

Noesis

The Journal of the Mega Society

Issue #180

March 2006

Contents

About the Mega Society/Copyright Notice		2
Editorial	Kevin Langdon	3
Second Report on Online Testing	Dean Inada	4
The Colored Rains of Kerala: An Exploration of Possible Causal Mechanisms	Ian Goddard	9
God	Kevin Langdon	19
(Pel)lucid Dreaming	John Ostendorf	22
Autobiography	Richard May	23
The Colonies	Richard May	24
Vista	Richard May	24
In Praise of Stupidity	Richard May	24

About the Mega Society

The Mega Society was founded by Dr. Ronald K. Hoeflin in 1982. The 606 Society (6 in 10⁶), founded by Christopher Harding, was incorporated into the new society and those with IQ scores on the Langdon Adult Intelligence Test (LAIT) of 173 or more were also invited to join. (The LAIT qualifying score was subsequently raised to 175; official scoring of the LAIT terminated at the end of 1993, after the test was compromised). A number of different tests were accepted by 606 and during the first few years of Mega's existence. Later, the LAIT and Dr. Hoeflin's Mega Test became the sole official entrance tests, by vote of the membership. Later, Dr. Hoeflin's Titan Test was added. (The Mega was also compromised, so scores after 1994 are currently not accepted; the Mega and Titan cutoff is now 43—but either the LAIT cutoff or the cutoff on Dr. Hoeflin's tests will need to be changed, as they are not equivalent.)

Mega publishes this irregularly-timed journal. The society also has a (low-traffic) members-only e-mail list. Mega members, please contact the Editor to be added to the list.

For more background on Mega, please refer to Darryl Miyaguchi's "A Short (and Bloody) History of the High-IQ Societies,"

<http://www.eskimo.com/~miyaguch/history.html>

and the official Mega Society page,

<http://www.megasociety.org/>

Noesis, the journal of the Mega Society, #180, March 2006.

Noesis is the journal of the Mega Society, an organization whose members are selected by means of high-range intelligence tests. Jeff Ward, 13155 Wimberly Square #284, San Diego, CA 92128, is Administrator of the Mega Society. Inquiries regarding membership should be directed to him at the address above or:

ward-jeff@san.rr.com

Opinions expressed in these pages are those of individuals, not of *Noesis* or the Mega Society.

Copyright © 2006 by the Mega Society. All rights reserved. Copyright for each individual contribution is retained by the author unless otherwise indicated.

Editorial

Kevin Langdon

This issue is late because we haven't been getting enough submissions lately.

Candidates for the 2006 election for Mega Society officers were solicited in the previous issue of *Noesis*. Only the incumbent officers have responded and all have expressed an interest in seeking reelection. Therefore, these candidates being unopposed, I declare each reelected:

Administrator	Jeff Ward
Editor	Kevin Langdon
Internet Officer	Chris Cole

In this issue we have some interesting articles.

Dean Inada has provided a second report on the online testing project that he has been conducting with Chris Cole. Work of this kind is necessary given the general unavailability of good new high-range tests.

Ian Goddard's essay herein, "Possible Causal Mechanism of Kerala's Red Rain," is an expanded version of one of the articles on his interesting and eclectic website:

<http://www.iangoddard.net/>

The next issue of *Noesis* will be a special issue on Biblical Scholarship. I already have a number of interesting and thought-provoking articles on hand, but further submissions are invited and encouraged. My article, "God," in this issue, one of a continuing series of autobiographical notes, is published at this time to get you thinking about this subject. The deadline for this issue will be April 30.

We have links to members' websites on our home page, but Ron Hoeflin's former website is no longer up and that leaves only my site. Members, please supply URLs for your Web presences.

I am grateful, as always, to the contributors of material for this issue. And, as always, I request more high-quality submissions for subsequent issues.

Cover: A pattern generated with "Spines," a routine in Hallucinations™, by Kevin Langdon. Copyright © 2006 by Polymath Systems. All rights reserved.

Second Report on Online Testing

Dean Inada

Introduction

This is the second status report on this online testing site: www.mental-testing.com. A description of the basic operation of the site can be found in the first report at www.megasociety.org/noesis/177.htm#FirstReport.

The test has received a good review by the independent test ranking Web site www.iqte.st, ranking second of the sites they have reviewed. We have 3764 new test takers since the first report.

Corrections and Refinements

We discovered a bug in the hangman questions, so we had to reset those answers. This means that everyone who has previously answered the questions is allowed to answer the questions again.

In the questions that ask which of five words is not in the same category as the other four we noticed that some words were frequently missed when they were offered as an answer.

In a made up example, suppose that for one question we picked four random words from

arm	hip	ora
ear	jaw	rib
eye	leg	toe
gum	lip	

which were meant to form a group, and one random word from

bye	mho	taw
cay	neb	tog
fey	nix	tom
gat	nub	tux
gel	obi	yaw
gyp	ohm	yin
haw	ova	zap
ilk	oxy	zed
kea	phi	
lei	pox	

which was meant to be the answer.

We generate reports listing the correct answers divided by the total answers, which might look like this (again these are made-up numbers simply for illustration).

wrong answers	
ora	2087/5602
rib	1003/5782
jaw	770/5628
gum	661/5629
lip	474/5676
toe	462/5688
leg	460/5756
ear	428/5649
hip	416/5701
arm	345/5652
eye	229/5825

missed alternative answers	
ova	191/281
gyp	144/251
mho	116/247
yaw	113/264
nub	111/261
taw	107/252
fey	105/251
kea	106/254
oxy	112/270
cay	108/261
haw	98/237
pox	110/287
zed	102/268

gat	98/268
neb	91/250
obi	104/288
ohm	95/270
zap	97/290
tog	88/267
ilk	79/242
nix	80/251
tux	89/281
yin	82/262
lei	80/256
gel	78/250
bye	79/254
phi	77/256

We eliminate any answer that was missed more than half the times it was offered, like “ova” and “gyp.” We might also decide that “ora” is too obscure, and eliminate that too.

New Features

We added a new feature by which people may request to be notified by email when new questions are added to the test.

Recent Statistics

50610 registrants, 37209 participants, 979 tests completed

Problem	Answered	% Answered	% Correct	% Partial credit
A	6649	62	4	0
B	2475	57	22	0
C	15077	81	6	0
D	7568	65	9	0
E	17995	82	57	0
F	19778	90	73	0
G	17451	89	66	0
H	19048	93	68	0
I	20008	88	72	0
J	16689	89	65	0

K	19583	92	77	0
L	19911	91	70	0
M	24654	91	67	0
N	22880	91	74	0
O	3293	79	5	0
P	12000	75	13	0
Q	7645	87	5	9
R	1768	88	8	12
S	12930	88	8	0
T	5459	35	11	0

%Answered is number of people who were asked a question/number of people who answered that question. The more difficult questions are less likely to be asked unless the persons performance on other questions indicates that they may have a good chance of answering that question, or we have run out of easy questions to ask that person.

%Correct is correct answers/answers.

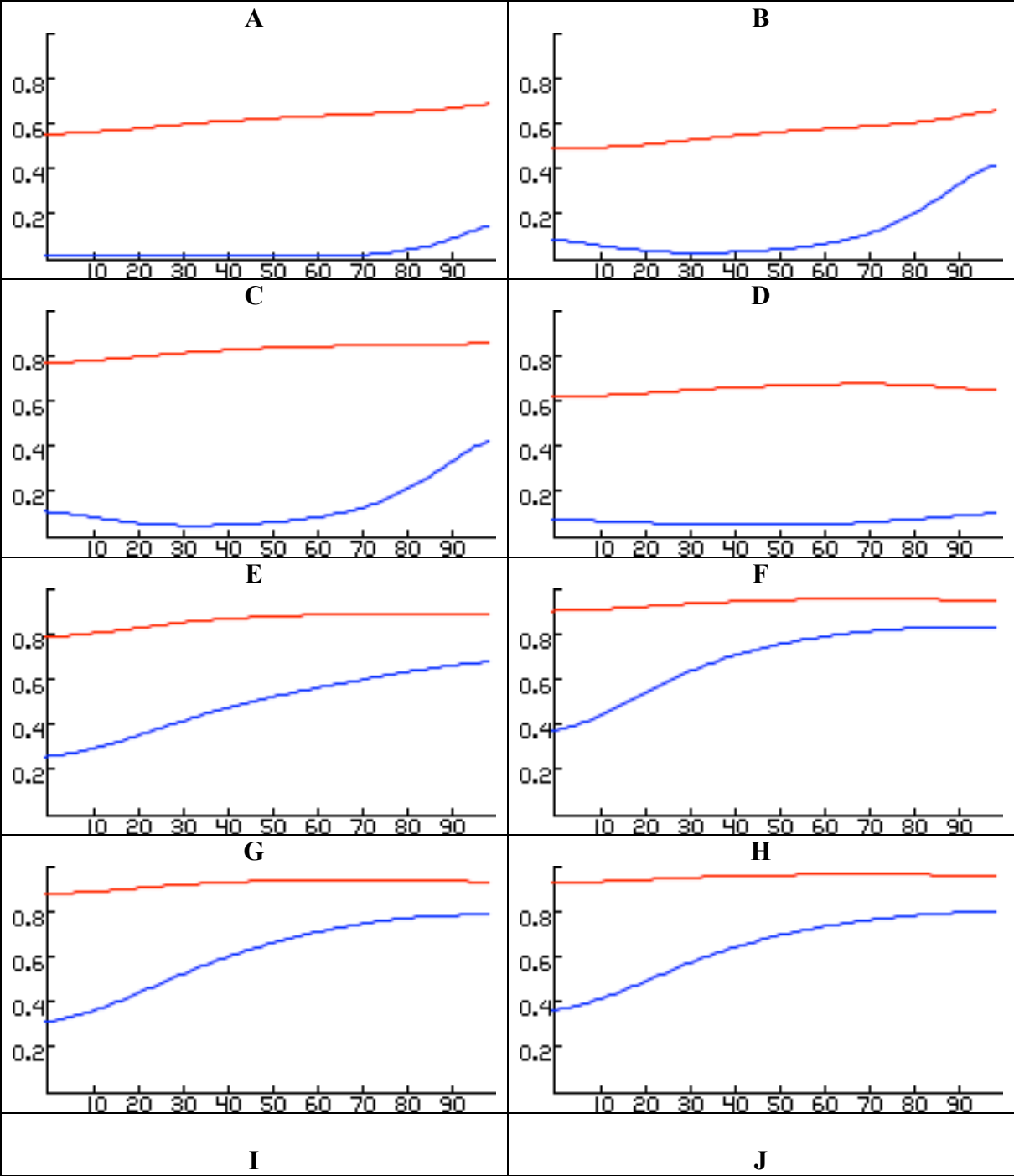
Graphs of Question Statistics

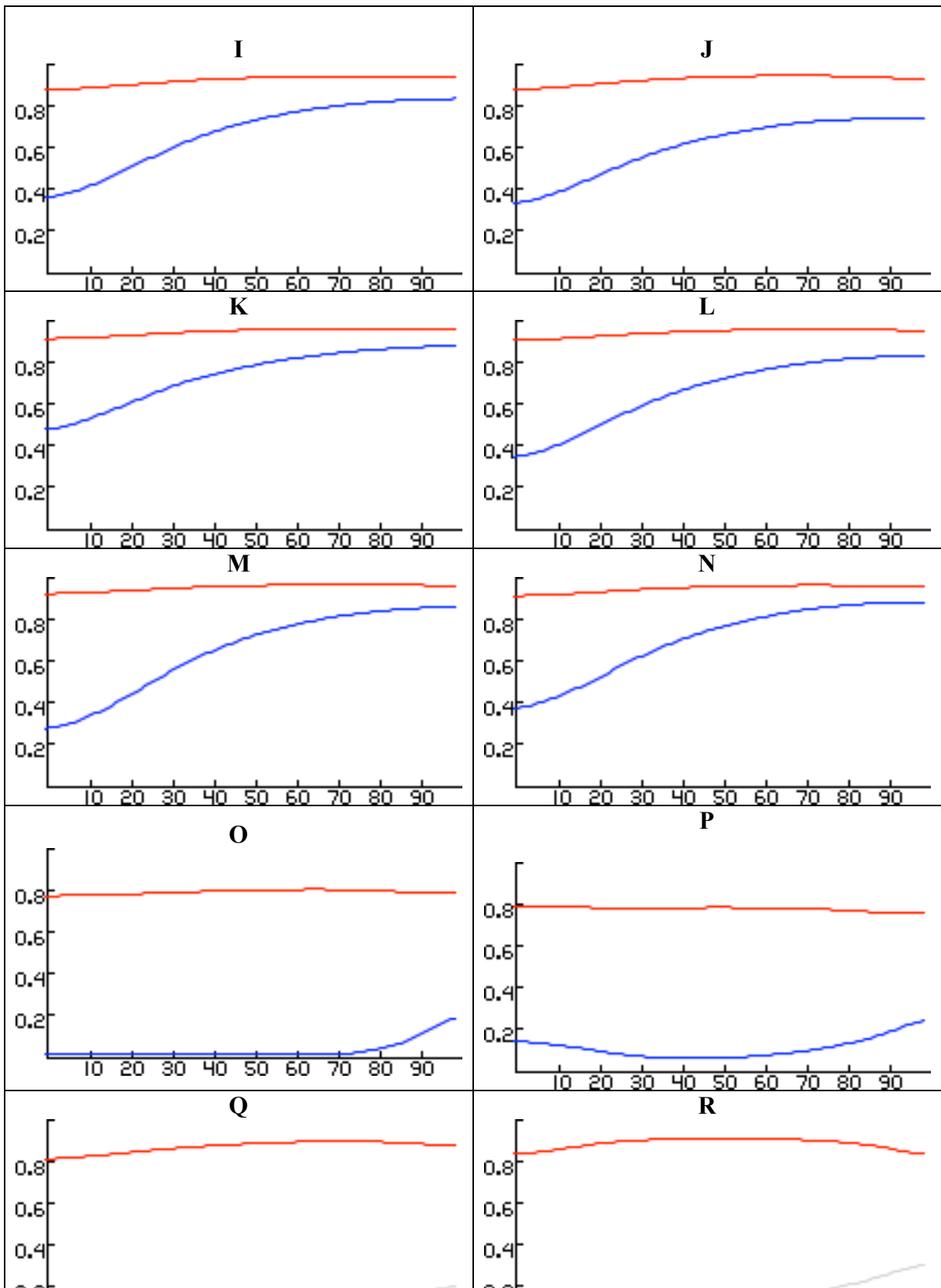
The quality of a test item is determined by the shape of the curve of the probability of getting a correct answer as a function of test taker intelligence. A good test item will have a sigmoid curve, starting at zero and suddenly increasing to one at some threshold, with no wiggles. Wiggles represent alternative answers that occur to people at higher intelligence levels. For example, problem 25 on the Mega Test has wiggles, whereas problem 1 has a low threshold with no wiggles and problem 36 has a high threshold with no wiggles:

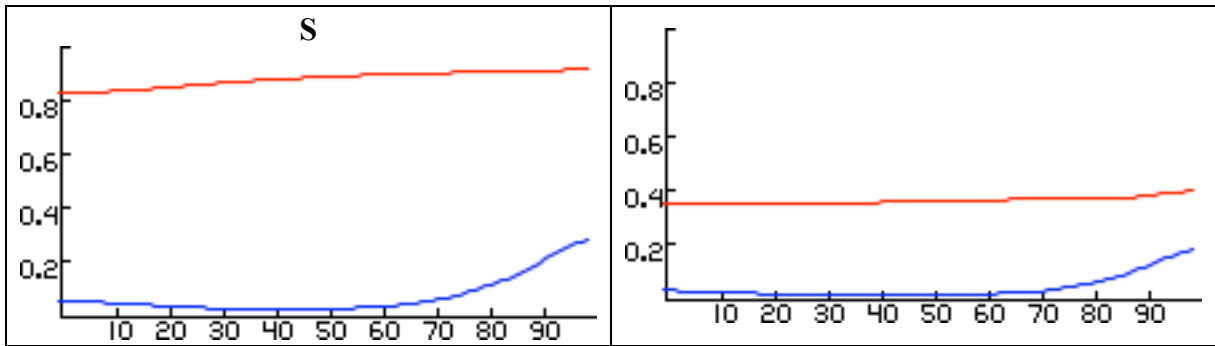
http://www.megasociety.org/noesis/156/di_to_cc.html

In a multiple choice question, the probability may not start out at zero, because there is a residual chance of guessing the right answer. This does not affect the Bayesian estimation of a test taker's rank, because the mathematics automatically subtracts out the probability of guessing the right answer.

In the following graphs the lower blue line is the probability of getting a correct answer as a function of a test taker's estimated rank, the upper red line is the probability of attempting the question as a function of a test taker's estimated rank, and a middle grey line in two of the graphs is the probability of getting a correct or partial credit answer as a function of a test taker's estimated rank. The letter labels on each graph correspond to the row label in the above report of statistics.







Future Directions

Several test takers suggested that we allow second guesses on the non-multiple-choice questions. I will probably score this the same way that partial credit answers are scored, as more categories besides just correct and incorrect into which the question splits the population when we do our Bayesian analysis.

We also are considering techniques for bootstrapping the norm of the test. In order to reach the Mega level, the test will need harder questions.

The Colored Rains of Kerala: An Exploration of Possible Causal Mechanisms

Ian Goddard

Abstract. During the monsoon of 2001, colored rains fell in several regions of Kerala, India. Sampath *et al.* found the rain contaminated primarily by spores of an algae of the *Trentepohlia* genus. But questions they raised remain unanswered: How did at least one ton of the spores contaminate the rain? And why in only scattered areas during 2001? In a search for answers to those questions this paper reviews the history of colored rains, explores possible causal models for the Keralan cases, and concludes that their uniqueness among colored rains suggests the possibility of uncharted territory in the domains of botany or meteorology that calls for further scientific exploration.

Colorful Kerala

From July to September of 2001, rains colored primarily red but also yellow, green, or black periodically fell in scattered areas of the Indian state of Kerala.⁽¹⁾ Due to the collapse of wells, people had placed vessels in open areas to collect rain water but found colored water instead. In some cases the water was so red it looked like blood. Those outside during the rains had their cloths stained the color of the rain. Amidst bewildered media reports, scientists and officials scrambled for answers.

An early ad hoc explanation proposed that the rain was colored by fallout from an exploding meteor. Such a bolide event was inferred from reports of a loud thunder and flash of light a few hours before the first colored rain. However, thunderstorms do occur during the monsoon.⁽²⁾ But that theory was soon retracted⁽³⁾ after Sampath *et al.* found that the rains were colored by fungal and algae spores, a few protozoa, and other debris. No meteoric, volcanic, or desert dust was found and 90% of the spores were from a locally prolific aerial red algae in the *Trentepohlia* genus, which grew in medium from the spores.⁽⁴⁾ The algae is often found in a lichenized symbiosis with the fungi *Coenogonium*. Accounting for all the observed rain colors, *Trentepohlia*-genus spores can be red or green, and the when red can make water appear yellow or black depending on their degree of dilution. It is estimated that at least one ton of the spores fell with the rain.⁽⁵⁾

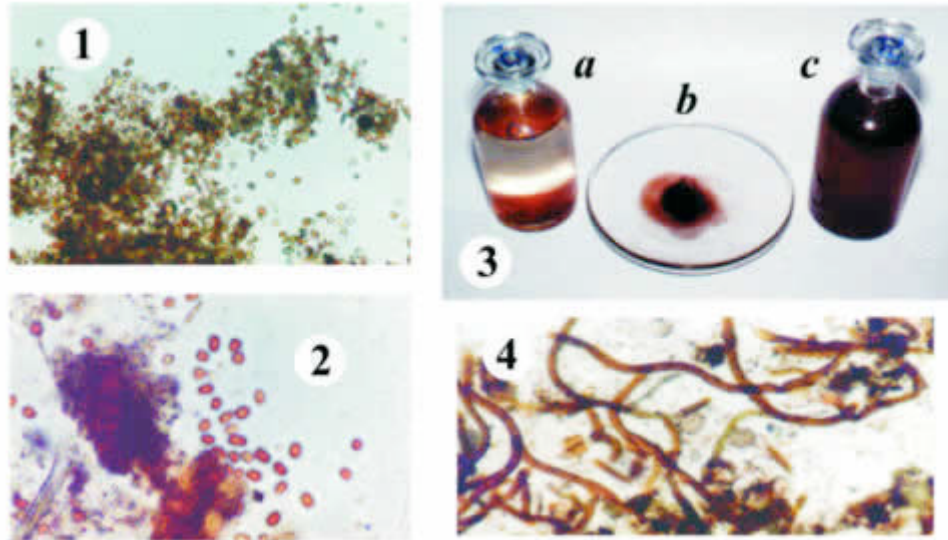


Figure 1: Frames (1) and (2) show the microscopic spores that colored the Keralan rains; (3) shows rain samples with (a) spores settled to the bottom, (b) rainwater evaporated, and (c) the spores suspended in the rainwater; (4) shows the *Trentepohlia* algae grown from the spores that colored the Keralan rains.

However, as simple as the spore explanation seems to be, it did not immediately answer several questions that were noted by Sampath *et al.* The unanswered questions are: Why did the colored rains occur only in 2001? Given that the implicated algae grow throughout Kerala, why would their spores color rains in only scattered areas and even very small regions? Moreover, exactly *how* would so many spores become commingled with rain? In this paper we shall explore several hypothetical models proffered as possible explanations to those mysteries of Kerala's colored rains.

Previous Colored Rains

While extraordinary, colored rains have been recorded and studied over centuries. In the nineteenth century C. G. Ehrenberg analyzed 17 samples of red rain and snow. Some contaminants in each sample were organic matter—up to 33% in one case—mostly pollen and spores. Ehrenberg identified 320 species in his collection of samples.⁽⁶⁾

Red rains in Italy blown in from African deserts are called “sirocco dust.” An analysis of 50 samples of Italian red rain found organic material including pollen and spores in each, accounting for 15% of the contamination.⁽⁷⁾ Analysis of a red rain that fell near Melbourne, Australia in 1903 found that 2% of its contaminants were pollen and spores.⁽⁸⁾ Another red rain that fell on Melbourne nine years prior was mostly sands but scales of butterfly wings and organic diatoms were also found.⁽⁹⁾ A red snow that fell on North Eastern Victoria, Australia in 1929 contained pollen and sand.⁽¹⁰⁾ A red rain that fell in central England in 1968 was composed of African sands, but no mention was made of any organic content.⁽¹¹⁾ Many other sand-based red rains have occurred.

While the coloration of Keralan red rains is attributed to haematochrome in spores, other red rains were colored by iron-oxide coated sand. It is also worth noting that other red rains were contaminated by a wide array of aerosols lofted into the atmosphere from distant places. Yet the Keralan rains were contaminated almost entirely by spores from one local species. So, while other cases demonstrate that colored rains do happen, the contents of the other rains are notably different from the Keralan rains.

Better Historic Analogs

Kerala's spore-colored rains find better analog in yellow rains colored by pollen. Like spores, pollen is an aerosol easily swept by winds into the atmosphere. When a yellow rain fell in England in 1879, many believed it was a rain of sulphur marking the end times. But the coloration was caused by pine pollen.⁽¹²⁾ In the same year pollen-yellowed precipitation also fell in the United States where pine-tree pollen contaminated snow in Pennsylvania and cypress-tree pollen yellowed showers in New Orleans.⁽¹³⁾ In 1841 a yellow rain in Nova Scotia dumped buckets of pine pollen on a ship.⁽¹⁴⁾ A yellow shower in south Sweden carried Scotch pine pollen 35 miles from its source.⁽¹⁵⁾

While none of those cases involved spores, like the Keralan rains they were rains colored primarily by single-species aerosols. The closest analog to Kerala's rains I've found is in a footnote in a *Monthly Weather Review* article from 1917 that states: "on Reunion Island the spores of *lycopodium* sometimes are present in the air in such quantity as to make breathing difficult."⁽¹⁵⁾ While that is not a case of spore-colored rain, it is germane to the possible causal models that shall be proffered forthwith.

Exploring Local Atmospheric Models

As we observed above, other red rains were contaminated primarily by desert sands colored red by iron oxide along with a potpourri of aerosols from distant lands. If that were the case in Kerala, a simple explanation would be at hand: typical transmission of remote aerosols by upper-atmospheric winds. But given the relatively pure collection of locally derivable organic contaminants in the Keralan rains, explanatory models should be sought from possible local-atmospheric models.

Rain Washout Model

The weather in Kerala during 2001 was unique. There were unusual heavy pre-monsoon rains that would have stimulated abundant growth of the already prolific local algae. Then rainfall was significantly below average before and during the colored rains, during which an abundance of spores could have built up.⁽¹⁶⁾ So in theory, when the winds of a storm arrive they loft spores upwards into a cloud that is then washed out by rain, thereby contaminating the rain. In fact, both Marks *et al.*⁽¹⁷⁾ and Dales *et al.*⁽¹⁸⁾ have confirmed the pollen- and spore-lofting effect of approaching storms.

An important fact is that the spores in question are so small (3 to 5 μm)⁽⁴⁾ that rain washout is very inefficient because their low inertia increases their rate of being swept aside by falling raindrops.⁽¹⁹⁾ The fact that pollen grains (at 20 to 60 μm) are larger than most spores may account for the proliferation of pollen versus spore rains. Based on spore-washout data from J. E. McDonald, a 1 cm rainfall with raindrops of 0.2 mm diameter would wash out roughly 13% of a cloud of 4 μm spores; 1 mm raindrops would wash out around 70%; and the largest raindrops at 4 mm would only wash out about 18% (obviously the relation is nonlinear).⁽¹⁹⁾ So a problem for a simple rain washout model is that colored rain fell on Kerala all at once—people’s clothes were immediately stained—which seems inconsistent with an inefficient and thus slow washout. This seems to suggest that the spores may have contaminated the rain before it fell.

Electrostatic Model

Keralan residents reported thunder shortly before the first colored rain on July 25.^(3,4) In fact, on average around 22% of the annual thunderstorms in Southern India occur between July and September.⁽²⁾ According to F.G. May, raindrops charged by nearby lightning can act as electrostatic collectors that attract airborne spores, which may account for as much as 20% of the spore washout during a thunderstorm.⁽²⁰⁾ Perhaps all the more so if charged rain happens to be falling through a relatively dense spore cloud.

The electrostatic thunder model might explain highly localized instances of colored rain in Kerala. In one case red rain reportedly fell around just one house, with clear rain falling elsewhere.⁽²¹⁾ Perhaps lightning (cloud-to-land or cloud-to-cloud) struck directly overhead, charging rain in only that region. However, Sampath *et al.* report that residents only reported the sound of one thunder. Even if there was more thunder, the validity of the electrostatic model as a possible cause requires further research.

Storm-Circulation Model

As we’ve observed, the simplest explanatory model would be the washout by rain of spores lofted up by winds from an approaching storm. However, in addition to the problem of the inefficiency of spore washout is the fact if a washout was sufficiently efficient to color the rain, the coloration should be most prominent with the onset of rain. However, Keralan residents told Sampath *et al.* that the rain was normal *before* the onset of colored rain. The storm-circulation model might be able to explain that and more.

The storm-circulation model seen in Figure 2 extends the pollen-storm model of Marks *et al.*⁽²²⁾ to include a continuous inflow from ground level up into the storm cloud that draws aerosols like spores into a mature-stage storm cloud wherein they are concentrated and eventually rain out en masse sometime *after* the first rain falls.

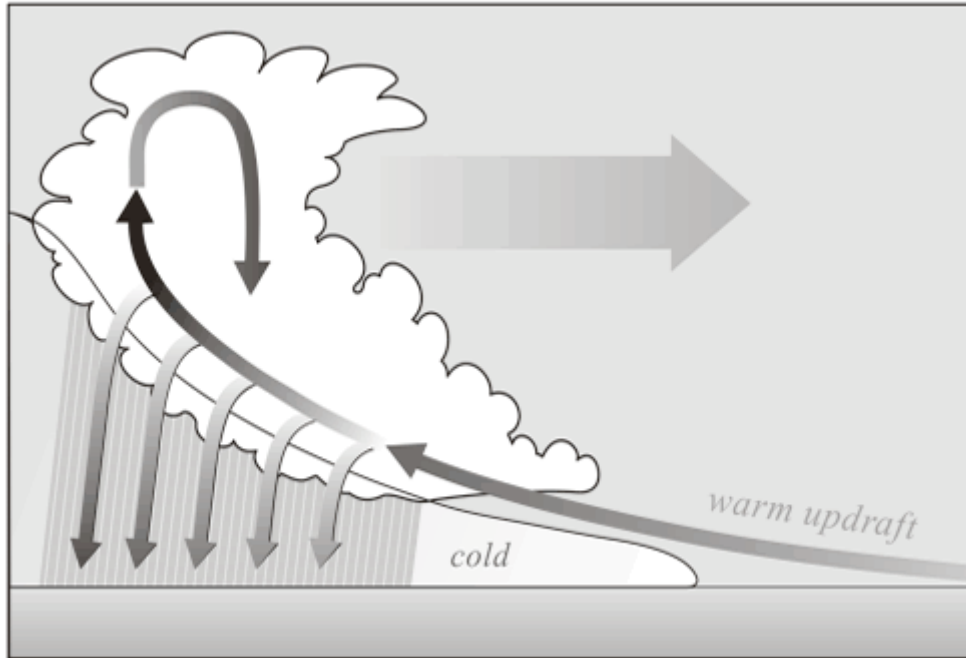


Figure 2 shows the anatomy of a self-perpetuating storm. In the storm-circulation model, accumulated spores forward of the storm cloud are lofted up and carried into the cloud via the warm updraft. Within the cloud they may follow one of the many possible paths depicted above before they rain out.

Figure 2 shows the upward induction of ground-level warm air into a storm cloud that is typical of a self-perpetuating storm.⁽²³⁾ In fact, warm air closest to the ground forward of a storm can be drawn-in the fastest,⁽²³⁾ which favors the possibility that updraft winds could loft up spores and draw them into a storm cloud.

According to R. S. Scorer, it is useful to think of a self-perpetuating storm as a “machine.”⁽²³⁾ So let’s think of the storm in Figure 2 is a machine with an input of airborne spores and an output of spore-colored rain. Within the cloud input-spores may follow any of the paths in Figure 2 as they are processed into rain droplets by absorption or by providing the nuclei for the formation of new raindrops. Now, with such a *de facto* machine in mind, consider that the output of machines can be variable and thus a spore-rain machine could conceivably sometimes output unusual concentrations of spores. As human “machines” we know that our systems can sometimes become congested.

Now consider the exploratory thoughts of P. H. Gregory:

Conceivably, spores may undergo reconcentration within a cloud. Rising convection bubbles may bring new spores to the top of the cloud, where they can be collected and washed down by raindrops [...] The abundance of microbes in hail, and the reports of a ‘biological zone’ at several thousand meters altitude, supports the suggestion that convection clouds may be spore collectors.

While Gregory speaks of common microbial contamination of precipitation, not spore-colored rains, his comments provide reason to believe input-spores could be concentrated within a cloud. Also, the reader may have observed a brief fall of hail during a rain, indicating that some precipitation can be concentrated in isolated regions of clouds. Consider further that in the case of scattered showers, input-spores from a wide area forward of an *isolated* storm would be output over an isolated area. So there are reasons to hypothesize that unusual wet weather followed by unusual dry weather could cause an unusual accumulation of spores that were lofted up by an approaching storm, drawn into its cloud and concentrated therein, and then rained out *en masse* onto an isolated area *after* the onset of rain, matching the structure of Kerala's colored rains.

Cyclonic Model

Cyclonic winds less intense than a tornado below or near a storm might concentrate and inject spores into a cloud from which they rain out onto a localized area. A relevant historic report of cyclonic winds drawing up pollen from a pine forest is found in D. P. Thompson's *Introduction to Meteorology* (1849), which reads:

On the afternoon of June 11, 1847, the wooded part of Morayshire appeared to smoke, and for a time fears were entertained that the fir plantations were on fire. A smart breeze suddenly got up from the north and above the woods there appeared to rise about 50 columns of something resembling smoke, which was wreathed about like waterspouts. The atmosphere now calmed and the mystery was solved, for what seemed smoke was in reality the pollen of the woods.⁽¹⁵⁾

There we have an important example of extreme atmospheric uptake of an organic aerosol apparently from one species. The description of columns wreathing about like waterspouts indicates cyclonic winds were involved. There may have been a yellow rain not far from that incident. Given this example, the extent to which cyclonic winds may have played a role in Kerala's colored rains calls for further scientific exploration.

Waterspout Model

Waterspouts are tornadic cyclones that occur over water and are believed to account for reports of fish falling with rains.⁽²⁴⁾ Along with fish, waterspouts may draw up algae into a storm cloud. Given an increasing proliferation of red-tide algae off the coast of Kerala,⁽²⁵⁾ a waterspout model has *prima facie* appeal. However, a serious problem for this model is that while *Trentepohlia* cells can survive underwater for up to 5 months,⁽²⁶⁾ all members of the *Trentepohlia* genus are aerial algae that only grow above water, no member has ever been found living in water.⁽²⁷⁾

Bolide Fallout Model

Given its media coverage it is appropriate to review the bolide-fallout model. As noted, bolide fallout was proposed as the cause of colored rain prior to analysis of the rain, but was retracted afterwards.⁽³⁾ However, in their widely reported papers, Louis & Kumar do not mention the findings of Sampath *et al.* and contend that the rain may be contaminated by extraterrestrial cells carried by a meteor and released from a bolide over Kerala.^(28,29)

Minimal viability criteria for a bolide model requires: (1) at least one eyewitness account of a meteor and of it exploding, (2) a coherent correlation between the observed bolide and its alleged fallout, and ideally (3) detection of known meteoric debris in its alleged fallout. However, not one of those minimal requirements has been met. The only empirical evidence for a bolide is that witnesses reported hearing a thunder and seeing a flash of light during a monsoon rainstorm.⁽⁴⁾ Given that the likelihood of thunder is far greater than a bolide, the logical causal inference is lightning, not a meteor.

Louis & Kumar contend that a bolide occurred directly overhead from which debris fell onto some parts of Kerala within a few hours on July 25th and then sporadically over three months until the last colored rain on September 23rd. However, such a three-month spread of scattered colored rains prevents any coherent correlation between the proposed bolide and its fallout for it is inconceivable that some debris, especially microscopic debris, would fall straight down through winds over three months. Moreover, the fact that Keralan residents reported having seen colored rain in their childhood⁽⁴⁾ stands as further evidence of some local causal mechanism. Finally, no meteoric debris was found in the colored-rain samples.⁽⁴⁾ In sum, there seems to be no evidence of a bolide and the given evidence appears contrary to such a hypothesis.

Conclusion

That the colored Keralan rains were contaminated primarily by spores successfully grown by the Tropical Botanical Garden and Research Institute and thereby identified as local algae of the *Trentepohlia* genus answers the question of *why* the rains were colored. But the lingering question is exactly *how* at least one ton of the spores contaminated the rain. The lack of desert sands and the presence of purely organic matter composed primarily of spores from one species suggests that Kerala's colored rains may be unique among colored rains. Such apparent uniqueness calls for scientific exploration of possible casual mechanisms, yet the scientific community as expressed little curiosity.

Such curiosity could lead to scientific advances. Since aerosols such as spores measure atmospheric dynamics, and since there is no unequivocal meteorological explanation for such prolific spore contamination, investigation of these rains may add knowledge to meteorology. Likewise, the lack of a clear explanation in the botanical literature and the fact that some Keralan residents reported having seen red rain in their childhood⁽⁴⁾ suggests undocumented botanical processes might be at work.

The intent of this paper has been to pursue such curiosity by exploring possible explanatory models for the colored rains of Kerala. It seems likely that given the above-average premonsoon rain followed by below-average rainfall just before the colored rains (facilitating conditions for a likely proliferation and build up of spores) that one, a variant of one, or some combination of the local atmospheric models presented herein may account for the rains. Nevertheless, it is clear that further research, especially onsite, is needed to fully understand exactly how at least one ton of spores primarily from one species of algae colored the rains of Kerala.

-
1. Mathew, R. (2001). Multicolour rain. *The Hindu*, July 29.
 2. Kandalgaonkar, S.S., *et al.* (2005). Study of thunderstorm and rainfall activity over the Indian region. *Atmosfera*, 18(2), 91-101.
 3. Gopinath Nair, K. (2001). 'Red rain was fungus, not meteor.' *The Indian Express*, August 6.
 4. Sampath, S., Abraham, T.K., Sasi Kumar, V., & Mohanan, C.N. (2001). Coloured Rain: A Report on the Phenomenon. *CESS-PR-114-2001*, Center for Earth Science Studies and Tropical Botanical Garden and Research Institute. <www.cessind.org>
 5. Kumar, V.S., Sampath, S., Mohanan, C.N., & Abraham, T. K. (2002). Colored rain falls in Kerala, India. *Eos, Transactions, American Geophysical Union*, 83(31), 335.
 6. The editors. (1851). On the Infusoria and other Microscopic forms in Dust-showers and Blood-rain. *The American Journal of Science and Arts, Second Series*, 6, May, 372-83.
 7. Tacchini, P. (1879). *Ann., Met. Ital.*, pt. 1, p. 63-115. Cited in: McAtee.⁽¹³⁾
 8. Chapman, F., & Grayson, H. J. (1903). On "red rain", with special reference to its occurrence in Victoria, with a note on Melbourne dust. *The Victorian Naturalist*, 20, 17-32. Cited in Baker.⁽¹⁰⁾
 9. J.L.H. (1899). Notes on Inorganic Chemistry. *Science, New Series*, 10(257), 819-20.
 10. Baker, G. (1959). Opal phytoliths in some Victorian soil and "red rain" residues. *Australian Journal of Botany*, 7(1), 64-87.
 11. The editors. (1968). Red Rain. *Nature*, 219, 112.
 12. Carpenter, P.H. (1879). Pine-pollen mistaken for shower of sulphur. *Nature*, 20, 195-6.
 13. McAtee, Waldo I. (1917). Showers of Organic Matter. *Monthly Weather Review*, 45(5), May, 217-224.
 14. Bailey, A.W. (1842). *American Journal of Science and Arts*. 42, 195-7.
 15. Thompson, D.P. (1849). *Introduction to Meteorology*. London: William Blackwood and Sons. p. 151.
 16. Kumar, R.K. & Revadekar, J.V. (2001). *Weekly evolution of the 2001 Indian summer monsoon season*. Indian Institute of Tropical Meteorology.
 17. Marks, G.B., *et al.* (2001). Thunderstorm outflows preceding epidemics of asthma during spring and summer. *Thorax*, 56(6): 468-71.
 18. Dales, R.E., *et al.* (2003). Role of fungal spores in thunderstorm asthma. *Chest*, 123(3), 745-50.
 19. McDonald, J.E. (1962). Collection and washout of airborne pollens by raindrops. *Science, New Series*, 135(3502), 435-6.

20. Gregory, P.H. (1973). *Microbiology of the atmosphere*. John Wiley & Sons: New York.
21. personal communication (2006) with V. Sasi Kumar, co-author of Sampath *et al.*⁽⁴⁾.
22. Illustration of the storm-air-flow-aerosol model of Marks *et al.*⁽¹⁷⁾ :
<<http://thorax.bmjournals.com/cgi/content-nw/full/56/6/468/F1>>
23. Scorer, R.S. (1978). *Environmental Dynamics*. New York: John Wiley & Sons, p 430-3.
24. Gudger, E.W. (1946). Rains of fishes--Myth or fact? *Science, New Series*, 103(2684), 693-4.
25. Sahayak, S. *et al.* (2005). Red tide of *Noctiluca miliaris* off south of Thiruvananthapuram subsequent to the 'stench event' at the southern Kerala coast. *Current Science*, 89(9), 1472-3.
26. Gupta S., & Agrawal, S.C. (2004). Vegetative survival and reproduction under submerged and air-exposed conditions and vegetative survival as affected by salts, pesticides, and metals in aerial green alga *Trentepohlia aurea*. *Folia microbiologica*, 49(1), 37-40.
27. López-Bautista, J.M., Waters, D.A., & Chapman, R.L. (2002). The Trentepohliales Revisited. *Constancea*, 83(1).
28. Louis, G., & Kumar, S. (2003) Cometary panspermia explains the red rain of Kerala. School of Pure and Applied Physics, Mahatma Gandhi University, Kottayam – 686560, Kerala, India. Unpublished.
29. Louis, G., & Kumar, S. (2006). The red rain phenomenon of Kerala and its possible extraterrestrial origin. *Astrophysics and Space Science* (in press).

God

Kevin Langdon

God is a concept by which we measure our pain.

—John Lennon, in his song “God”

I was born with hip dysplasia and a weak urinary system. I had a series of operations as a young child to deal with these problems and so, though my family was nominally Catholic, I received no formal religious training until I was sent to Catechism at the age of seven.

Before I was sent to Catechism I heard people talking about God and I had one predominant reaction: I was offended by the idea of a being superior to me and by what I perceived as the subservient attitude of those who spoke about this being. I suspect that, on a very deep level, this resentment of God plays a big part in many people’s attitudes toward religion and the world. In fact, there are a lot of people who say they don’t believe in God who are carrying around this resentment anyway.

The Catechism classes were taught by authoritarian nuns who demanded rote learning and were hostile to real questions. I resisted them and spoke insolently to them, but, against my will, the nuns eventually wore down my resistance and I became a devout Catholic. I still found the nuns’ approach stupid and rigid but I began to see that there was more to religion than that. I was interested in the doctrines, the history, and the ritual—and I began to feel that there was something very important at stake; I didn’t want to go to hell and I sensed that there was a profound understanding of human nature—and possibly of something far greater—at the heart of the spiritual teachings of the Church.

I confessed my sins and took my First Communion and later Confirmation.

I felt something special in church, a taste of another level of experience, and I understood that to truly participate in the Mass and other sacred rituals an effort of attention was required of me.

When I attended the University of California at Berkeley, just across San Francisco Bay from my home in Marin County, the ferment of ideas I was plunged into was so attractive that I had a lot of trouble focusing on my academic studies and I flunked out after only two semesters; this was to create difficulties for me for the next several decades.

At Berkeley I met a very intelligent (though eccentric) man who became my mentor; he exposed me to many ideas which were new to me and put me into question

about those I already had, among them my belief in God. In the course of a weekend pondering the questions that had been raised for me I “lost my faith.”

At first, letting go of my former belief system brought a heady taste of freedom. Infinite possibilities seemed to lie before me. It was only a year or two later that I began to really feel the terrifying responsibility of finding my own way in the face of my limited powers, very partial understanding, and mortality.

I began searching seriously, though I wasn't sure what I was looking for. I investigated hundreds of philosophies, religious teachings, psychotherapies, and communal experiments. I read many books, but whenever possible I attended meetings with leaders of the groups that interested me. I was looking for answers to my questions, self-transformation, and a line on the metaphysical, another chance at immortality.

It soon became obvious that the great majority of the groups, teachings, and teachers I found brought nothing useful for me. Some were more-or-less-successful con games; some were feel-good philosophy; some were fanatical cults; and some just didn't address my questions.

In Chapter 2 of *Monkey*, a Chinese “folk novel” by Wu Ch'eng-en, translated by the noted Chinese scholar Arthur Waley, the first few chapters of which were published separately as a children's book and which I had as a child, the protagonist becomes a pupil of an “Immortal Patriarch” named Subodhi and engages in the following dialogue:

“There are three hundred and sixty schools of wisdom,” said the Patriarch, “and all of them lead to Self-attainment. Which school do you want to study?” “Just as you think best,” said Monkey. “I am all attention.” “Well, how about Art?” said the Patriarch. “Would you like me to teach you that?” “What sort of wisdom is that?” asked Monkey. “You would be able to summon fairies and ride the Phoenix,” said the Patriarch, “divine by shuffling the yarrow-stalks and know how to avoid disaster and pursue good fortune.” “But should I live forever?” asked Monkey. “Certainly not,” said the Patriarch. “Then that's no good to me,” said Monkey. “How about natural philosophy?” said the Patriarch. “What is that about?” asked Monkey. “It means the teaching of Confucius,” said the Patriarch, “and of Buddha and Lao Tzu, of the Dualists and Mo Tzu and the Doctors of Medicine; reading scriptures, saying prayers, learning how to have adepts and sages at your beck and call.” “But should I live forever?” asked Monkey. “If that's what you are thinking about,” said the Patriarch, “I am afraid philosophy is no better than a prop in the wall.” “Master,” said Monkey, “I am a plain, simple man, and I don't understand that sort of patter. What do you mean by a prop in the wall?” “When men are building a room, said the Patriarch, “and want it to stand firm, they put a pillar to prop up the walls. But one day the roof falls in and the pillar rots.” “That doesn't sound much like long life,” said Monkey. “I'm not going to learn philosophy!”

The Patriarch offers several more “schools of wisdom” and Monkey rejects them all, on the grounds that they don’t lead to his aim of immortality—which seemed eminently reasonable to me.

One day, at a discussion group I attended in the 1960’s, I heard a talk on “Gurdjieff’s Ideas.” I was electrified, as Gurdjieff touched on many points which corresponded to my questions, extended them, and provided some practical approaches to matters which, while clearly important, had appeared to be beyond the reach of empirical investigation.

Among the subjects to which Gurdjieff brought unusual and illuminating perspectives were the questions of God’s existence and nature and man’s place in the cosmic scheme. Although I was unable to draw any firm conclusions about such matters from what I’d heard and read, new hope arose in me that something beyond the sterile prospects offered by positivist science was really possible.

The ideas in which I’d become interested offered a great deal of practical wisdom with regard to the human condition and an approach to the symbolic quality of scripture, ritual, and sacred art. And this new understanding made it at least plausible to me that something beyond life on earth was possible.

However, Gurdjieff taught that what is necessary to transcend death is exactly the same as what is required to live an honorable life. Taking this idea seriously allows me to put metaphysics aside and concentrate on working for my own benefit and (to the extent to which I am able to put myself in their place) that of other beings.

Gurdjieff said that his teaching was *esoteric Christianity*.

For an introduction to Gurdjieff’s teaching, see my web site:

<http://www.polymath-systems.com/phenomen/gurdj/index.html>

For a more comprehensive introduction to Gurdjieff’s ideas, see *In Search of the Miraculous*, by P.D. Ouspensky (do not be put off by Ouspensky’s rather negative attitude toward science, which was not shared by Gurdjieff).

(Pel)lucid Dreaming

John Ostendorf

I have had numerous encounters with gold and silver bearded persons in various metro US areas. My favorite was waiting for the bus in a south-central Minneapolis bus stop in winter when I was 19. A very large and surly fellow with gold paint all over his face stood nose to nose with me and yelled at me as I waited for my bus to my job at Saks downtown in an Armani suit (I got all my suits at huge discounts or from side deals with my similarly-proportioned clientele). I knew I could not risk any physical confrontation as merely touching my knee to the ground would entail monetary loss via Armani replacement. I could not leave my bus stop as the next one was at least a mile across a bridge over an Interstate and I couldn't risk being late (again!). He was looking not at me, but through me as he screamed at me and gesticulated. This gave me the idea to tell the man, "I am not here. I am only a part of your imagination." The Jedi mind trick can come in handy. The guy looked liked he had been punched in the face and stopped addressing me even though he was still inches form my nose and still staring through me. I slowly backed away and waited until my bus arrived. The huffer stood glued to his location even after I lost sight of him from the bus.



Autobiography of Richard May

This and the three short pieces on the following page are reprinted from *Yarnspinners & Wordweavers*, Volume 1, Issue 3, 02/15/06 <<http://www.redenginepress.com/Newsletter0202.pdf>>, by permission of the author.

Born near the rarified regions of Laputa, then and often, above Boston, U.S.A., during the Year of the Monkey, a Piscean, a cerebrotonic ectomorph and ailurophile, occasionally I've strived to descend from the mists to attain the mythic orientation known as having one's feet upon Earth. Kafka and Munch have been my therapists and allies. A paper tiger with letters after my name, I've been awarded an M.A. degree, *mirabile dictu*, in the humanities by Cal.State, a U.S. patent for a board game of possible interest to ET's and attained I.S.P.E. Diplomat-dropout status. An Amish yuppie, I've been a member of Mensa, the Prometheus Society, Mega, Omega and the Aleph-3 and done both consulting and Sisyphean shlepping. As founder of the Aleph, itself, and the renowned Laputans Manque, I'm a biographee in Marquis' *Who's Who in the Brane World*; interested in the *philosophia perennis* and the realization of the idea of humans as incomplete beings who can and should complete their own evolution by effecting a change in their being and consciousness. At a moment when I see Richard May's non-being, 'I' am.

Copyright © 2006 by Richard May. All rights reserved.

The Colonies

Richard May

Certainly by adolescence, if not before my conception, I observed that I was actually several colonies of ‘moles’, when in a state of unusual unity. In order to safeguard my privacy, using undetectable nanocameras, I actually recorded myself spying on my selves and passing along the secrets about my selves to my selves over a period of many years. Hence, the theoretical possibility of my mere paranoia had certainly been disproved.

At first I was deeply concerned with the implications for me of this high-level breach of Personal security by me. But it became apparent that my client selves were at best completely incapable of learning anything from the deepest ontological secrets I caught myself passing along to them.

So I initiated an extremely covert strategic program of concealing my greatest secrets by leaving them right out in the open, where I was certain that I would never notice them. Of course, in order to permanently secure my freedom, it was necessary to place myself in preventive detention for an indefinite period and not to allow myself to represent myself legally or in any other sense, even momentarily.

Vista

Richard May

After so many years of striving I finally became a blind rodent, incessantly gnawing its way through a limitless garbage heap, contemplating its own sublimity; listening with resentment to the gnawing sounds of its blind fellows nearby.

In Praise of Stupidity

Richard May

Homo sapiens is a primitive species whose primary activity is internecine tribal warfare and whose secondary activity is destruction of the ecosystem. Obviously human wisdom and compassion have not evolved as rapidly as the intelligence associated with technology and weaponry. Maybe for this reason “human stupidity” actually has survival value for our species. If the mean absolute I.Q. were 150 rather than 100, and if there were no correspondingly increased levels of wisdom and compassion, then perhaps we would have eradicated our species from the planet.

Is stupidity, itself, the long awaited but unrecognized Messiah?

Copyright © 2006 by Richard May. All rights reserved.