, prior informed consent or reciprocity towards the knowledge providers. The only resource, as we have argued, in which poor people were often rich was their knowledge about use of resources, coping with risks of climate or other environmental factors, dealing with stresses, and managing survival. This knowledge, whether of material or institutional nature, was scouted and documented by outsiders and shared in a language that local communities did not know. The act of bringing private knowledge or community knowledge into the public domain without consent (Gupta and Sinha, 2003) was considered *just* because the larger number of people benefited from the use of that knowledge. The largest good of the greatest number of people, a utilitarian logic, produced the norm according to which no injustice was caused. It was argued that local communities did not lose anything by sharing their knowledge. In any case, the ethics of these communities often guided them to share their knowledge unhesitatingly. The providers of knowledge, in many cases, did not ask for any report of what the knowledge seekers did with the knowledge they obtained.<sup>6</sup> Therefore, by not providing access to the analysis or the publication, the outside researchers or corporate agents did not, apparently, do any *injustice*. However, is it not a violation of human rights when something is taken from someone who is not aware of its true worth, or does not care to ask for the products developed by the knowledge seekers? Most local communities around the world are very generous in sharing their knowledge. They do not even ask investigators what they will do with the knowledge provided. In their culture, sharing is the most natural and expected behavior. They don't realize that a majority of the outsiders who access local knowledge do not feel obliged to either disclose their purpose or to inform them when something of commercial value is developed based on that knowledge. In the absence of any written agreement, the local communities don't even know what products actually came out of the knowl-

edge they shared. The question of sharing benefits does not arise. The tragedy is that when young people notice that most of the knowledge-rich, older people often remain economically poor, they lose interest in acquiring, experimenting with, and maintaining the knowledge. The erosion of knowledge starts because young people don't want to remain poor by continuing with the traditional sharing ethic.

### Criteria for Assessing Adverse Consequences for Knowledge Providers

How do we derive the criteria by which fairness can be judged? Rawls said, "When an adverse consequence of an exchange occurred for, or affected even one person, the process would be qualified as unfair." Therefore, a community or an individual knowledge provider can be considered as a sufferer if any of the following four things happen: (a) the knowledge provider needs access to a product, say a medicine, based on the knowledge he provided but cannot afford or access it; (b) by sharing the knowledge, other people come to know and the demand for the skills and/or the local resources goes down because people can obtain knowledge and/or resources from other sources; (c) the social esteem of the local community or the individual knowledge holder does not increase, even when the knowledge they provided proves to be extremely useful to the larger world, because they have not been acknowledged or cited as the source of the knowledge (for instance, provision of the knowledge of Cinchona as a malarial control plant by the American Indians to the European settlers, who used this knowledge to dominate and control the Indian tribes); and (d) the younger people within the community lose respect for the knowledge that elderly people shared with the outsiders without any reciprocity because they find that knowledge-rich elders are often economically very poor. And there could be other criteria by which the adverse consequences on one or many knowledge providers can be assessed.

### Criteria for Assessing Adverse Consequences for Knowledge Seekers

My second contention is that unfairness can also arise if we look at the possible adverse consequences for the knowledge seekers using unfair means to get the knowledge. Let me illustrate ways in which this can happen: (a) the respect for oral communications and tacit knowledge goes down in the profession because scholars notice that not acknowledging oral knowledge of tacit and traditional communities is not very different from ignoring similar knowledge of modern communities or individual scholars; (b) the interactional opportunities among the scholars go down, leading to decline in trust, social capital and production, and cumulation of knowledge; (c) enforcement of ethical values among schol-

6 Britz and Lipinski (2001) cover this issue under commutative and contributive justice.

arly communities becomes difficult because of the guilt or fear of being faulted for using different values while dealing with similar knowledge from informal sources; (d) the respect among younger scholars and students for senior scholars goes down when they realize that the professional norms of a *just* way of dealing with knowledge actually appear to cause unfairness in the dispensation of justice; and (e) the organizers of a conference regretfully find that there is no dearth of potential participation from the scholars who follow similar norms of unfair knowledge extraction but those few scholars who are sensitive and responsible do not participate. The adverse consequences even for a few of the knowledge seekers may create a similar dilemma to the adverse consequences for knowledge providers.

### Motives of Knowledge Extraction and Consequences of Different

#### Motives

My submission is that fairness in knowledge exchange should not be judged only by the consequences but also by the motives of the knowledge extractors. Even if the consequences are good (unfair extraction of knowledge about a traditional medicine leads to development of a cheap, affordable drug), and many more lives are saved than would have been the case without such extraction, without attribution and reciprocity the exchange would still remain *unfair*. This situation becomes more complex when the knowledge-providing communities or individuals are either not able to access this drug because of poor infrastructure, low purchasing power, or other disabilities which cannot be overcome even with access to the drug. *The consequences are often easy to measure; the motives have to be inferred*. While the norms of justice would apply in a conflict within the constitutional framework, the norms of fairness would require the prevalent ethics to be put in a larger social and political context. By not signing the Convention on Biological Diversity or other such treaties, a dominant country can escape from legal consequences and thus may still be operating within the domain of justice. But will such conduct be called fair? Assume for a minute that a state, being the sovereign right holder over natural resources within its boundary, decides not to honor the knowledge rights of local communities. In fact, it passes a law in the parliament which defines all oral knowledge practised by anybody, anywhere, as a prior art and thus in the public domain. Now the professionals who document such knowledge without attribution have a legal justification for exploitation. Because the knowledge of the local communities is in the public domain, there is no reason why any norm of seeking permission should be followed. Whether copyright of the communities should be considered is an issue equally complex. It is often difficult to find the precise authors of a traditional knowledge, even though it may be possible to find the outstanding practitioners

of such knowledge with or without contemporary improvements. Let us take the case of a traditional knowledge which is widely distributed and has been brought into the public domain. Scholars who collect such knowledge and use it to produce contemporary commercial products don't see any reason why they should either enrich the public domain or enhance the capacity of the communities to keep the knowledge intact so that future generations may be able to either improve upon it or analyze its operational context. As we restrict the conditions of diffusion, awareness, or practice of the knowledge, the complexities increase. The motives of the scholars who collect knowledge from local communities may be benign. When they publish the knowledge of people, their motive may be to explain the public domain. However, if, in the process, the knowledge providers lose the rights to this knowledge, the consequences that follow are not always benign. In some cases, one labels such exchanges as biopiracy.

If the purpose is to keep the crucible of creativity in which knowledge is produced, reproduced, debated and refined intact, then the present discourse has to look at the relationship between knowledge, institutions, ethics, and culture. I, therefore, will discuss the interface between these four dimensions — knowledge, institutions, ethics, and culture — next.

If knowledge is conceptualized like “words” in a sentence, then institutions are like “grammar.” The culture provides the “thesaurus” and the ethics underlying the embedded meanings in certain phrases or usages. It is possible that we use the words very precisely and arrange them in a grammatically correct manner with sensitivity towards the usage, yet the meanings could cause injury to the interests of certain classes of society if not used appropriately. The sign of the swastika is one such example. Misuse of this sign by one of the worst tyrants in the history has imbued it with a specific meaning in our cultural, historical, and social context. In another context, usage of this sign does not evoke even remotely similar feelings. It is this “context”-specific meaning and its bearing on the “content” of the meaning which may cause a problem of unfairness. People who have suffered at the hands of that tyrant would like the whole world to show this sensitivity and rightly so. Every right-thinking human being must recognize the problem. At the same time, a tribal community or a local community in another part of the world oblivious to this connotation may use the sign with a very different meaning and with no intention to cause hurt to anybody. Here the importance of motives becomes even more paramount. If motives are proper, can a wrong action be justified?

#### What is a Normal Professional and Institutional Behavior?

Many scholars, we now revert to our original context, would argue that when they extracted the knowledge of local communities without any acknowledge-

ment, they did not do it to exploit the people. They did it because that was a *normal* thing to do as per the professional standards or norms of institutional behavior. What is “normal” need not be governed either by the dominance of the institutions which define normality or by the discomfort caused to those whose conduct gets questioned. No journal of ethnobotany refuses a publication because the content of the articles has not been shared with the knowledge providers in their local language or because the sources of the information have not been acknowledged as authors, or prior informed consent has not been taken before putting the knowledge of the local communities in the public domain. In Honey Bee, we have faced these problems squarely and have tried to evolve norms which could be considered *just as well as fair*.

But, what we practise, even if imperfectly, is not yet the norm of the profession or social science research councils of European or developing countries. A Ph.D. thesis will not be rejected in Germany or the USA because the student did not get permission from the local communities and fulfilled other responsibilities mentioned above. And yet, a certificate is signed to say that all due acknowledgements have been made. How do we include or deal with the acknowledgements which have not been made and thus not considered “due”?

The norms of justice can converge with norms of fairness if we grapple with the problem of means and ends. In oral societies the legitimacy of oral tradition exists and therefore, the values of certain kind matter more than others. Some societies may be very unjust in their treatment of women, handicapped people, or even minorities. However, the right to have one’s knowledge treated in a fair and just manner is not divisible and subtractable. Therefore, one cannot argue that a traditional healer convicted of murder has no right over his healing knowledge because he has committed a murder. Several of his constitutional rights may be superseded because of his offence. But, in my view, his knowledge right will not be compromised.

### Policy Challenges: What Next

The discussion so far provides a framework of fairness in which arguments about justice can be pursued to design institutions serving right ends through right means. The National Innovation Foundation (NIF), set up by the Department of Science and Technology, Government of India, is mandated to build a national register of grassroots unaided innovations and traditional knowledge. Many times, similar innovations are developed by several people simultaneously. But some of them come to know about NIF or SRISTI on their own or Honey Bee Network collaborators discover them early. Some are discovered much later. If an innovator is honored for an innovation which he or she discovered to NIF first, the norms of justice have been followed. But surely the in-

novator who comes to know of it later may feel unfairly treated. In such a case, the institution must have norms, which are flexible, friendly, and fair to those who developed the innovation first but were not smart enough or lucky enough to be noticed early or reach the NIF early.

In the case of traditional knowledge, a similar problem may arise. The same plant may be used for somewhat similar purposes by many communities, not all of whom may be able to reach us or be discovered by the NIF. The knowledge of some communities may have been documented by scholars in the past and published. These communities may have developed very valuable knowledge but will be denied any recognition because scholars in the past published their knowledge without their permission and in an unfair manner. This community is not at fault; but the ends of justice will be compromised if the novelty in the innovation is not appreciated. Sometimes, an innovator has developed a solution which some other individual or community in another part of the world has discovered or developed earlier and independently. Should such a person be given credit if it can be established that he may had no access to international knowledge base and thus developed the knowledge *de novo*? If the purpose is to promote creativity, originality, novelty, and an experimental ethic, then the norms by which an arrangement is called just and fair will be different than the case where the purpose is only to grant a patent.

Within the context of intellectual property rights, I have raised the following issues, which involve similar dilemmas:

- a. First to file versus first to invent: It is completely a just system if the patent office grants patents to an innovator who comes first. In the USA, the first-to-invent system is followed; in most other countries, the first-to-file system is followed. From a legal point of view, it makes sense. Now look at the transaction cost for a small inventor or innovator who has developed his or her innovation in a remote corner, away from the big cities and who is unaware of the modern systems of protection. He does not have the resources to hire the best attorneys and therefore cannot file an application earlier than someone else who is more resourceful. He loses his rights. Should we now accept the fairness of this system because it rewards resourcefulness over resourcelessness? Is this the only way to address the problem?
- b. Lawful and rightful disclosure: Since 1993, SRISTI and I have argued that every patent office must require each patent applicant to file an affidavit declaring that all the knowledge and/or resources used for making the claims have been obtained, “lawfully” and “rightfully.” If India does not have a law requiring prior informed consent of local communities/individuals, whose knowledge is collected by outsiders for any commercial or

- non-commercial use, then it is perfectly lawful not to obtain their consent. But is it “rightful” also? Just because a country does not have a law or does not have the capacity to implement a law, should ethical and fair conduct become dispensable?
- c. Is traditional knowledge a prior art: The patent laws of many countries consider traditional knowledge (TK) a prior art and therefore beyond any protection. Is there not a case for modifying such provisions to discriminate between widely known and widely practised TK vis-à-vis widely known and rarely practised, or rarely known and rarely practised TK? Should not the norm of reasonable accessibility be applied while evaluating the classification of a particular knowledge as prior art? The rights of local communities should not be evaluated only from the legal framework but should be seen in the ethical framework of fairness.
- d. Sacred marks: From the legal point of view, there may not be any restriction on using the sacred marks of one community to brand the commercial goods of another community. However, the norms of fairness are violated when indiscretion is performed in such matters. The protection of sacred marks should become inevitable. I do not know whether every unfair action must require expansion of the justiciable boundary of the concept. That will make legal system very cumbersome and moral boundaries very restricted.
- e. Open source innovations: There is a widespread consciousness that public domain must be expanded to empower civil society discourse and dialogue. However, this must happen voluntarily and through mutual consent. At the same time, any corporation or private organization, which draws upon public domain knowledge contributed by the local communities, should consider making a contribution towards the enlargement of the public domain. Various incentives can be developed by which innovators and inventors are compensated and then persuaded to bring their knowledge into the public domain. Development of such incentives and their popularity could be considered as a good indicator of the extent to which norms of justice and fairness converge in a society.

### Concluding Comments

I have argued in this paper that in many cases it is easier to be just than to be fair: I am suggesting the need for developing a theory giving primacy to fairness while ensuring justice. Sometimes, intragenerational fairness is a precondition for ensuring intergenerational justice. If the children of local knowledge

experts do not have an incentive to keep the knowledge systems alive, then the future generations will be deprived of access to a living laboratory of experimentation and creativity. *A grave injustice to future generations will follow because we could not develop norms of fairness in the current generation.*

The asymmetry in rights and responsibilities is inevitable. None of us are able to achieve the goals of complete justice and fairness in our personal lives. We realize that, in our anxiety to be fair to different roles, we cause injustice to some or the other stakeholders. These tradeoffs in everyday life perhaps make us insensitive to the need of avoiding these tradeoffs in the larger society. We can avoid this only at the cost of eventually becoming fair to each constituent.

I submit that knowledge asymmetries have provided the spur for social dialogue, engagement, and encounter in society for centuries. The challenge is to maintain the incentives for local expertise to evolve and grow without legitimacy being granted to unfair means of overcoming the asymmetry. Local knowledge, linked to place and time, invariably encompasses certain universal values of compassion, creativity, and collaboration. I am not suggesting such to be the case in every instance. I am only saying that the probability of such a thing happening is higher when a knowledge production, consumption and distribution system is linked to a place and the people inhabiting that place.

The institutional context of technological, cultural, and social knowledge production therefore becomes extremely important. Those who produce knowledge should take into account the values that increase the chances of putting such knowledge to environment friendly and socially compatible use. I am aware that social compatibility can sometime be a constraint rather than an opportunity. At such moments, an individual has to listen to the call of conscience and decide. No major innovation would have taken place if compatibility with the existing norms of society had been a precondition. At the same time, the norms of social fairness and justice require that while developing knowledge and institutions to manage it, we do not disregard the envelope in which the message is communicated. The institutional envelope for technological and social knowledge has to be calibrated so that it can contain a fair extent of variety.

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