



A DUKE AND DEAN—'Bookend' chairman Dean Crawford and Duke Ellington confer at the Saturday night dance. (Photo by Steve Eisenberg)

'Bookend' Rated Greatest; Theta Xi's Cop Top Award

Record attendance, student and organizational co-operation made "Spring Bookend 1963" the most successful Spring Weekend on record.

Carnival attendance was far beyond expectation. Before the evening was half over ticket sellers had run short of tickets. Alert booth attendants quickly returned their tickets to replenish the supply. Before the evening ended at 11 p.m. and estimated \$2,500 had exchanged hands.

A party in the gym immediately following the carnival inaugurated RIT as a "damp" campus.

Saturday morning saw the culmination of a solid week of construction evaporate in a mere three hours. All booths were removed from the ice rink by 11 o'clock Saturday morning.

Despite the dreary 40 degree weather, around 600 people turned out for the second annual Spring Weekend Picnic.

After a cocktail party at the Men's Dorm over 1,500 people danced to the music of Duke

Ellington in the Midtown Mall. This was the first off-campus dance for Spring Weekend.

The Hi Lo's climaxed the weekend with the Sunday evening concert.

The real culmination of the weekend came when Chairman Dean Crawford took stage center to award recognition trophy's to the various participating organizations.

Alpha Phi Omega received special recognition from the Student Association with a plaque inscribed "Outstanding Service, Spring Weekend 1963." Skip Millor accepted commenting, "It's not how much work you do, but it's how you put your heart in it."

Class A competition saw Theta Xi Fraternity emerge the winner with 3,413 points. A close second was Alpha Xi Delta Sorority with 3,241 points. Placing third was Sigma Pi Fraternity with 2,975 points.

In class B competition saw Delta Sigma Pi Fraternity edge into first place with 1,671 points.

Kappa Phi Omega Fraternity followed right behind with 1,628 points. Student Christian Fellowship was third with 1,610 points.

Judges comments seemed to indicate that a more creative use of color and design would have improved all the competitive events. Construction was applauded as excellent. The judges were alumni in the fields of art and advertising.

Booths were given 400 points for stability, construction, general appearance and aesthetics. 100 points were awarded for theme, continuity and originality and 500 points for content, originality of thought and active participation. Some of the judges comments were: construction good—esthetically good—just a little more imagination would have made it better—exceptionally well done—show a little slow moving, sound could have been better—general appearance could have been improved—and more work inside, outside very good.

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'Exploring the Universe' New Series with Garroway

Dave Garroway returns to Rochester May 29 via an exciting 11-program series entitled "Exploring the Universe" on Channel 10. Local sponsor of the National Educational Television feature is RIT.

Each half-hour of "Exploring the Universe" is an incisive and well-documented inquiry into the latest scientific theories and advances. Garroway and outstanding scientists from various scientific fields explore a galaxy of highly interesting subjects—from the possibilities of life on other planets to the creation of our universe.

The program will be seen

locally every Wednesday evening from 8:30 to 9 p.m. for eleven consecutive weeks, on WHEC's Channel 10, as a public service presented by RIT.

Among the distinguished scientists who will appear with the popular television host during the programs are Nobel Prize winners I. I. Rabi (Physics, 1944) and Edward Percell (Physics, 1952), Harlow Shapley, Robert Oppenheimer, Walter Orr Roberts, Maurice Goldhaber, Martin Schwarzschild, Leon Lederman, Barry Commoner, Isaac Asimov, Charles Townes, Banesh Hoffman, John Wheeler, Robert Jastrow, and Phillip Morrison.

The programs are titled: The Nature of Science, Is There a Scientific Method, Point of Order, Science and Social Responsibility, Some Facts About Scientific Fact, Some Light on Light, Are Theories True, How Did the Universe Begin, Is There Other Life, The Challenge of the Space Age, and Values and Limitations of Science.

New Sorority Begins Activity

There will be a new sorority on campus next year. It will be Beta Chi, and it is expected to start with a group of about 25 to 30 girls. The aims of the sorority will be friendship, scholarship, and charity.

As yet, the group is still in a beginning stage and plans for next year are still being made. The girls instrumental in forming this new sorority are Linda Fess, Jerry Ebbesen, Barb Gebell, and Rezy Riviere, all in Art and Design I.

Anyone wishing to know about joining this new sorority, may contact any one of these girls.

Barry Winters Elected 'Speaker Of Assembly'

Barry A. Winters (Ph 4) was elected Speaker of the New York State Intercollegiate Legislative Assembly in Albany, May 4.

Winters was the unanimous choice of the Assemblymen from 19 colleges throughout New York State. He defeated candidates from the University of Buffalo and Wagner College.

The main duties of the Speaker are to preside over the legislative sessions and generally facilitate the functioning of the Assembly.

The Assembly is run along the same lines as the New York State Assembly with committees reporting bills on different subjects, and the Assembly debating the merits of each bill and voting to accept or reject.

This year's Assembly passed a bill to give state aid for the education of gifted children in the public elementary and secondary schools, defeated a bill to liberalize the State's censorship laws and passed a bill extending the grounds for divorce in New York State.

Further honor was brought to RIT when Winters was voted the outstanding member of the Assembly.

Hugh Franklin (BA 2) was cited for excellence of performance in committee meetings, and was elected to the Student Planning Committee for the coming year.

Others representing RIT were Denis Kitchen (Pr 2), Helen Howard (FA 2), and Jack Cassetta (Mech 1).

'Miss RIT', 'Mr. Campus'!



During last Spring Weekend Festivities Sue Heacock (Ret 4) and Jim Williams (Pr 3) were the recipients of two of RIT's highest non-academic honors. Miss Heacock was named "Miss RIT for 1963" and Williams was awarded the title of "Mr. Campus." (Photo by David M. Spindel)

College Health Committee Meets

The College Health Committee of the Health Association of Rochester and Monroe County will discuss "New Concepts and Standards in College Health" at its conference to be held May 17-18 at the Sheraton Hotel.

This conference will consider Legal Responsibilities of College Health Services, Some Observations on Cerebral Concussions in Athletes, Management of Respiratory Infections today, College Health Services—New Prospects and Opportunities.

Other topics will include Health Knowledge of College Students, Psychiatric Emergencies and Pseudo-Emergencies in the College Setting and Infectious Mononucleosis.

Dr. Victor S. Murphy, M.D. of the RIT Student Health dept. along with other prominent speakers in the professions such as Dana L. Farnsworth, M.D. Harvard, Alexius Rachum, M.D. Cornell, and Alex Braiman, M.D. U of R will conduct this conference.

EDITORIALS EDITORIALS EDITORIALS

Spring Weekend Post-mortem

It's a difficult thing to sit down and discuss the past Spring Weekend, when one's brain is clouded with a hang-over. This fact is clear however, that this year, as has always been in the past, "This was the best Spring Weekend ever." Everything was bigger, if not always better; the outdoor advertising, the carnival and the parade. And with all this, the committee did an outstanding job.

But with the grandioseness of it all, another spectre rears its head—Cost! To many of the participating organizations this factor has reached the saturation, or breaking point. To put on a successful showing demands a very full purse or an overextended credit rating. It was not at all uncommon for many of the organizations to go through \$600 or better. In the majority of cases this is actually more than they can afford.

And yet, the fierce competition demands this supreme effort, not to mention the fall rushing program.

What can be done to curb these spiralling costs? Several groups have advocated the dropping of one or more of the segments of the weekend, such as the carnival or the parade.

Perhaps this is not the answer. Not only would this just put extra emphasis on the remaining events, but it would destroy one of the school's best public relations pieces. Rather, it is suggested that since the Institute is the biggest benefactor of all the weeks of work, and the hundreds of dollars spent, that possibly the school could underwrite part or possibly 50 per cent of the cost, with a defined maximum.

Whether or not this could be handled by the administrative keepers of the purse strings, or whether organizations could receive a subsidy from Student Council, are matters which would bear investigation and negotiation. But the handwriting is on the wall.

Unless some subsidy is received Spring Weekend is going to be reduced to a second rate affair.

A Race Well Won

The ballots were cast, 588 to be exact, the results tabulated, and last Saturday night, the Institute had itself a new "Miss RIT" and Mr. Campus."

To go over their qualifications would be redundant. Both Sue Heacock, and Jim Williams are qualified and deserving, and exemplify the titles they received.

Congratulations to both the winners and their fellow candidates. For this was a race where the honor of running was equal to the honor of winning.

Letters... Letters... Letters... Letters

Dear Editor:

Last week's editorial, "An Ordeal of Nerves," was praiseworthy insofar as it sought a peaceful end to the incidents involving attacks on RIT students that have occurred recently. However its author used the occasion to make several statements that seem to me unwise, unwarranted, or both.

"The citizens of this community, . . . have in effect muzzled our police force with their censures." It is hard to see how the protests against police brutality and the creation of a Police Review Board in Rochester have effectively muzzled anything within the proper domain of police power. Or would the editor prefer using the rubber hose on suspects?

"The NAACP's overzealous and unrealistic defense of their community . . ." Overzealous for equality? Should the NAACP wait until every last white man has decided to give us his prejudices before asking for what rightfully should have been theirs long ago?

"We have seen on a national level that students are prone to this type of action [take matters into their own hands]. Witness 'Ole Miss.' "I am certain that the editor does not mean to condone either the murder of a newsman by a racist mob, or the despicable treatment of a student whose behavior proclaims them to be his inferiors. Then why mention "Ole Miss" in the first place? I reject with contempt any implication that our

students at RIT can possibly be compared, now or in the future, with the racists of "Ole Miss." As for taking the law into one's own hands, I would think that the very unpleasant events this past September—which, by the way, may not be unrelated to the present tension—would have been enough to last RIT students for a lifetime.

A general observation, to conclude. I have no brief for anyone, from any group, who wantonly attack another. They should be punished according to the law. But as long as Negroes are denied fundamental human rights, beaten, and discriminated against in more subtle ways in the North, denied equal housing, education, and job opportunities—so long will crime and violence recur. Booker T. Washington, whom nobody could call "overzealous" or "unrealistic" said long ago "If the white man wants to keep the Negro in the gutter, he's going to have to climb in there with him." The editorial shows a lamentable lack of awareness of America's number one problem: Haven't you anything to say about that, Mr. Editor?

Robin Brooks
Instructor, G. S.

* * *

Dear Editor:

The RIT Reporter is to be commended for publishing Jerry Lewis's commentary on foreign affairs. A good student newspaper should try to see beyond its immediate campus. Unfortunately, however, Mr. Lewis has fallen

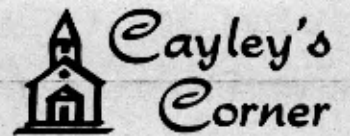
into the abyss which is always open and waiting for a fledgling foreign affairs commentator—he has discovered an overly simple explanation for our national misfortune.

Undoubtedly Lenin dreamed of the day when communism would rule the world. Yet, he is but one in a long line of Alexanders, Caesars, Napoleons and Hitlers who have always been with us and probably always will be with us. Therefore we should not grip ourselves with fear and succumb to panic over what is apparently a condition of the human race. We should take this condition in our stride; we should deal with it rationally as human beings facing a serious, but not uncommon human problem.

Moreover, I wonder if the danger lay so much with the Lenins and the Caesars as with ourselves—the rest of mankind—who permit inhuman conditions to develop which make the appearance of a strong man attractive to the dispossessed and desperate.

If Latin America becomes communist, will it be because Lenin has decreed it so, or will it be because we of the United States have not cared enough for the Latin Americans to assist them in attaining a standard of living sufficient to make liberty meaningful?

Richard D. Lunt
Instructor, G.S.



'Move People Musically,' Says Trio Leader Mitchell

by Nick Cerchio

"Last night I had the strangest dream I've ever dreamed before. I dreamed all nations had agreed to put an end to war." This ended a two-and-one-half hour concert given by the Chad Mitchell Trio at the Palestra on the University of Rochester River Campus.

Twenty five songs were sung including the groups two "pop" hits, "Lizzy Borden" and "The John Birch Society," all of which provided a most enjoyable evening of entertainment for the 900 people present.

After the concert a party was held in the Alpha Epsilon Pi lounge for the Trio and guests of the fraternity. It was during this party that I was able to interview Chad Mitchell and find out his views on some of the questions that I had asked Joan Baez two weeks previous.

My first question pertained to the absence of the groups long time accompanist Jim McGuinn. Mr. Mitchell informed me that Jim had planned to go with The New Christy City Minstrels but somewhere along the way had wound up accompanying Bobby Darin where he is at the present time.

After this the question of whether or not a singer has the obligation to entertain was once again asked and was answered by Chad himself.

He said, "We (The Chad Mitchell Trio) consider ourselves to be artists. I think that it is the obligation of an artist to move people musically or emotionally by offering what they have of

themselves. To cater to an audience just to entertain them I think is a mistake. We try to move our audiences, by virtue of the songs we sing that have a dramatic impact, into some sort of a state whether it be politically or socially.

Then he added, "In that way an artist must be true to himself, he has to believe in what he is doing first of all. Therefore I think that it is incumbent upon an artist to entertain but entertain in the scope of what he is doing."

Would you consider yourselves to be a "commercial" group?

"Well what do you mean by 'commercial?' If you mean, do we make money at what we do? That we do. Do you mean that in order to make money we will sacrifice what we believe to be good in the way of artistry? That we won't do. Now an artist such as Joanie has no one to worry about except herself but we as a group have three people to worry about and therefore have to make certain compromises."

Mitchell was then asked to define a "purist."

"There are a group of people, that say when The Kingston Trio

(Continued on Page 7)

Omission

Two third year photography students were inadvertently omitted from the Reporter's published list of students placed on the Dean's List. Terry Deglau and Douglas Lang were the students who were named to the Dean's List.

Oh —
I suppose
That most of us —
At times —
Long
For a fairy—tale life —
With
"Joy and laughter
And
Peace everafter."
Then —
On those days —
When
Things don't go to
Suit us —
We complain
Like
Spoiled brats
And whimper
— "Shouldn't happen to a dog!"
— perhaps —
Grades flop — or
Friends drop — or
Weather goes plop — or
Plans geglop — or
Headaches pop — or
Dividends stop —
Then some
Pseudo—sophisticate
says
slyly with
Pseudo—superiority
"I'm really
Not at all sure,
You know,
That pain
Is supposed to be
Good
For us"
Well, well, bub,
Just you tell me
How to divide
The men who can
Lick pain
From
The boys who are
Licked by pain
Without
Taking it!

Chaplain M. A. C.

RIT REPORTER

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The growth of industrialization has brought with it the great organizational complexes in which the individual at most levels is a unit in a serial operation. The more recent developments of automation tend to replace the skill and judgement of a worker with the "built-in" skill and judgement of the machine. This produces a basic qualitative change in the life of men. We cannot reverse this change in the life of men. We cannot reverse this change back to a handicraft society, nor would we want to, for the advantages, in a productivity sense, that automation brings are far too attractive. However, we must face the problem of the orientation of the individual to an image of his own economic worth, his social worth, and his sense of personal integrity in a society where soon most people will be working in automated production.

Let us create, for the purpose of our discussion, three images of the relationship of men to their work.

A young Evening College student came to see me to inquire about the possibilities of becoming a "commercial artist." He was unhappy in his present work because the work was dull, uninteresting, and offered him little challenge. He was well paid, but found that the new automated equipment left him little opportunity to use his machinist's skill. It was not the possible loss of his job that concerned him, but rather the loss of identity in his work. He saw in "art" a possible solution for himself. In his mind, becoming a professional artist meant he would work where personal skill and creativity was important.

The second image has to do with the artist as one who has complete control of his process of work. We are not considering here the artist engaged in the industrial-commercial complex, but the "free" artist who conceives his product, produces it in his own way, at his own pace and can completely identify himself with the results of his labor. In a sense he is the last refuge of free-enterprise, for whether he starves or is successful, his relationship to his work is the same—he is his own master. This is a model of the desirable relationship of man to his work. The artist works primarily for the intrinsic value of the process itself.

The third image is of the British gentleman of the Nineteenth Century. The aristocrat was schooled for responsibility, not for a job. The social and intellectual climate aimed to create an individual who accepted a period of service to the "Empire" in the military, diplomatic, or commercial enterprise and means to pursue one's "interests." These interests may have prizes, followed by a relatively early "retirement" to manage the estate, with been horse-breeding, archeology, science, music, etc., and were motivated by a drive towards expertness and accomplishment, which enabled some of these "amateurs" to make significant contributions to their respective fields. The British gentleman can also serve as a model for working primarily for intrinsic values, even as an amateur.

With these three images in mind, let us look at the relationship of man to his work in the future. Automation will result in the possibility of a longer period of schooling, a shorter work week and/or working day, and an earlier retirement from direct economic production. The productivity of

Production Information

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The class in Design for Graphic Reproduction (A318) of the School of Art and Design, under the guidance of Professor Barkin, were intensely involved in the production of this issue of Matrix. Through them this project became alive and a real experiment in graphic communication design, with all the hazards of perverse details and the pressures of practical deadlines. David Saifman (Art and Design, 3rd year), served as student Art Director and was responsible for the basic visual concept and graphic design; Richard Stahl (Art and Design, 3rd year), as Visualizer solved many of the technical problems; Jo Ann Falsone (Art and Design, 3rd year), Production Assistant, did most of the mechanicals; and Russ Flint (Photography, 4th year), was Photographer and provided the photographs in this issue.

For the Graphic Arts Research Department and Web Offset Press: Robert Wheaton, Production Coordinator; Jack Bartles, Camera-work, Angelo Palermo, Platemaking; Fred Wolfe, Head Pressman; Dick Nachtwey, Pressman; Frank Hughes, Robert Kolk, and Henry Hassel, Typesetting.



matrix

Introducing an occasional publication concerned with the image of contemporary problems.
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AN EXPERIMENT IN VISUAL COMMUNICATION

ROCHESTER INSTITUTE OF TECHNOLOGY

Spring '63 Vol.1 Number 4

When the Model-T began to roll off the first continuous production line in 1909, the effects of mechanization were almost immediately reflected in a trend toward shorter working hours. Our national input of human labor in 1910, the year that often marks a real turning point in this country's economic and social development, reached 42.5 million standard man-years. Ten years later, the man power input had increased by only one million man-years. It then began to level off and remained almost constant until the early 40's. Even at the peak of the World War II effort, with a massively larger population, our total labor input was still only 10 per cent greater than 1910. Now, next to mechanization, enter automation, with their combined effects on the required labor input and changes in the kinds of manpower needed. In this issue, Matrix explores the implications some of these accelerating effects and side-effects have for education and rediscovery of the individual.

Drucker sees "unlimited" educational opportunities ahead. Since the early 50's, managerial, technical and professional groups have become the largest employed in the American economy, having already overtaken the masses of semi-skilled machine operators, who characterized the age of mass-production and mechanization. Because of this shift, it is understandable that teachers, who build the foundations on which our modern educated society is based, are now the very largest of these employee groups. They are facing their greatest challenge: how to teach us the many skills as yet unknown along with the ability to learn new things after we leave school. They must strike the balance between education for a "great life" and education for a life that's great.

Barkin believes that education for automation will not only have to prepare the individual for a balance between his work and the new leisure, but may even need to prepare him for a parallel or "auxiliary career," which a person could pursue for its intrinsic value alone, when he could not find such satisfaction on the job.

each worker in an age of automation is so great that this is not only economically possible, but becomes socially necessary. We cannot stand for half of our population being "out of work" even though half of the population may not be "at work." A worker will need, of course, a high degree of technical education, but also to a high degree, a sense of responsibility, for he is in charge of complicated and expensive equipment. The British gentleman was educated for responsibility through a study of the "classics." It seems there is a high correlation between the amount and quality of education and a sense of social responsibility. Liberal arts, in the truest sense, is not just a particular set of courses and content, but that part of

education pursued for its own sake and which is concerned with values. To be educated is to be wise, and to be wise is to be responsible.

However, this educated, responsible worker cannot get, from his job, the full sense of satisfaction necessary to his well-being in the complicated organization of our industrial complex. He will need an auxiliary career in which he sustains and develops an interest throughout his mature life. The requirements of this career, whether it be in the arts, sciences, or social services, are that it provide for the individual the potential of genuine fulfillment rather than a mad pursuit of "activity." The concern for such an auxiliary career must be built into our en-

tire educational structure.

The person whose work already allows him to be creative does not necessarily need such an auxiliary career. The research scientist, the artist, the teacher, the inventive technologist, and the enterprising manager can find the necessary amount of intrinsic satisfaction in their work. The requirements of freedom of initiative in their work must be recognized, for the creative person does not need either the carrot or the stick of sheer economic reward. Intrinsic satisfaction in the process of work is, in itself, his primary reward.

What all this means for education is obvious. Intrinsic interests need to be developed and nurtured, for these interests will find their outlet either in the

individual's "job" or through his auxiliary career. Education, in the truest sense, will of necessity be "for life." The alternatives, which avoid deliberate planning of our education programs with this in mind, are almost too formidable to contemplate; a work relationship out of gear with the psychological facts, a national desparation resulting in malaise, boredom, chaos, and violence.

JK

EDUCATION

IN THE NEW

TECHNOLOGY

by Peter Drucker

Peter Drucker is an internationally known management consultant and writer. He teaches management at New York University's Graduate School of Business. He is one of only three Americans to have received an honorary doctorate from Nihon University in Tokyo, "in recognition of his contribution to Japan's economy and culture."

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AS FAR AS THE AVERAGE CITIZEN IS CONCERNED, automation's greatest impact will not be on production technologies and will not be on employment. The greatest impact of automation will be on our intellectual and cultural life. Automation, after all, is first and foremost an idea. It is an idea which organizes other ideas, and its impact on ideas accounts for the far-reaching implications.

What might the impact be? Indeed, as soon as we ask the question we see very great changes — and changes that are already in full swing and are no longer speculation regarding the future. As in any change proceeding from a new insight of man, there are opportunities and challenges.

A society in which automation has become a governing concept of production and distribution is, of necessity, an "educated society." It is a society in which knowledge rather than man's animal energy is the central resource. It is a society which puts to work the one specific quality in which the human being excels — for man is neither a particularly strong animal nor endowed with outstanding manual dexterity. In the highly advanced industrial countries, the largest employee group is already the people who are supposed to work with knowledge rather than with their hands. In this country, the groups which the census calls "Managerial, Technical and Professional" became the largest employee group during the last decade—rapidly overtaking the semi-skilled machine operator, that characteristic employee of the mass production age based on the assembly line. In other industrialized countries the same process is under way. And these groups, the knowledge workers, are the only employee groups which are growing very rapidly.

For the first time in human history this has made possible a society in which everyone with the intellectual capacity to acquire knowledge can be given an advanced education. In the past, where physical brawn or manual skill alone were productive, the number of people to whom a society could afford to give an education, was severely limited. For earlier society (including the society in which the men now 50 grew up) did not consider knowledge an economic resource, let alone the central capital of the economy.

Even the richest economy before our time could afford only a very small number of people who did not contribute directly to economic production through working with their hands. Today, increasingly, we worry about

not having enough educated people. We can, increasingly, not afford to leave anyone uneducated who has the capacity to become a knowledge worker.

The immediate result has been a complete change in opportunities available to the individual. Historically, occupations, even in the freest society, were basically hereditary. In the Indian caste system this reached the extreme where the son of the weaver could only become a weaver, the son of the goldsmith or the merchant only a goldsmith or a merchant. But much more flexible societies—including 19th century Europe and even 19th century United States—differed less from the complete rigidity of the Indian caste system than they differ from the complete freedom of opportunities of the new educated society. This or that son of a weaver might acquire another craft, might even become a professional man. But the majority was by and large confined to staying within the craftsman class.

Only 30-odd years ago, when I myself was a student, one of my friends in England wanted to become a mathematician. He had done mathematical work of unusual distinction in college—though he was not of genius rank. The entire family—a professional, highly educated family of reasonable affluence—converged on him to dissuade him from so asinine an idea. "How could one make a living as a mathematician?" they all asked. Perhaps, in the case of an unusually gifted man, a fellowship at a college might be available. But otherwise there was no future for a mathematician except as a badly paid wretch of a schoolmaster. The only ways in which an "educated man" could make a living were the "old professions": the law, the church, the army, medicine and the civil service. And the point of this story is that the family was right—as recently as 1930. Today, needless to say, one does not have to worry about job opportunities for a mathematician.

The same applies to other areas of knowledge. There are few today for which there is not constant and increasing demand in industry, in government, in the universities. This gives our young people an abundance of choice unprecedented in human history. And if freedom is defined as "ability to choose," then the advent of the educated society, based on the ideas that underlie automation, is one of the biggest steps towards freedom in the history of the race.

This also changes the structure of society itself. Our books, our news-

papers, our political speeches still assume that in an industrial society there are two groups: a very small group of "bosses" and a huge, undifferentiated group of "workers." This, of course, is the basic picture of society on which Marx built his entire theory—but he only accepted what to anyone in the 19th century (or at any earlier time) was obvious, God-given and apparently unaltered. Today, however, the most important as well as the largest group—let alone the most rapidly growing one—are neither bosses nor workers, but "knowledge employees": the accountant and the public health doctor, the sales manager and the chemical engineer, the industrial psychologist and the operations researcher. None of these is a boss in the old sense; they are all employed. And few of them expect to become top management, or even want to move into such a position. Yet they are also clearly not workers.

Our very largest employee group is indeed the group that transmits the knowledge on which our modern educated society is based: teachers. They are already the largest employee group in the American economy—and the one that will have to grow the fastest. Teachers rather than workers on the automobile assembly line are the representative employees of an educated society. They are clearly not bosses; but they are equally clearly not proletarians. They belong to the new, the third big group, the typical and dominant group of an educated society: middle-class, educated, employed and yet independent—if only because in knowledge they possess a "property" of much greater value to the productive process and of greater impact on society than land, gold mines or factory buildings.

But there are no opportunities that do not create their own challenges.

To avail ourselves of the opportunities of the educated society will require great changes in schools and education. What we will have to teach is, above all, ability to learn new things after one has left school. And yet we also clearly need people who have greater and more systematic knowledge in the various disciplines.

A generation hence, we may, for example, have no engineering schools as such and no medical schools as such. We may find out that technology, that is, the application of systematic knowledge to work, is a common and universal concept which has to be understood by the man who applies knowledge to inanimate matter just the same way as by the man who applies knowledge to the living body. We might, therefore, well have schools of technology. And yet, obviously, both the engineer and the doctor need increasingly specialized knowledge in their own fields.

Perhaps we face the greatest challenge to traditional education in respect to skills. It used to be that a man who acquired a specific skill as a boy had learned what he needed to be

able to do for the rest of his life. A skilled man was a man who had learned a traditional craft. Today, increasingly, craft skills as such become meaningless. In organizing the economic job as a "process" based on automation, that is, on the systematic flow of information and material, skills that never were together become one at a given place of work. And skills that formed a cohesive whole, let us say that of the electrician, become parceled out among a great many pieces of work in a great many different places. Worse still, skills that were apparently eternal only yesterday, may overnight become obsolete—and new skills, not yet visible, may become required overnight.

We have already seen such radical obsolescence of skills. The slight engineering craft, for instance, had a life of 15 years—from the coming in of the multi-engine propeller plane to its replacement by the jet plane. Similarly, some traditional skills of the printing craft may become obsolete as we replace the mechanical transfer of ink with reproduction through heat, chemical reaction or electronic image. Great skills will be needed for these new processes, but not the traditional printing skills.

We may need, therefore, a change in the very idea of "skill." Instead of being what one has learned, skill will have to become the capacity to learn, that is, to apply ideas regarding work to new tasks. We speak today of an I.Q., an intelligence quotient, and mean thereby the ability of a man to apply knowledge to new situations. We may have to develop something like an S.Q., a skill quotient that measures the ability of a man to transfer experience from one kind of material and one set of tools to new materials and new tools.

An even bigger challenge may well be that of the uneducated minority. There is today a great deal of concern over the dropout, the child who does not finish high school. Twenty years hence, the child who has not gone to college will increasingly be such a dropout problem. For, in an educated society the jobs to be done do not only tend to call for people with higher education; the opportunities tend to be restricted to people who can produce the formal evidence of higher education: the college degree, if not an advanced degree.

The uneducated will be both a minority and underprivileged. And an underprivileged minority is worse off than an underprivileged majority. It lacks the votes to change its position.

Here, therefore, may be a major social problem. I should not be surprised to see, a generation hence, strong agitation against the denial of opportunities to those without the academic ability for higher education. After all, scholastic ability is as much an accident of birth as race or color of skin and, in a democratic society, as questionable a ground for a denial of opportunities. It may not be too fanciful to imagine, in another generation,

agitation to forbid asking for educational information on the employment application as it is now forbidden, in some states, to ask for race or age.

Making higher education general and the prerequisite for access to opportunities would also tend to create what our society has always rejected: an intellectual elite.

The employment manager who insists on a college degree, the university that demands a Ph.D., or the civil service commission that prescribes a higher education—everyone who makes access to opportunity or to advancement dependent upon evidence of formal education—subordinates man and society to the analytical, the intellectual faculty, and makes intellectual ability the governor of human affairs.

But man is not an intellectual, analytical being only, not even in his higher, human faculties. He is perceptual and spiritual in addition to being conceptual. Indeed, the highest achievements of man are not conceptual achievements—the achievements of saint and statesman, artist poet or entrepreneur. Even the achievements of the truly great scientists are as much based on perceptual as on conceptual ability. They are works of art rather

than essays in logic, visions of the unknown rather than technical process (which always presupposes, that one already knows).

A society which puts intellectual ability into the driver's seat would be a poor and lopsided society. It might also be a sterile society.

At least this was the fate of the one society that based itself on higher education and proven intellectual ability as the dominant qualifications for leadership: the China of the Mandarins. This destroyed the creative ability of the Chinese within a few centuries. From being original and creative inventors (we owe, after all, gun powder, printing and papermaking, among many other inventions, to the genius of the early Chinese technologists) China became completely unproductive technologically, completely frozen in its tools and techniques. The very great art of China—and few peoples have equaled the painting, poetry and ceramics of Sung-period China—became equally sterile.

To take full advantage of the tremendous advance in potential and capacity, in opportunities and knowledge, which the ideas underlying data automation make possible, we therefore need bal-

ance in the education of the individual, balance which stresses and rewards perceptual if not also spiritual qualities and achievements. We need balance also in society, balance which stresses the aesthetic and spiritual contributions as much as it stresses the analytical ones. This is not something the designer of computers has to worry about. Nor is it a problem for the user of the computer. It is a problem, however for every citizen and for every member of our society.

The vistas, while wide, are admittedly highly speculative. But the opportunities are great enough to warrant keen interest in these new concepts and techniques on the part of the educator, the writer, the statesman, the student of society and culture. And the problems, too, are likely to be great enough to warrant concern on the part of the scientist, the logician, the engineer, the economist.

The fundamental insights that underlie automation are insights of great power, of the great beauty of structure, rhythm and architecture. They enable us to do great new things socially and culturally as well as technically and economically. They therefore call for great responsibility and true understanding in their application and use.

WORK AND EDUCATION

IN THE AGE OF

AUTOMATION

by Leonard Barkin

Leonard Barkin is Professor of Art and Design in the College of Fine and Applied Arts at the Rochester Institute of Technology and Counselor for the Division of Fine and Applied Arts of the Evening College. He is currently involved in planning a new graduate program at RIT for the preparation of teachers in Art Education. He says that his "auxiliary career" is in playing the "classical harmonica."

The life of man, by the very nature of existence, poses three basic problems. First, the individual must learn to contribute to the economic life of his community through the production of goods, services, or other economic benefits. Second, the individual should play a role in the cultural evolution of his community in terms of the maintenance and creation of values in a political, religious, educational, and aesthetic sense. Third, the individual, to himself, needs to develop a sense of personal worth and integrity, a feeling of power in achievement, and growth toward an understanding of the nature of his identity.

Traditionally in western society, and especially in American culture, these problems were faced through the identification by the individual with his trade, his vocation, his profession. When a man was asked "What are you?" he usually replied in terms of "I am a carpenter," or "I am a merchant," or "I am a teacher," etc. This kind of identification is made with our cultural heroes: Jesus the carpenter, Spinoza the lens-grinder, Ben Franklin the printer, and Lincoln the rail-splitter. The individual's identification with his work established not only an economic status, but also the window

through which he saw the world and the lever by which he could move it. The pride, for example, of a Colonial carpenter in his craftsmanship was a moral imperative. Bad work was tantamount to sin. Even "common labor" had its own kind of pride, as celebrated in song and legend. "John Henry was a steel-driving man," who would not be bested by a machine. While this is perhaps romanticizing, pride in work has been basic to our mythology and to a great extent still is. The man who is capable, expert, and proud in his work is our image of the "good American."

'Bookend' ...

(Continued from Page 1)

Parade floats were allotted 300 points for durability and construction, 200 for theme, 400 for quality and 100 for originality of thought. Some of the judges comments were: poor color, lack of imagination — construction was very good but did not tie in with novel — imaginative building materials used — could have shown more action — good design — and more color and better craftsmanship.

Outdoor advertising was judged 250 points for durability, 150 for theme, 400 for quality and appearance, 100 for originality, and 100 for advertising Spring Book-end. Some of the judges comments were: used space well — big but not effective — and could have used more color and design.

And another Spring Weekend came to a close, one of the biggest to date. Even old man

Faculty Members Meet At Manger

RIT was represented by three faculty members at the annual conference of the New York State English Council held May 10-11 at the Hotel Manger.

Miss Marion L'Amoreaux, assistant director of the RIT Reading Laboratory, was program chairman for the conference.

James W. Wilson, dean of the College of General Studies participated in a panel concerned with "The Transition from a Two-year to a Four-year College."

Robert Bickal, assistant professor in the College of General Studies, took part in the "Academic Freedom to Assign Reading" panel.

weather's frown could not dampen the enthusiasm that this weekend generated.

Chad Mitchell...

(Continued from Page 2)

came out with some of their music, who didn't appreciate what the trio was doing and therefore said that "their" idiom was being raped so to speak. Many of them identified with Bluegrass said that this was what was pure. In a sense their position is nonsense because the first folk song was the "ugh" that came when a caveman hit a rock and got a beat. From this all music stems. The purist has a limited scope and says that anyone who takes a song and makes money out of it is being commercial and ruining our idiom."

"Where do you get your material?" he was asked.

"Well the traditional pieces we get from other singers, from books, records and collectors. The satirical pieces at this point people are sending us. Lizzy Borden came from "New Faces of Fifty Two" so its been around for quite some time."



Hank Blaustein

Tiger Tracks

As previously mentioned, one of the big handicaps plaguing our intramural athletic program has recently been the absence of various athletes at practice and at games.

On May 4, only one day after my article condemning the lack of repercussion in instances where athletes fail to show up for regularly scheduled games, the golf team ran into the exact difficulty I was trying to express.

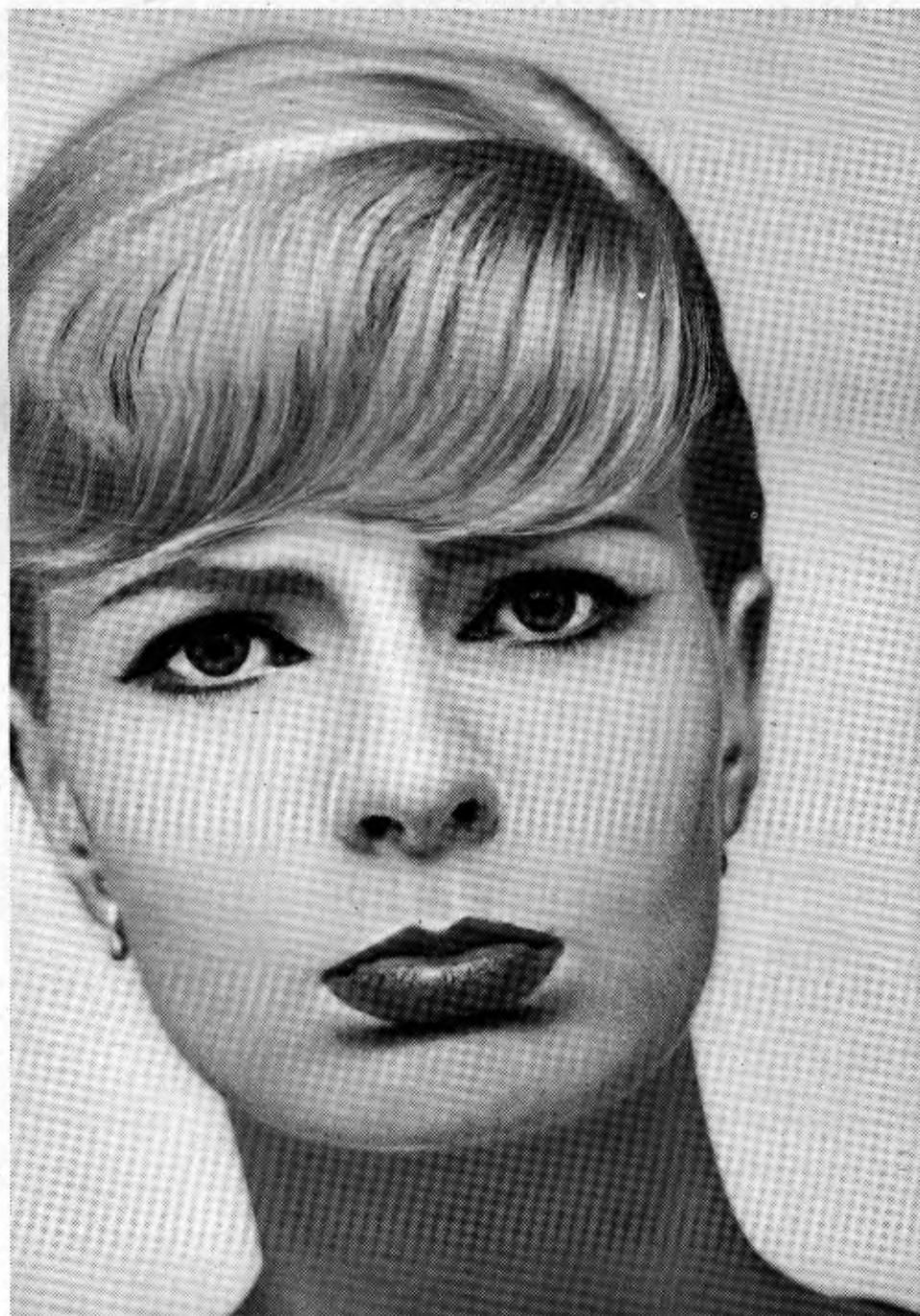
The team was scheduled to leave for Potsdam at 6:30 a. m. Coach Bob Klos was there on time. Carter was there on time. Butler was there. Babcock was there. So were Smith, Piechota and Solareck. But the team was minus transportation in the form of Ed Romanowski. Also they were short two starting players, Jerry Abel, and Bob Dinga.

Bob Klos was boiling, he wanted to have all of his starting team on hand in order to protect his 14-in-a-row record. It certainly would be a letdown if his undefeated season went on the rocks because some linksman failed to show. Plans to leave at dawn were changed and scheduled departure was held off indefinitely. Where was Romanowski? "Buffalo" Bob started searching for another car to take the boys to the north country. Just then a green Ford pulled up to the Ritter-Clark Building and one problem was solved. "The late" Ed had arrived. Now, how could he get in touch with Dinga? A quick check of the telephone directory offered no aid.

The team gathered to help make a decision. Should we wait around a little longer or leave without the number one man? "Let's see if he shows up before eight." The clock turned a bit slowly, and as 8 a.m. rolled around seven men climbed into cars and headed northeast to Potsdam minus Bob Dinga and Jerry Abel.

Several hours later all concerned were greatly relieved. As the final totals were posted, the Tigers had won by an eight to one margin. Although two of the five participants were not regular starters, the RIT linksmen showed good depth and were able to keep up their usual winning form.

On their return to Rochester, the mystery of "Whatever Happened to Bobby Dinga" was solved, and the fugitive was absolved of all guilt. He is now the proud father of a baby boy.



Q: Dear Answer Lady: My boyfriend rubs me the wrong way. Please help me!

A: Dear Irritated Frosh.

Yours may be an emotional problem. I don't think so.

I feel you're suffering from simple "Whisker Rub." Most girls have come up against this same trouble.

My advice: Go to the bookstore and buy him a Remington® 25. (Use any excuse for the gift. A birthday, Groundhog Day or the eve of Bacon's Rebellion.) You'll be surprised how much closer you two will be. You see, Dear Irritated, the

Remington 25 is a powerful shaver. Powerful enough to shave closer... faster... smoother. Sports a man-size shaver head. It has roller combs, too. They roll skin down, comb whiskers up. Push them in the path of six rows of diamond-tipped cutters. (And other jazz like that.)

You may wonder how the Answer Lady knows so much about shavers? Well, you see, my dear, I am really a man. I live on fraternity row. I use a Remington shaver myself. Maybe you should give up this guy. I'll call you Saturday.



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PAST TIME
Dinner Served At
Noon & Five

Gibbroek Past Cookout Champ

It was recently called to the attention of the Alumni Relations Office and the staff of the *RIT Reporter* that a story appearing in the March 19 issue of the *Reporter* regarding Mr. Jacques C. Sopkin, PH '51 had an error of omission.

It appears that no mention was made of the fact that another RIT Alumnus was the first national champion in the American Cookout Contest in which Mr. Sopkin is one of this year's finalists.

Howard Green, an instructor in the Food Administration Dept. brought the following fact to light. Robert C. Gribbroek, who studied in the School of Art and Design, won the grand prize of \$10,000 and the title of "America's Cookout Champion of the Year" in the initial contest in 1959. The contest is sponsored by the Kaiser Aluminum Co. and is open only to men.

Gribbroek resides in Glendale, Calif. and designs and paints for Warner Brothers Cartoons. He is a member of the famed Academy of Motion Picture Arts and Sciences. His hobbies other than cooking include ceramics, weaving and gardening. Mr. Gribbroek is a bachelor and the recipe was an original one.

Recipes from the cookouts may be found in the volume entitled, "The Cookout Book" published by the Ward Ritchie Press in 1961. It is available in the RIT Library.

Papers Presented By Photo Alumni

Several alumni of the School of Photography, now employed in the Photographic Research Group at Itek, Corp., Lexington, Mass., presented papers at the Annual Conference of the Society of Photographic Scientists and Engineers during the Annual Conference, April 29-May 3 in Atlantic City.

Robert J. Kohler, 1959, co-authored (with D. I. Harvey and L. C. Sanford) a paper titled "The Application of Photographic Photometry to Electronic Display System".

John R. Manhardt 1959, and Donald J. Forst, 1962, co-authored paper called "The Dual Mechanism of the Albert Effect."



Milford D. Diedrick (A&D '32) a medical illustrator at the State University of New York at Buffalo, recently visited the facilities of the Instructional Resources Laboratory. Shown here with Dr. Maurice Kessman of RIT, Diedrick is examining a transparency used on overhead projects. Diedrick is the current president of the Association of Medical Illustrators.

Former 'Reporter' Editor Employed With Polaroid

'Color in Weeklies' Topic of Article

Wes Kemp (Ph '63) is going to Europe for several months to execute a variety of freelance assignments for book magazine publishers. He will commence work there on May 15.

Upon graduation, Wes went with Polaroid in Cambridge, Mass., where he was involved in the development of color and professional photographic materials. He is presently associated with Polaroid as a consultant.

A photograph of a sky diver by Wes has been used as a full page Polaroid advertisement in 15 national magazines. Recent assignments have taken him to California and aboard an aircraft carrier in the Gulf of Mexico. He was staff photographer for "Polaroid Land Photography," a new Ziff-Davis book.

While at RIT Wes was Photo and Graphics Editor of the *RIT Reporter*, and student representative to photo faculty (President, Photo Student Council).

A paper describing a new precision camera for Microphotography was presented by William M. Drumm, 1950.

Two other RIT graduates also presented a paper. Paul F. Bourque and Stephen F. Langer, 1962, presented a paper on "A Mechanism for Achieving Rapid Access Color Images."

Can a small rural weekly with limited equipment use color successfully and profitably?

This was the opening for an article that appeared in the "Weekly Editor" column of *Editor and Publisher* for March 20, 1963. The answer is apparently yes, based on the information contained in the article which centers around *The Orange Daily Post*. The Post is owned by the Mr. and Mrs. Elmer Spear family of Washingtonville, N. Y. Their son, John Spear, is a 1961 graduate of the School of Printing.

The article deals with the Post's extensive use of high quality color work. The equipment used to print the paper is a web fed offset press which the Spear's installed in 1962.

John, who completed work for his Bachelor's degree in three years instead of the customary four, graduated summa cum laude. He is the production manager of the paper and also writes the local sports section for the paper. During his years as an undergraduate, Spear was active in the Newman Club, Pi Club Techmila and was sports editor of the *RIT Reporter*.

The article appearing in *Editor and Publisher* gives a fairly detailed description of the Post's switch from letterpress to offset. It describes the changes that were necessary in the publication's paper purchasing program and also covers the reactions of the paper's advertisers to the use of color.

The Post was the recipient of the New York Press Association's first place award for tabloid weeklies. The success of their conversion to web offset was evidenced by the judges comments that the paper press work was excellent.

Photograph by Donald Cohee



LYONS STAMP SERVICE
150 Phelps Street Lyons, New York

Alumni News

Clifford A. Brown (BA '62) has been appointed instructor of economics and accounting at Jefferson Community College in Watertown, N.Y. The new college will open Sept. 1, 1963. Brown was graduated from RIT with High Honors and is presently studying for his master's degree in Economics at Bucknell University, Lewisburg, Pennsylvania.

Paul D. Starkey, 1960 graduate of the School of Retailing, was recently the subject of a feature article in the Trade publication, *Playthings*. The article was entitled "A Typical Day in the Life of a Toy Buyer."

Starkey is the toy buyer for the Halle Brother Company, a major Cleveland, Ohio department store.

Paul Rand, a 1946 graduate of the School of Photography was recently elected president of the Professional Photographers Association of Pennsylvania. He and his wife, the former Jean Stanton, (Ph '46) operate the Stanton-Rand Studio in Meadville, Pa. Rand will preside at the Association's next annual conference in Pittsburgh in 1964.

Salvatore L. Schifano (Elec '59) was recently promoted to Senior Associate Engineer with the International Business Machines Corporation. Sal is in the General Product Division, Development Laboratory of the Corporation at Endicott.

Jack Norton (BA '59) is the father of a baby girl, Kimberly Susan, born on March 5. Jack is employed in data processing work with the Eastman Kodak Co.

Art and Mary Gardner have announced the birth of a daughter, Alison Eve, on May 2. Art is a 1959 graduate of the School of Printing. He is the Assistant Director of the International Typographic Composition Association, Inc. in Washington, D.C. He is a past vice-president of the RIT Student Association.

Army Maj. John B. Smart, (RIT '42) whose wife, Joyce, lives at 336 Basket Rd., Webster, N. Y., participated in the annual First U. S. Army Rifle and Pistol Matches at Fort Dix, N. J., April 17-21.

Approximately 400 Army marksmen took part in the event conducted under Army regulations and current National Rifle Association Rules.

Top shooters will represent First Army in the All-Army matches to be held at Fort Benning, Ga., in June, and winners there will travel to Camp Perry, Ohio, in August for the National Rifle Association matches.

Assigned to the U. S. Army II Corps. Control Group at Camp Kilmer, N. J., Major Smart was last stationed in Rochester.

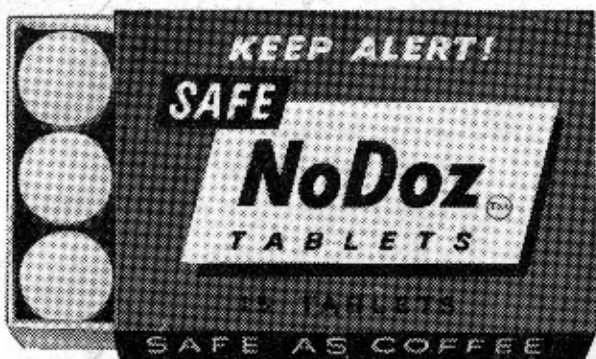
Second Lt. Bruce D. Ellsworth (Mech '62) of Whitesville, N.Y., has been named honor graduate of the United States Air Force course for weapons controllers at Tyndall Air Base.

Lt. Ellsworth was given training in the duties of a weapons controller, with emphasis on radar scope and manual air defense system operation.

He is being reassigned to Ellington AFB, Texas, for duty.

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