The Effects of Fluorescent Lights and Metal Boxes on Growing Plants

By JIM DEMEO, A.A.*

The life-negative effects of fluorescent (FL) lighting and other electromagnetic (EM) devices have been known to workers in orgonomy since the days of the Oranur Experiment (1947-51). To my knowledge, Reich did not elaborate on the oranur reactions of FL lighting specifically, but rather considered the antithesis between orgone energy and EM and atomic energies in general (1). Ott has shown that FL lights and TV sets will stunt plants and modify behavior (hyperactivity) in animals; school children and plants show greatly increased movement and frantic irritation as viewed in time lapse (2).

Orgonomically, these effects are attributed to an oranur reaction caused by high voltage excitation of a neon gas-filled tube coated with beryllium, a poisonous substance. The excitation causes the beryllium to luminate but also results in a toxic irritation of the orgone energy surrounding the tube. This irritation of the orgone constitutes the oranur reaction. Each organism reacts differently to the FL-induced oranur; mobile, high energy organisms feel the effect quicker than do more severely armored, low energy organisms.

It must be mentioned that, even without the presence of an FL device, oranur is to be found in the area where the experiments described below were performed. I live about eight miles north of the Turkey Point Nuclear Power Reactors, which have, during the last two years, progressively increased the amount of DOR and oranur in Southern Florida to the point that I am now in the process of moving. Therefore, these experiments actually relate the reactions of plants to additional oranur irritation in what is already an oranur environment. This additional oranur reaction from the FL device had a proportionately greater effect; it merely intensified the oranur disturbances already present in the experimental area.**

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*Student of Environmental Studies, Florida International University, Miami, Florida.

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Effect of Fluorescent Lights

These experiments are similar to and partially duplicate the work of Dr. John Ott, who demonstrated that both plants and children react negatively to an FL environment. My own work, starting in early 1974, involved growing mung beans and Alaskan peas near an FL apparatus, but without allowing any of the light generated to reach the plants. Only sunlight reached the plants and the light-shielded FL apparatus was timed to turn on with the rising and off with the setting sun. The plants were divided into three groups: one control, one separated from the FL apparatus by a 3/32″ lead plate, and one separated from the FL apparatus by opaque cardboard.

The control plants broke up through the soil first and in greater numbers than those near the FL apparatus. When the FL plants finally broke soil they raced ahead and soon outgrew the control plants, as if exposure to sunlight somehow threw them into high gear. However, their appearance was taut and strained, showing smaller leaves and more uneven growth as compared to control plants. Eventually, the FL plants ceased growing and the control plants grew tallest. At the end of the experiment, the cardboard-shielded FL plants were the most stunted, while the lead-shielded FL plants were slightly taller than they, but not as lush or tall as the controls. Plants located near the center of the FL tubes grew taller than those located near the cathodes in the FL tube ends. Plants also tended to lean away from the FL fixture; when turned so as to lean toward the fixture, they would lean away again within a few hours. The control plants flowered and fruited more generously and also showed a greater resistance to drought when left unattended in the scorching sunlight for several hot dry days. The results are summarized below (Table 1):

TABLE 1

Near FL Apparatus	*Away from Apparatus (control)*
later to break soil	earlier to break soil
fewer seeds come up	almost all seeds come up
speeded growth after breaking soil	steady, even growth
earlier budding of leaves	leaves bud later on
smaller leaves	larger leaves
cessation of growth after a period of racing growth	steady, even growth; controls eventually the tallest
great variation in plant sizes	even, uniform plant sizes

The following differences in pea pods were noted:

	FL-cardboard	*FL-lead plate*	*Controls*
average length of pods:	3.0 cm.	3.2 cm.	3.7 cm.
taste:	bitter	bland	sweet
appearance:	shriveled, hard, knotty, dried		full, plump

In a second experiment, seeds were sprouted in light-tight culture dishes, some kept near the FL apparatus separated by lead plate, some separated by cardboard, and a third control group; the results are summarized below (Table 2):

TABLE 2

Near FL Apparatus	*Away from FL Apparatus (control)*
excessive splitting off of secondary rootlets	secondary rootlets only at tip, late in growth
stunted root growth, twisted, snarled growth	slim, even, comparatively graceful growth
random root growth direction	all roots grow downward, normally
acrid odor (like formaldehyde) sometimes present	clean, pleasant odor
bitter-tasting sprouts	sweet-tasting sprouts
average 57% germination (60% with lead shield)	average 90% germination

After five days of growth, control sprouts were four times longer than FL-exposed sprouts:

	FL (average length)	*Control (average length)*
Alaskan peas:	1.95 cm.	8.9 cm.
mung beans:	1.4 cm.	4.87 cm.

Insertion of a lead separation shield between culture dishes and FL tubes eliminated some of the stunting and twisting of roots, but had no constant effect with regard to taste, odor, root growth direction, or secondary rootlet formation.

The FL apparatus was located on one side of the porch of my home. On the other side of the wall behind the apparatus and inside my home were several potted plants which had been there for at least a year: a philodendron, a 5 ft. umbrella tree, and several assorted ferns. Within a week of the start of this experiment, these plants began to droop, lose leaves, and die. As this process became more evident, they were moved to the other side of my home where they recovered nicely.

Photographic plates (Polaroid #57) failed to show any fogging after being near the FL apparatus for several days, and an un-OR-charged GM counter failed to detect any increase above background levels. I did, however, experience some racing to off-scale values (as Reich found during the Oranur Experiment).

Ott's work showed that laboratory animals, when exposed to TV radiation, would become frantic and hyperactive, which was inevitably followed by a drop into a dulled, lethargic state. In my own experiment, FL-exposed Alaskan pea plants, and mung beans to a lesser extent, grew tall very quickly but then ceased growing and had puny flowers and bitter, shriveled fruit. Control plants took longer to reach the same height but then flowered and fruited more generously. In both of these cases, it is the atmospheric oranur field reaction induced by the TV or FL device that excites and pushes the organism into a hyperactive state. Eventually, the organism's energy is depleted; its metabolic rate reduced. The organism becomes weak, passive, and lethargic. When no escape from oranur can be found, the organism necessarily adjusts to a slower, lower level of energetic existence. Reich used the analogy of a wild animal: When free to move about, it is calm and peaceful; when captured or restricted (or as in this case, irritated), it fights with wild rage. If freedom is not attained, it resigns into a dulled, lethargic state (3). The animal behavior is due to the behavior of the orgone energy of which it is composed. The FL apparatus communicates with the organism via the orgone continuum in which both are immersed.

Standing in the room with the FL fixture, I can feel a tense, dead heat on my skin, even when temperatures are quite cool. It becomes tiring to the eyes and restricts my breathing. Visual observations reveal a frantic seething of the orgone about the fixture. Sometimes a specific point of lumination will emerge from the orgone near the plant which will cause an attached millivoltmeter to simultaneously react. I have also noticed that the lower portions of FL-lit rooms will sometimes distort into distinct vertical waves.

Classically, there are three factors related to the life-negativity of the FL apparatus: emission of soft X-rays from the cathodes, incomplete lighting spectra (as compared to lumination by sunlight at the Earth's surface) and emission of radiofrequencies (2). The classical formulations of X-rays and incomplete lighting spectra fail to offer any explanation of these phenomena, particularly as to why Ott was able to eliminate most of the life-negativity of FL radiation in West Florida by using thin lead shields around the cathodes of the tubes (plus a more complete spectral arrangement, which was not evaluated in my experiments), whereas my plants in Miami were stunted by FL radiation through both lead plate and concrete!

Here one must keep in mind my earlier statement as to oranur conditions prior to the start of the experiment. Ott's studies, as related in this journal (8: p. 99) were performed at an area approximately 120 miles from the nearest nuclear reactor, with the Gulf of Mexico directly to the West. However, my experiment was performed eight miles from two enormous reactors; severe oranur reactions had already been present (particularly during the introduction of new fuel rods!). I seemed to have been dealing with increased oranur effects that were too severe to be softened much with either lead or concrete. The FL irritation results in an oranur increase that is inseparably tied to the original state of the orgone. For example, if you pinch or slap a relaxed man, he might give you a hard look and restrain you; but apply the same stimulus to a seething, frustrated, and angry man, and an explosive reaction may occur. Near an established nuclear power reactor, the orgone is seething and frustrated due to irritation by the nuclear materials inside (which are periodically changed). The addition of an FL device into such an atmosphere merely serves as an additional annoying slap.

This environmental difference is a possible explanation for the differences and similarities between Ott's studies and my own, and one that is in agreement with established orgonomic findings. However, I do feel that the question will not be fully clarified until measuring instruments are devised to more clearly quantify the oranur phenomenon and its relationship to varying frequencies of electromagnetism. Here, we are reminded of James C. Maxwell's description of electromagnetism as being a disturbance of the ether.

At present, the only measuring instrument I have been able to use for oranur detection is my own body. Reich used orgone-charged GM tubes for this work, but in Southern Florida's oranur-laden environment I have not dared to build orgone accumulators of sufficient charging strength. Construction of even a single-fold accumulator has been sufficient to set off an unbearable chain reaction.

Effect of Metal Boxes

Reich pointed out that certain metals imparted a life-negative quality to the orgone when used in construction of an accumulator, and that iron or steel were the only life-positive orgone-reflective metals (4). I have duplicated this finding in several series of experiments using open-faced culture dishes with mung beans inside light-tight metal boxes (10″ x 10″ x 2″) made of galvanized steel, aluminum, copper, and lead. The steel always affected the seedlings more beneficially than did the lead, aluminum, or copper. In one series, I used two separate lead boxes, one contaminated with oranur after being next to the experimental FL unit for several months, and one made with fresh lead from the factory. The FL- and oranur-exposed lead box clearly stunted the seedlings more than the fresh lead box (these metal boxes did not have an external organic layering). The effects of these metals could also be felt when held near the face or forearm. The steel felt penetratingly warm, while the lead, aluminum and particularly the FL- and oranur-exposed lead felt warm but jumpy and excited. The copper, lead, and aluminum boxes all clearly have life-negative effects on seed germination, growth, and root direction, yet none of these metals is constantly more life-negative than the other. Here I found an indication that lead can soften the oranur effect. Within the fresh lead box, sprouts grew better during periods of intense oranur than during periods of relative orgonotic calm, when they would be more stunted in comparison to those in the other metal boxes. This may be due to diminution of orgone activity by the lead. As the oranur state prevails, the lead may slow the penetration and activity to a level which is similar to the plant's normal, or optimal, pulsatory rate. When the orgone is relatively calm, the lead still slows the penetration and activity, this time to a level which may be far below the optimal pulsatory rate, tending toward a state of DOR. Reich pointed out that oranur may have definite therapeutic value as it goes right to the bodily blocks of DOR, stirring them up, exciting, and moving the stale energy about. It may well be that the low-energy, armored individual, like the seedling in the lead box, will function more actively in an intense FL-lit, oranur-laden environment. In a similar situation, as with children and bean sprouts, the high-energy, lightly armored individuals will be driven up a wall.

Current theories embracing numerous "sub-atomic particles," contradictory "particle-waves," "cosmic" rays, and transmission of EM waves through "empty intermolecular space" without a medium bar any functional grasp of the oranur phenomena. One must keep in mind also the limitations of currently used measuring instruments that touch certain portions of the same orgonotic phenomena and call it by different names.

POSTSCRIPT

After completing this series of experiments, for which I had been credit-sponsored at my university, I undertook to present Ott's work with children and my work with beansprouts to student government members and university administrators who were planning a children's day-care center. I never expected to get the university to change the lighting all over the campus, which is almost entirely FL lit, but I did feel that there was a good chance to eliminate the FL lights planned for the day-care center.

Students were receptive to the new information, but the administrators were not prepared to make any decisions without a second opinion as to Dr. Ott's and my own work, of which I had supplied copies. (My own work was then devoid of any orgonomic interpretation.) A second opinion was obtained from a Ms. D., a professor in the psychology department. The university administrators refused to show me Professor D's. written opinion, but our conversations revealed its hyper-critical nature. Beyond certain character assassinations, Professor D. (who is an obese, hard woman) made an evasive analysis of FL lighting that revealed a lack of contact with the subject. She even questioned the existence of childhood hyperactivity. According to the administrator who revealed to me the contents of her letter, she recommended that the university ignore all questions raised, stating that the FL hazard was unproven and without reality. Later on, I chanced to meet Professor D.; the ensuing conversation revealed that her opinion was based upon a review of Ott's work in *Science News* (which was, surprisingly, a favorable one) (5). She further stated that she "didn't have time to bother" reading Ott's or my own experimental reports, even though they were readily available. With that, she refused any further conversation on the matter, ignoring the question I raised as to how she could make such definitive statements on work which she admittedly had never read!

Apparently acting upon Professor D's. recommendations, the university administration lost all interest in the matter and student government representatives I had been working with balked at sponsoring Dr. Ott as a guest lecturer.

REFERENCES

1. Reich, W.: "The Oranur Experiment," *Orgone Energy Bulletin,* 3:185-342, 1951.
2. Ott, J.: *Health and Light.* Devin-Adair Co., Conn., 1973.
3. Reich, W.: *Contact With Space.* New York: Core Pilot Press, 1957.
4. Reich, W.: *The Orgone Energy Accumulator; Its Scientific and Medical Use.* Rangeley, Maine: Wilhelm Reich Foundation, 1951.
5. "School Lights and Problem Pupils," *Science News,* April 20, 1974.