RADIO CORPORATION OF AMERICA ET AL. *v.* UNITED STATES ET AL.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF ILLINOIS, EASTERN DIVISION.

No. 565. Argued March 26–27, 1951.—Decided May 28, 1951.

After extensive hearings on, and demonstrations of, three different methods of color television transmission, the Federal Communications Commission issued an order which, in effect, permits use of the method of Columbia Broadcasting System (CBS) and excludes use of others. This order was based upon findings that the CBS method was the best presently available and had reached a state of development which justified its acceptance to the exclusion of others, though color telecasts by the CBS method could not be received either in color or in black and white on the millions of existing black and white receivers without costly adaptations. Subsequently, the Commission declined to reopen the proceedings at the request of Radio Corporation of America (RCA), which claimed to have made great advances toward a method of color television transmission which could be received in black and white on existing black and white receivers without any adaptation. The District Court dismissed a suit by RCA to enjoin and set aside the Commission's order. *Held:*

1. The District Court did not fail to review the record as a whole in determining that the Commission's order was supported by substantial evidence. Pp. 414–416.

2. The District Court did not misapprehend or misapply the proper judicial standard in holding that the Commission's order was not arbitrary or against the public interest as a matter of law. Pp. 416–420.

(a) Viewing the record as a whole, the Commission did not err as a matter of law in concluding that the CBS color method had reached a state of development which justified its acceptance to the exclusion of others. Pp. 416–419.

(b) The Commission's determination, after hearing evidence on all sides, that the CBS method will provide the public with color television of good quality and that television viewers should be given an opportunity to receive it if they so desire, was not capricious. Pp. 419–420.

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(c) Courts should not overrule an administrative decision merely because they disagree with its wisdom. P. 420.

3. Whether the Commission should have reopened its proceedings to permit RCA to offer proof of new discoveries for its method was a question within the discretion of the Commission; and that discretion was not abused. Pp. 420–421.

95 F. Supp. 660, affirmed.

A three-judge district court sustained an order of the Federal Communications Commission prescribing standards for color television transmission. 95 F. Supp. 660. On direct appeal to this Court under 28 U. S. C. §§ 1253 and 2101 (b), *affirmed*, p. 421.

John T. Cahill argued the cause for the Radio Corporation of America et al., appellants. With him on the brief were *Weymouth Kirkland, Howard Ellis, Joseph V. Heffernan, John W. Nields, Ray B. Houston* and *Robert G. Zeller.*

Simon H. Rifkind argued the cause and filed a brief for the Emerson Radio & Phonograph Corporation, appellant. Also of counsel was *Thomas D. Nash.*

Alfred Kamin argued the cause and filed a brief for Local 1031, International Brotherhood of Electrical Workers, A. F. of L., appellant.

A. L. Schapiro and *B. C. Schiff* submitted on brief for the Pilot Radio Corporation, appellant.

John J. Kelly, Jr. for the Radio Craftsmen, Inc.; *Frank S. Righeimer, Jr.* for Wells-Gardner & Co.; and *Gerald Ratner* for the Television Installation Service Association, appellants.

Solicitor General Perlman argued the cause for the United States and the Federal Communications Commission, appellees. *Samuel I. Rosenman* argued the cause for the Columbia Broadcasting System, Inc., appellee. With them on a joint brief were *Stanley M. Silverberg,*

Benedict P. Cottone, Max Goldman and *Richard A. Solomon* for the United States and the Federal Communications Commission, and *Ralph F. Colin* and *Richard S. Salant* for the Columbia Broadcasting System, Inc.

MR. JUSTICE BLACK delivered the opinion of the Court.

Radio Corporation of America (RCA) and two of its subsidiaries brought this action in a three-judge District Court to enjoin and set aside an order of the Federal Communications Commission prescribing standards for transmission of color television.[1] The effect of the challenged order was to reject a color system proposed by RCA and to accept one proposed by the Columbia Broadcasting System (CBS).[2] The basis of RCA's complaint was that the order had been entered arbitrarily and capriciously, without the support of substantial evidence, against the public interest, and contrary to law. After hearing and oral argument, the District Court entered summary judgment sustaining the Commission, one judge dissenting.[3] RCA and the other plaintiffs took this direct appeal under 28 U. S. C. § 1253 and § 2101 (b).

At the outset we are faced with RCA's contention that the District Court failed to review the record as a whole in determining whether the Commission's order was supported by substantial evidence; it is urged that for this reason we should summarily reverse and remand the case for further consideration by that court. If RCA's premise were correct, the course which it suggests might be wholly

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[1] The subsidiaries are the National Broadcasting Co. and RCA Victor Distributing Corp. Later, other parties were permitted over the Commission's objection to intervene in support of RCA's position. The Columbia Broadcasting System (CBS) intervened as a party defendant.

[2] The order also rejected a system proposed by Color Television, Inc., which is not a party to this litigation.

[3] 95 F. Supp. 660 (N. D. Ill.).

appropriate. For as pointed out recently, in considering the question of sufficiency of evidence to support an administrative order this Court must and does rely largely on a first reviewing court's conclusion. *Universal Camera Corp.* v. *Labor Board,* 340 U. S. 474. The present case, however, need not be returned for further scrutiny below because we are convinced that the review already afforded did not fall short of that which is required. The District Court heard oral argument for three days and deliberated for about five weeks before handing down its decision. Both the majority and dissenting opinions show a familiarity with RCA's basic contention (and the minor ones as well) that could have come only from careful study of the record as a whole. To be sure, there was a casual statement in the majority opinion susceptible of the interpretation that the court in reaching the decision made an examination of the record less complete than it should have been.[4] Fairly construed, however, the remark, while perhaps unfortunate, is entirely consistent with that conscientious review which we are satisfied was given this

[4] "After listening to many hours of oral argument by able counsel representing the respective parties, we formed some rather definite impressions relative to the merits of the order, as well as the proceedings before the Commission upon which it rests. And our reading and study of the numerous and voluminous briefs with which we have been favored have not altered or removed those impressions. *Also, in studying the case, we have been unable to free our minds of the question as to why we should devote the time and energy which the importance of the case merits, realizing as we must that the controversy can only be finally terminated by a decision of the Supreme Court.* This is so because any decision we make is appealable to that court as a matter of right and we were informed during oral argument, in no uncertain terms, that which otherwise might be expected, that is, that the aggrieved party or parties will immediately appeal. In other words, this is little more than a practice session where the parties prepare and test their ammunition for the big battle ahead." (Emphasis added.) 95 F. Supp. at 664.

record by the District Court. We therefore pass to the question of validity of the Commission's order.

All parties agree, as they must, that given a justifiable fact situation, the Commission has power under 47 U. S. C. § 303 (c), (e), (f), (g) [5] to do precisely what it did in this case, namely, to promulgate standards for transmission of color television that result in rejecting all but one of the several proposed systems. Moreover, it cannot be contended seriously that the Commission in taking such a course was without evidential support for its refusal to adopt the RCA system at this time.[6] The real argu-

[5] 47 U. S. C. § 303: ". . . [T]he Commission . . . as public convenience, interest, or necessity requires, shall—

. . . . . .

"(c) Assign bands of frequencies to the various classes of stations, and assign frequencies for each individual station and determine the power which each station shall use and the time during which it may operate;

. . . . . .

"(e) Regulate the kind of apparatus to be used with respect to its external effects and the purity and sharpness of the emissions from each station and from the apparatus therein;

"(f) Make such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of this chapter . . . .

"(g) Study new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest."

[6] The Commission unanimously believed that CBS had the best system presently available, although two Commissioners dissented on other grounds. The relative merits and demerits of the RCA and CBS systems were summarized as follows:

"[T]he RCA system [is] deficient in the following respects:

"(a) The color fidelity of the RCA picture is not satisfactory.

"(b) The texture of the color picture is not satisfactory.

"(c) The receiving equipment utilized by the RCA system is exceedingly complex.

"(d) The equipment utilized at the station is exceedingly complex.

"(e) The RCA color system is much more susceptible to certain

ment, advanced at great length and in many different forms, boils down to this: Viewing the record as a whole, the Commission as a matter of law erred in concluding that the CBS color system had reached a state of development which justified its acceptance to the exclusion of RCA's and that of others. Consequently, before the Commission, the District Court and here, RCA's main attempt has been to persuade that no system has yet been proven worthy of acceptance for public use, that commercial color broadcasting must be postponed awaiting inventions that will achieve more nearly perfect results.

We sustain the Commission's power to reject this position and hold valid the challenged order, buttressed as it is by the District Court's approval. To explain our

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kinds of interference than the present monochrome system or the CBS system.

"(f) There is not adequate assurance in the record that RCA color pictures can be transmitted over the 2.7 megacycle coaxial cable facilities.

"(g) The RCA system has not met the requirements of successful field testing.

. . . . . .

"[T]he CBS system produces a color picture that is most satisfactory from the point of view of texture, color fidelity and contrast. . . . [R]eceivers and station equipment are simple to operate and . . . receivers when produced on a mass marketing basis should be within the economic reach of the great mass of purchasing public. . . . [E]ven with present equipment the CBS system can produce color pictures of sufficient brightness without objectionable flicker to be adequate for home use and . . . the evidence concerning long persistence phosphors shows that there is a specific method available for still further increasing brightness with no objectionable flicker. Finally, . . . while the CBS system has less geometric resolution than the present monochrome system the addition of color to the picture more than outweighs the loss in geometric resolution so far as apparent definition is concerned." Second Report of the Commission, October 10, 1950, 1 Pike & Fischer Radio Reg. (P. & F.), ¶ 91:26, pp. 91:441–442.

conclusion it is unnecessary to repeat the detailed statement of facts made in the majority and minority opinions of the Commission and District Court.[7] Nor, for present purposes, is it necessary to attempt a translation of the technical terms invented to carry meanings in the rapidly growing television industry. It will suffice to give the following brief summary of the background of the Commission's findings and what was found:

Standards for black and white television transmission were first promulgated by the Commission in 1941. RCA's complaint alleges, and all apparently agree, that "The quality of the present [black and white] service, the improvements and reductions in price to the public that have been made, the incredible expansion of the industry as a whole, are all due to the fact that manufacturers could build upon a *single set of long-range high-quality standards.*"[8] From 1941 until now the Commission has been engaged in consideration of plans and proposals looking toward promulgation of a single set of color standards.[9] CBS apparently made quicker progress

[7] The facts found by the Commission appear in two reports on Color Television Issues. First Report of the Commission, September 1, 1950, 1 P. & F. ¶ 91:24, p. 91:261; Second Report of the Commission, October 10, 1950, 1 P. & F. ¶ 91:26, p. 91:441. The District Court described the proceedings before the Commission as follows: "The hearing, participated in by all members of the Commission, commenced September 26, 1949 and ended May 26, 1950. In all, fifty-three different witnesses were heard and 265 exhibits received. The transcript of the hearing covers 9717 pages. During the period from November 22, 1949 to February 6, 1950, extensive field tests were made of the three systems [RCA, CBS, Color Television, Inc.] proposed. Progress reports concerning these tests were filed with the Commission by the three proponents during December 1949 and January 1950. Comparative demonstrations of the three proposed systems were made on different dates until May 17, 1950." 95 F. Supp. at 665.

[8] Emphasis added.

[9] See the particularly interesting historical summary of these efforts in Commissioner Jones' dissent to the First Report of the Commis-

in developing an acceptable system than did others.[10] It was soon attacked, however, on the ground that it was utilizing old knowledge highly useful in the realm of the physical sciences and mechanical practices but incongruous in the new fields of electronics occupied by television. This is still the core of the objection to the CBS system, together with the objection that existing receiving sets are not constructed in such a way that they can, without considerable adjustments, receive CBS color broadcasts either in color or black and white. The fact that adjustments are required before a CBS color broadcast can be received in black and white on existing sets makes this system "incompatible" with the millions of television receivers now in the hands of the public.

There is no doubt that a "compatible" color television system would be desirable. Recognition of this fact seems to be the controlling reason why the Commission did not long ago approve the "incompatible" CBS system. In the past, it has postponed adoption of standards with the hope that a satisfactory "compatible" color television system would be developed. But this time, in light of previous experience, the Commission thought that further delay in making color available was too high a price to pay for possible "compatibility" in the future, despite RCA's claim that it was on the verge of discovering an acceptable "compatible" system.

The Commission's special familiarity with the problems involved in adopting standards for color television is amply attested by the record. It has determined after hearing evidence on all sides that the CBS system will provide the public with color of good quality and that television viewers should be given an opportunity to re-

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sion, September 1, 1950, 1 P. & F. ¶ 91:24, pp. 91:346–447. His view was that color television standards should have been promulgated long before they were.

[10] See note 6, *supra*.

ceive it if they so desire.[11] This determination certainly cannot be held capricious. It is true that the choice between adopting standards now or at a later date was not free from difficulties. Moreover, the wisdom of the decision made can be contested as is shown in the dissenting opinions of two Commissioners. But courts should not overrule an administrative decision merely because they disagree with its wisdom.[12] We cannot say the District Court misapprehended or misapplied the proper judicial standard in holding that the Commission's order was not arbitrary or against the public interest as a matter of law.[13]

Whether the Commission should have reopened its proceedings to permit RCA to offer proof of new discoveries for its system was a question within the discretion of the Commission which we find was not abused.[14] We

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[11] See note 6, *supra.*

[12] *National Broadcasting Co.* v. *United States,* 319 U. S. 190, 224.

[13] *Universal Camera Corp.* v. *Labor Board,* 340 U. S. 474, 490–491.

[14] See *United States* v. *Pierce Auto Lines,* 327 U. S. 515, 534–535. With respect to reopening the record, the Commission said in part: ". . . [A] new television system is not entitled to a hearing or a reopening of a hearing simply on the basis of a paper presentation. In the radio field many theoretical systems exist and can be described on paper but it is a long step from this process to successful operation. There can be no assurance that a system is going to work until the apparatus has been built and has been tested. None of the new systems or improvements in systems meet these tests so as to warrant reopening of the hearing. . . .

"The Commission does not imply that there is no further room for experimentation. . . . Many of the results of such experimentation can undoubtedly be added without affecting existing receivers. As to others some obsolescence of existing receivers may be involved if the changes are adopted. In the interest of stability this latter type of change will not be adopted unless the improvement is substantial in nature, when compared to the amount of dislocation involved. But when such an improvement does come along, the Commission cannot refuse to consider it merely because the owners of existing

have considered other minor contentions made by RCA but are satisfied with the way the District Court disposed of them.

The District Court's judgment sustaining the order of the Commission is

Affirmed.

MR. JUSTICE FRANKFURTER, *dubitante.*

Since I am not alone in entertaining doubts about this case they had better be stated. The ultimate issue is the function of this Court in reviewing an order of the Federal Communications Commission, adopted October 10, 1950, whereby it promulgated standards for the transmission of color television. The significance of these standards lies in the sanction of a system of "incompatible" color television, that is, a system requiring a change in existing receivers for the reception of black and white as well as colored pictures. The system sanctioned by the Commission's order will require the addition of an appropriate gadget to the millions of outstanding receiving sets at a variously estimated, but in any event substantial, cost. From the point of view of the public interest, it is highly desirable to have a color television system that is compatible. The Commission's order sanctioning an incompatible system is based not on the scientific unattainability of a compatible system, nor even on a

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receivers might be compelled to spend additional money to continue receiving programs.

". . . [A]ny improvement that results from the experimentation might face the problem of being incompatible with the present monochrome system or the color system we are adopting today. In that event, the new color system or other improvement will have to sustain the burden of showing that the improvement which results is substantial enough to be worth while when compared to the amount of dislocation involved to receivers then in the hands of the public." Second Report of the Commission, October 10, 1950, 1 P. & F. ¶ 91:26, pp. 91:445–446.

forecast that its feasibility is remote. It rests on the determination that inasmuch as compatibility has not yet been achieved, while a workable incompatible system has proven itself, such a system, however intrinsically unsatisfactory, ought no longer to be withheld from the public.

After hearings on the Commission's proposals were closed, the Radio Corporation of America, persistent promoter of a compatible system, suggested to the Commission further consideration of the progress made after the Commission had taken the matter under advisement in May, 1950. To be sure, this proffer of relevant information concerning progress toward the desired goal was made by an interested party. But within the Commission itself the need for further light was urged in view of the rapid development that had been made since the Commission's hearings got under way. The heart of the controversy was thus put by Commissioner Hennock: "It is of vital importance to the future of television that we make every effort to gain the time necessary for further experimentation leading to the perfection of a compatible color television system." The Commission did not rule out reasonable hope for the early attainment of compatibility. Indeed, it gave ground for believing that success of experimentation to that end is imminent. But it shut off further inquiry into developments it recognized had grown apace because in its "sound discretion" it concluded that "a delay in reaching a determination with respect to the adoption of standards for color television service . . . would not be conducive to the orderly and expeditious dispatch of the Commission's business and would not best serve the ends of justice . . . ."

The real question, as I have indicated, is whether this determination of the Commission, considering its nature and its consequences, is beyond judicial scrutiny.

I am no friend of judicial intrusion into the administrative process. I do not believe in a construction of the

Communications Act that would cramp the broad powers of the Communications Commission. See *National Broadcasting Co.* v. *United States,* 319 U. S. 190. I have no doubt that if Congress chose to withdraw all court review from the Commission's orders it would be constitutionally free to do so. See *Stark* v. *Wickard,* 321 U. S. 288, 312. And I deem it essential to the vitality of the administrative process that, even when subject to judicial review, the Commission be allowed to exercise its powers unhampered by the restrictive procedures appropriate for litigation in the courts. See *Federal Communications Comm'n* v. *National Broadcasting Co.,* 319 U. S. 239, 248. But so long as the Congress has deemed it right to subject the orders of the Commission to review by this Court, the duty of analyzing the essential issues of an order cannot be escaped by too easy reliance on the conclusions of a district court or on the indisputable formula that an exercise of discretion by the Commission is not to be displaced by a contrary exercise of judicial discretion.

What may be an obvious matter of judgment for the Commission in one situation may so profoundly affect the public interest in another as not to be a mere exercise of conventional discretion. Determinations by the Commission are not abstract determinations. We are not here called upon to pass on the abstract question whether the Commission may refuse to reconsider a problem before it although enlightening new evidence is promised. We are faced with a particular order of great significance. It is not the effect of this order upon commercial rivalries that gives it moment. The Communications Act was not designed as a code for the adjustment of conflicting private interests. It is the fact that the order originates color television, with far-reaching implications to the public interest.

The assumption underlying our system of regulation is that the national interest will be furthered by the fullest

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possible use of competition. At some point, of course, the Commission must fix standards limiting competition. But once those standards are fixed, the incentive for improvement is relaxed. It is obvious that the money spent by the public to adapt and convert the millions of sets now in use may well make the Commission reluctant to sanction new and better standards for color pictures if those standards would outmode receiving sets adapted to the system already in use. And even if the Commission is willing to adopt a second, inconsistent set of color television standards sometime in the future, the result will be economic waste on a vast scale.

And all to what end? And for what overriding gain? Of course the Commission does not have to wait for the millennium. Of course it does not have to withhold color pictures from the American public indefinitely because improvements in color transmission will steadily be perfected. That is not what is involved here. What the Commission here decided is that it could not wait, or the American public could not wait, a little while longer, with every prospect of a development which, when it does come, concededly will promote the public interest more than the incompatible system now authorized. Surely what constitutes the public interest on an issue like this is not one of those expert matters as to which courts should properly bow to the Commission's expertness. In any event, nothing was submitted to us on argument, nor do I find anything in the Commission's brief of 150 pages, which gives any hint as to the public interest that brooks no delay in getting color television even though the method by which it will get it is intrinsically undesirable, inevitably limits the possibilities of an improved system or, in any event, leads to potential great economic waste. The only basis for this haste is that the desired better method has not yet proved itself and in view of past failures there is no great assurance of early success. And

so, since a system of color television, though with obvious disadvantages, is available, the requisite public interest which must control the Commission's authorization is established. I do not agree.

One of the more important sources of the retardation or regression of civilization is man's tendency to use new inventions indiscriminately or too hurriedly without adequate reflection of long-range consequences. No doubt the radio enlarges man's horizon. But by making him a captive listener it may make for spiritual impoverishment. Indiscriminate use of the radio denies him the opportunities for reflection and for satisfying those needs of withdrawal of which silent prayer is only one manifestation. It is an uncritical assumption that every form of reporting or communication is equally adaptable to every situation. Thus, there may be a mode of what is called reporting which may defeat the pursuit of justice.

Doubtless, television may find a place among the devices of education; but much long-headed thought and patient experimentation are demanded lest uncritical use may lead to hasty jettisoning of hard-won gains of civilization. The rational process of trial and error implies a wary use of novelty and a critical adoption of change. When a college head can seriously suggest, not by way of irony, that soon there will be no need of people being able to read—that illiteracy will be the saving of wasteful labor—one gets an idea of the possibilities of the new barbarism parading as scientific progress.

Man forgets at terrible cost that the environment in which an event is placed may powerfully determine its effect. Disclosure conveyed by the limitations and power of the camera does not convey the same things to the mind as disclosure made by the limitations and power of pen or voice. The range of presentation, the opportunities for distortion, the impact on reason, the effect on the looker-on as against the reader-hearer, vary; and the

differences may be vital. Judgment may be confused instead of enlightened. Feeling may be agitated, not guided; reason deflected, not enlisted. Reason—the deliberative process—has its own requirements, met by one method and frustrated by another.*

What evil would be encouraged, what good retarded by delay? By haste, would morality be enhanced, insight deepened, and judgment enlightened? Is it even economically advantageous to give governmental sanction to color television at the first practicable moment, or will it not in fact serve as an added drain on raw materials for which the national security has more exigent needs?

Finally, we are told that the Commission's determination as to the likely prospect of early attainment of compatibility is a matter within its competence and not subject to court review. But prophecy of technological feasibility is hardly in the domain of expertness so long as scientific and technological barriers do not make the prospect fanciful. In any event, this Court is not without experience in understanding the nature of such complicated issues. We have had occasion before to consider complex scientific matters. *Telephone Cases,* 126 U. S. 1; *McCormick* v. *Graham's Adm'r,* 129 U. S. 1 (harvester); *Corona Co.* v. *Dovan Corp.,* 276 U. S. 358 (improvement

*"Broadcasting as an influence on men's minds has great possibilities, either of good or evil. The good is that if broadcasting can find a serious audience it is an unrivalled means of bringing vital issues to wider understanding. The evil is that broadcasting is capable of increasing perhaps the most serious of all dangers which threaten democracy and free institutions today—the danger of passivity—of acceptance by masses of orders given to them and of things said to them. Broadcasting has in itself a tendency to encourage passivity, for listening as such, if one does no more, is a passive occupation. Television may be found to have this danger of passivity in even stronger form." Report of the Broadcasting Committee, 1949 (Cmd. 8116, 1951) 75.

in vulcanization of rubber); *DeForest Radio Co.* v. *General Electric Co.*, 283 U. S. 664 (high-vacuum discharge tube); *Radio Corporation* v. *Radio Engineering Laboratories*, 293 U. S. 1 (audion oscillator); *Marconi Wireless Co.* v. *United States*, 320 U. S. 1 (wireless telegraphy improvement); and *Universal Oil Products Co.* v. *Globe Oil & Rfg. Co.*, 322 U. S. 471 (oil cracking process).

Experience has made it axiomatic to eschew dogmatism in predicting the impossibility of important developments in the realms of science and technology. Especially when the incentive is great, invention can rapidly upset prevailing opinions of feasibility. One may even generalize that once the deadlock in a particular field of inquiry is broken progress becomes rapid. Thus, the plastics industry developed apace after a bottleneck had been broken in the chemistry of rubbers. Once the efficacy of sulfanilamide was clearly established, competent investigators were at work experimenting with thousands of compounds, and new and better antibiotics became available in a continuous stream. A good example of the rapid change of opinion that often occurs in judgment of feasibility is furnished by the cyclotron. Only a few years ago distinguished nuclear physicists proclaimed the limits on the energy to which particles could be accelerated by the use of a cyclotron. It was suggested that 12,000,000-volt protons were the maximum obtainable. Within a year the limitations previously accepted were challenged. At the present time there are, I believe, in operation in the United States at least four cyclotrons which accelerate protons to energies of about 400,000,000 volts. One need not have the insight of a great scientific investigator, nor the rashness of the untutored, to be confident that the prognostications now made in regard to the feasibility of a "compatible" color television system will be falsified in the very near future.