

# Pendulum

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# P E N D U L U M

*Spring 1954*

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## FOREWORD

*PENDULUM is offered to Caltech as an experiment. It provides a means of literary expression for undergraduates. We very much desire contributions for future issues from students, and opinions from readers. We hope that your response will make the experiment a success.*

PENDULUM, AUTUMN, 1951

THE experiment, now ending its third year, has been a success and has been expanded to include the work of graduate students. PENDULUM'S success has been due to the combined efforts of our publisher, the Humanities Department; of our very able printer Mr. Grant Dahlstrom of the Castle Press; of our productive contributors; and, in the final analysis, of you, our readers. PENDULUM was never intended to be a financial success, for the limited audience and high quality of production are not economically compatible. The Humanities Department has very graciously agreed to accept our losses so long as an interest is shown in the magazine. Interest cannot limit itself to the contributors. Interest must be, and, we are happy to say, has been shown by a sufficient number of people to keep PENDULUM alive. We are indeed grateful to all those who have made the experiment a success.

We also wish to thank the many people in the motion picture industry for their friendly co-operation they have given us in our study of their medium. Mr. Stanley Kramer of United Artists, Mr. Al Finestone of the Paramount Publicity Department, Mr. John Woolfenden of Columbia's Publicity Department, and Mr. Julian Myers of Twentieth Century-Fox's Publicity Department have been of special assistance. The opinions presented are, of course, those of the author and do not necessarily reflect those of anyone not specifically quoted.

THE EDITORS.

## A NURSERY TALE FOR MODERN TIMES

By Gerald O. Dudek

ONE day the Little Red Hen was walking along the forest path, clucking softly to herself, when she came upon a sack of grain—wheat to be exact. So she quickly ran back to the farmyard with her grain. She knew of some unused land where she could plant the grain.

She first went to Piggie-Biggie and said to him, "Will you help me plant my grain?" And Piggie-Biggie said to her, "No, I'm government subsidized, I don't have to work." With that he rolled over and went to sleep.

Then the Little Red Hen went to Horsey-Worsey and said, "Horsey-Worsey, will you help me plant my grain?" "No," said the horse, "my union would not let me plant grain."

A bit discouraged, the Little Red Hen went then to the dog and said, "Doggie-Soggie, will you help me plant my grain?" Doggie-Soggie looked at her with scorn in his eye and said, "I am man's best friend, and it is indeed far beneath my dignity to help you plant some grain." And with his head held high, he slowly walked away.

Angry by now, the Little Red Hen stalked off, clucking to herself, "I'll plant the grain myself!" And so she did.

After weeding, watering, and carefully attending it (she was a conscientious fowl), the grain was finally ready for harvesting. So the Little Red Hen went to the big rooster and said to him, "Will you help me harvest my grain, Rooster-Booster?" And the rooster looked down upon her and said, "Mah deah, as a member of the management, mah time is far too valuable to help one such as you; however, if supervision is needed, be free to call upon me." With this he hurried off looking for some small hen to brow-beat.

Next she went to the cat, sunning himself on a rock, and said to him, "Catty-Ratty, will you help me harvest my grain?" The cat slowly lashed his tail and said, "I cannot, I am out on strike and am needed for nocturnal picket duty. I cannot afford to be called a scab."

Then the Little Red Hen went to Ducky-Wucky and said, "Ducky-Wucky, will you be so good as to help me harvest my grain?" The duck looked sadly at her and said, "I'm sorry, but I'll lose my social security if I work helping you with the grain."

The Little Red Hen fluffed herself up and said, "I'll harvest that damn grain myself." She did.

Since the grain needed thrashing, the Little Red Hen skittered over to Squirrel-Whirrl, the thrasher man and said, "Squirrel-Whirrl, will you help me thrash my grain?" The squirrel yawned and said, "If I help you, it will place me in a higher tax bracket, so I'm afraid I'll lose too much on the deal. If you want to, you can do it yourself." So the Little Red Hen worked over-time and thrashed the grain herself.

When the grain was thrashed, she wiped the sweat off her comb and went to Donkey-Wonkey and asked, "Donkey-Wonkey, will you help me carry the grain to the miller?" The donkey said to her, "Do you have *Union* approval? If not, I cannot carry any grain for you!"

Not having *Union* approval, the Little Red Hen next went to Goosey-Woozey and said to him, "Will you help me carry my grain to the miller?" Goosey-Woozey looked at her sorrowfully and said, "I am very sorry, but my transportation permit is only for over water, I cannot operate on land."

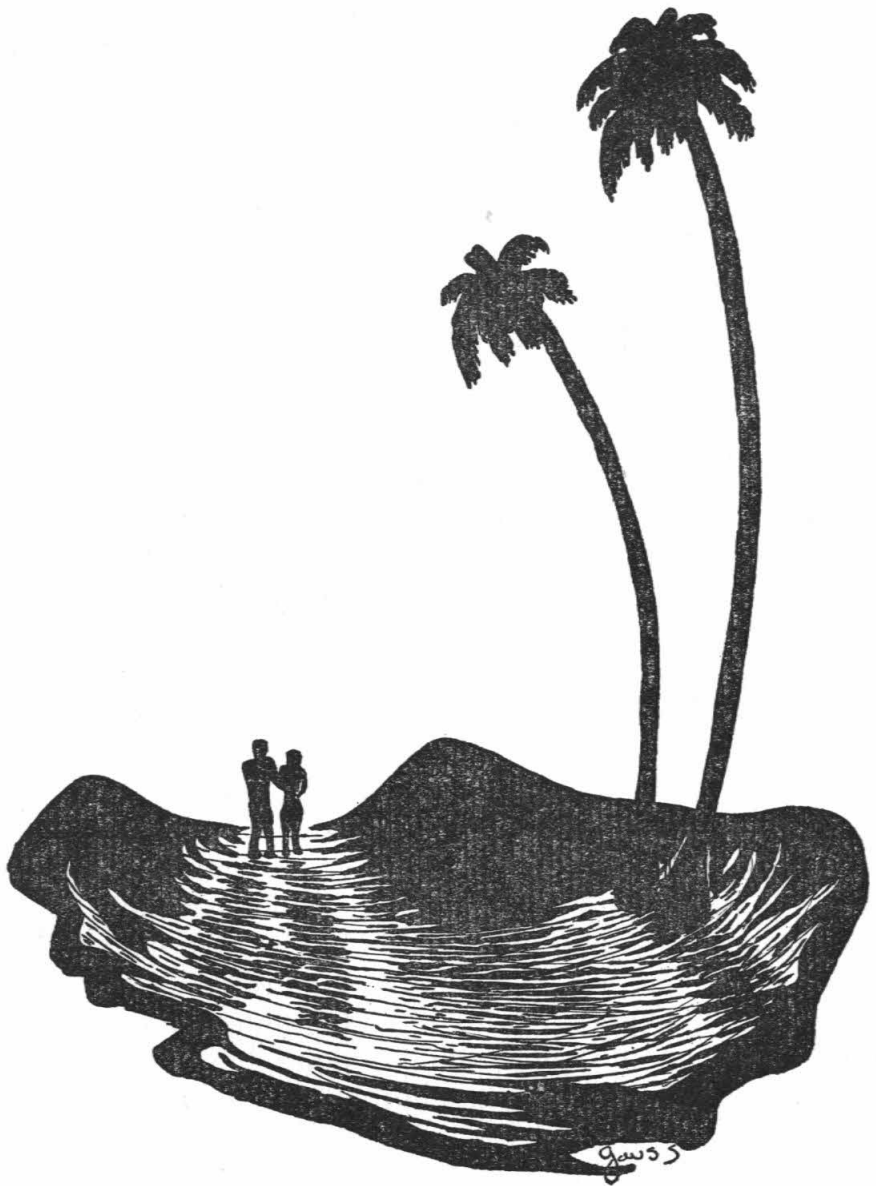
Then the Little Red Hen went to Rabbit-Babbit and asked him, "Will you help me carry my grain to the miller?" "By the seven sacred hairs of McCharty's Beard, No!" shrieked the rabbit, "You are a RED hen!"

After punishing this McChartyite in a proper manner and disposing of the body, the Little Red Hen proceeded to take the grain to the miller.

After filling out the proper forms, the grain was milled, bagged, and carried back to the farm.

With a backlog of experience behind her, the Little Red Hen baked the bread herself. She knew the folly of asking others to help. Naturally the smell of fresh bread attracted others. When they asked her for some, she very naturally told them where they could go. At this they became very angry and started to mutter comments like: "Anti-social, Reactionary, Hoarder, Exploiter of the Working Classes, Anti-Union, etc." But the Little Red Hen was angry herself and drove them all away.

As she settled down to eat the bread herself, a big Government-Woverment man rushed up and took most of the bread in the form of taxes, permit fees, inspection fees and the like. The rest he dyed blue, and for that little bit, he gave her a big sack of money.



# THE TROJAN WOMEN

By McKim Malville

A Rather Free Adaptation of the Final Part of a  
play by Euripides

*Here we go round the prickly pear*

*Prickly pear, prickly pear.*

*Here we go round the prickly pear*

*At five o'clock in the morning.*

—T. S. ELIOT, *The Hollow Men*

## CHARACTERS:

HECUBA, *Queen of Troy*

*Chorus of Trojan Women*

TALTHYBIUS, *Greek Herald*

*Chorus of Greek Soldiers*

## EXODOS

### SCENE:

Troy has fallen to the wooden horse of the Greeks after ten years of battle. All the Trojan men have either run away or are dead, and their wives are assembled in front of the sacked town, awaiting the sailing of the Greek ships to take them into slavery.

Cassandra, the half-crazed daughter of Hecuba, destined to prophesy only evil, has been carried away by Agamemnon. Hecuba's only other daughter, Polyxena, has been sacrificed on Achilles' tomb. Andromache, wife of the great Hector, has been taken by Achilles' son; and her son, Astyanax, has just been thrown from the walls of Troy by the Greeks, fearful of a future avenger of Troy.

Greek soldiers have set fire to all that remains of the city, and flames may be seen at the back of the stage. A few mangled corpses and broken chariots surround the huts in which the women are held captive. Talthybius, the herald, has arrived; he awaits the call of a trumpet to take the women down to the ships.

*Hecuba*

Is this the way it is to end?  
 The holy town of Troy in bloodstained de-  
 feat,  
 Its mighty walls lying in blackened rubble,  
 Its once-feared legions scattered headless and  
 armless across the plains?  
 And we, poor, pitiful Trojan widows,  
 The only witnesses of its death,  
 The only ones present to chant its dirge  
 Ourselves soon to be taken as slaves of the  
 hateful Argives.  
 Come,  
 Before they drag us forth from our land,  
 Let us hail our once glorious city as it reels  
 from the Greek torches.

O thou spiteful gods,

Why hast thou torn down the beautiful tow-  
 ers of Ilion?

*Women's Chorus*

Pallas Athene,  
 Why have you demanded the torn and bleed-  
 ing bodies  
 Of our men piled at your feet?

*Hecuba*

O Lord Poseidon, closest of all to sweet-  
 throated Zeus.

*Women's Chorus*

Lost, lost is Troy

*Hecuba*

Why hast thou forsaken us

*Women's Chorus*

deserted and burning

*Hecuba*

In our hour of need

*Women's Chorus*

its sacred altars defiled

*Hecuba*

O Olympian Zeus, mover of the Tempests.

*Women's Chorus*

our husbands murdered

*Hecuba*

Why hast thou betrayed Ilion's altars?

*Women's Chorus*

our children torn from our  
breasts

*Hecuba*

But why do we call on the gods?

*Women's Chorus*

(softly) and their heads dashed from  
the battlements.

*Hecuba*

The gods will not hear our prayers.

How often have I prayed before them?

How often has mighty Ilion smoked with  
incense in their honor?

Can you name but one Trojan who has not  
born branches of supplication before  
their altars?

But we have not been heard.

Our prayers remain unanswered and we are  
alone.

Come, my wretched sisters,

Let us hurl ourselves into the flaming pyre.

How best could we end our misery than in  
the flames of our fathers' house?

*Talthybis*

Hold back, unhappy woman,

Men,

Stop her!

We must spare her for Lord Odysseus' house-  
hold.

*Men's Chorus*

Unenviable women.

Poor widows of once proud warriors.

How oft in battle did we respect their sharp  
spears and swift chariots?

But now Fate has been cruel to them and they  
have a sad lot.

Blind and foolish is he

Who, when joyous, praises the gods for his  
happy destiny for alas,



## P E N D U L U M

Fortune follows only the aimless course of a  
crazed madman

And Happiness blesses no one forever.

The Ilions now have no Gods who will an-  
swer their prayers and supplications.

They have no gilded altars to cover with rich  
offerings and sacrifices, (and what god  
has time to bother with such meager  
propitiations as they can offer?)

Doomed, they are, to an existence of slavery,  
Fettered to a position lower than scavenger  
dogs burning out their lives begging  
for a dry crust of bread.

Never to be free,

Each day ordered by the wills of their Aegean  
masters.

Never again shall they participate in the  
grand festivals and sacred holidays  
that once were their right and duty.

Reduced now to spectators, mere bystanders  
in life, nay, even less.

Worn pebbles rolled back and forth by the  
pounding surf

Are greater parts of this world than these  
wretched creatures.

The world is too large and too great

For these insignificant slave women wholly  
without self-will

To have any effect on the passings of civili-  
zations.

It will be now as if their mothers' womb had  
never borne them.

Their prayers shall remain impotent,  
 lifeless wisps of smoke  
 blown into nothingness by the winds.  
 Their virtues shall be eclipsed by the stern  
 land which binds them.  
 Lamentation and prayer will aid them but  
 little,  
 For theirs is a hard destiny  
 to be lived out  
 and sweetened only by Death.

*(the flaming buildings crash to the ground behind them)*

*Hecuba*

What—

Did you hear?

Did you see?

The crash of the burning towers.

*Women's Chorus*

Did you feel the ground shake?

*Hecuba*

Mighty Troy has fallen.

*Women's Chorus*

Ill-fated Troy is sending up its last tribute to  
 the unfeeling gods.

*(a trumpet is heard and the women are led off the stage to the  
 Greek ships)*

*Hecuba*

Farewell Iliion.

*Women's Chorus*

We mourn for our city and our  
 country

*Hecuba*

Never to be seen again.

## AN ANALYSIS OF MOBILE SCULPTURE

By Charles Bodeen

**A**LMOST every art medium from pencil sketching to metal spinning has been ripped apart and analyzed piece by piece. Articles and books tell us how to paint, sculpture, and weave; they tell us the limitations and possibilities of these methods of expression. Most art forms have been around for a long time. Their applications have been thoroughly studied, evaluated, and to some extent standardized. The relatively new mediums which have been widely accepted by the public, or which have brought their enthusiasts some reward have been studied perhaps more deeply than have the older ones. The motion picture is an example.

There are still many new or experimental means of expression which are either so new or so narrowly accepted that almost nothing has been written about them, and, consequently, the public knows almost nothing about them. Mobile sculpture is one of these lost, or perhaps one should say not-yet-found, art forms.

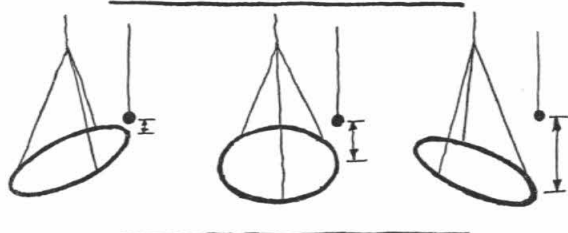
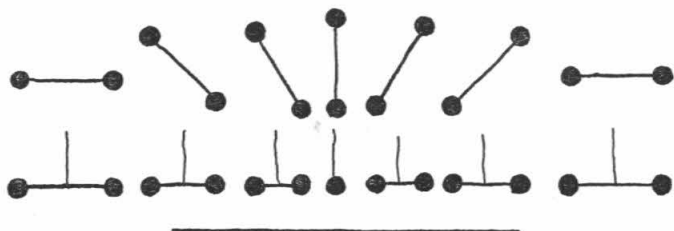
Two articles in past issues of this magazine have attempted to justify the medium, and to present a few interesting and different examples of its application. From the second of these articles comes the statement that mobile sculpture encompasses all that in which the material is used not as mass, but as a carrier of motion. In a more thorough investigation of the subject, we must analyze the material, the way it is used to create motion, and the motion itself. Since it is the motion that is the really essential element, let us begin by describing that.

Motion made by kinetic sculptures may be classified in various ways, but perhaps the most important classification entails the division between controlled and random movements. All move-

ments of every type of mobile are controlled to some extent: there are always some restricting forces or limits to the region of action which are under the complete control of the artist. On the other hand, not all mobiles have a random factor in their movements, for some of them are purely of rigid, mechanical construction. At first, it is difficult to say whether or not the seemingly uncontrollable wobbles of flexible members in some mechanical mobiles are regulated. At least we can say that although the properties of those members may be selected at random, once the pieces are incorporated into the mobile their motions are generally not subject to outside forces of sufficient magnitude to cause any visible changes in their mechanically prescribed maneuvers. The motion of the common hanging mobiles is controlled in that the individual parts usually follow paths inherent in the geometry of the construction. The angular or linear velocities of these pieces are dependent upon unpredictable outside influences.

The important aesthetic quality to be gained through random movements is variety, and variety thus obtained is unlike that found in any other medium. There is variety in graphic design, in painting, and in sculpture, but rarely do we find it except in a static nature involving differences in sizes, shapes, and colors. A mobile can have all this and more: it can have a dynamic variety which creates a new visual experience at each observation. Even though the artist constructed the mobile in an attempt to secure a motion he had in mind, the unpredictable movements give him the same, if not a greater, aesthetic experience as that which is had by an observer.

In mobiles we almost always encounter so-called *virtual* volumes, volumes which are generated by the pieces of the construction as they move through space. Step up, or down, as you like, a dimension and we find another virtual phenomenon—



Virtual motions

virtual motion. As a virtual volume is something we imagine as a volume although it really doesn't exist, so a virtual motion is something we imagine as a motion different from that which is really there. Two examples will serve to demonstrate this interesting source of motion.

Consider a rigid bar with a small sphere on each end. Suspend it at its midpoint, and let it rotate in a horizontal plane. If we are far enough from the system, we see not the rotation, but an apparent oscillation of the spheres back and forth and through each other.

Consider a hoop rigidly mounted on the edge of a turntable and inclined to the plane of the table. Imagine another hoop mounted on the first as the first is on the table. If we are unaware of the motion of the turntable, we have the illusion that the two hoops are spinning as a coin does for a while after it has lost its gyroscopic stability. One hoop seems to be just ready to settle down on the table, while the other appears to be precariously balanced on the first and to be rolling around in the opposite direction.

An interesting challenge, particularly in the common hanging mobile, has been the creation of linear motion as opposed to rotational. Due to the small magnitude of the driving forces available, friction usually overcomes any linkage solution to this problem. One answer lies in the use of another kind of virtual motion. A hoop or disc may be hung in a plane inclined to the horizontal. If a point is suspended over the hoop, the illusion of vertical linear motion is obtained as the hoop rotates.

The motions of common hanging and balanced mobiles seem to be limited to horizontal planes. Last year, in an effort to escape from the horizontal, I tried a few simple experiments with pendulum systems. Each of several pendulums suspended from a common string comes to life in an interesting sequence of rhythms

after one has been set in motion by the observer. A limitation to this type of construction is that the motion is not lasting, and the movement must be initiated by man. Perhaps this type of mobile finds a close parallel in a musical composition, for the music likewise must be started by someone, and has a definite duration. One might say the picture paints itself over and over again.

The actions of most of the mobiles mentioned above depend largely upon the relative motions of small elements of the whole. Any construction which is a mobile according to our previous definition and which does not consist of individually moving parts resolves itself into a kind of windmill. On occasion, one sees art objects which seem to be a combination of static and mobile sculpture. Such pieces use their material both as mass and as a carrier of motion, and therefore are not mobiles in the strict sense. Nevertheless, they do have a definite place, for the experience of having the work turn in front of us is indeed different from that which we have when we walk around the mass.

There is in the mobile world a type of construction which is paralleled by the scratchy drawings of children. It is the crude and imperfected attempt at what the person who makes it would really like to do. To this person, a mobile consists of a few pieces of wire from which he must hang things—anything—in order that the objects may move about in the air. Granted, the right idea, that of motion, is firmly in mind, but the results usually resemble overly decorated Christmas trees. Fortunately, enough of these four-dimensional doodles often leads the person to see how he can improve the motion, and before long he's creating interesting kinetic sculptures of considerably greater value.

We do not live in the massless, frictionless world of a physics text; and, consequently, we must expend energy if we are to create the motion so essential in the mobile. If the artist has a source of energy, he can put motion into his work, and if he can control the energy, he can control the motion.

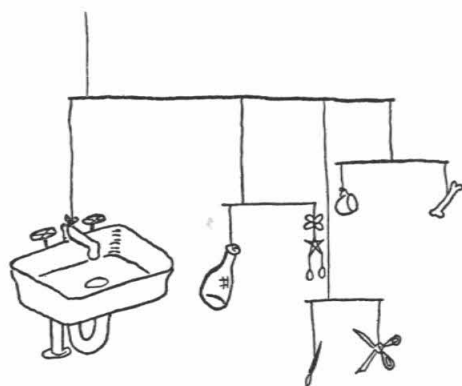
Most of us have never seen an "arty" mechanical mobile, for, because of costs and technical difficulties not involved in other types, they are scarce. But we have all seen carnival rides and mechanical advertisements which *are* mobiles because their primary purpose is that of carrying motion. We must not limit the source of energy for mechanical mobiles to motors. At an early age, I was impressed by a steel ball which was made to jump back and forth through a hoop in apparent violation of the law of gravity. Although a magnetic field is not in itself mechanical, it is clear that the system was under complete control, and therefore qualifies under the mechanical classification.

In order successfully to create a nonobjective mechanical mobile, an artist needs more than a sense of beauty and a vision of the motions he wants. He needs in many cases the advanced technical know-how of a machinist. The artist who lacks this skill must be content with mediums which depend less on tolerance and accuracy.

Mobiles which secure their energy from moving fluids are quite different in appearance and construction from those in the mechanical group. The most common "arty" mobiles are those which move because of air currents. These currents are in the most part random, but we control them to some extent by opening doors and windows, and by blowing our breath. The latter case is quite common among impatient observers who will not or cannot take the time to enjoy fully the serene and relaxing movements of the mobiles in their natural state.

Although I have not seen it done, it would seem that it would be possible to use the currents in a natural or artificial body of water to accomplish the same end as that of the wind driven mobile. It would be interesting to build a small mobile in a glass bowl, and to see if there is enough energy in the convection currents to produce motion.

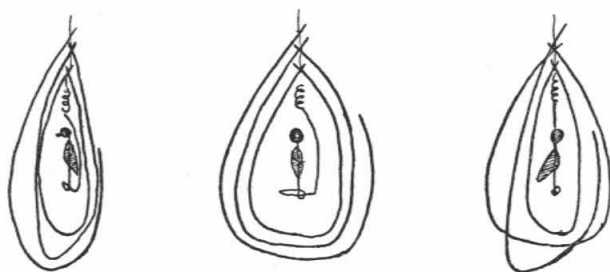




Typical "Christmas Tree"



Co-occupation of Space



Virtual Volume Birdcage

The energy of the earth's gravitational field, which is used to drive pendulum systems, should probably be classed with the magnets and steel ball, for although gravity is not controlable, it is constant and does not vary as do the fluid currents.

We have analyzed action in mobiles from type to source, but there remains to be considered the material that is involved in carrying the motion. This discussion will be related primarily to the use of materials in carrying motion in wind driven mobiles, for it is obvious that almost anything can be made to move through the linkages of a mechanical mobile.

The artist has at his disposal three types of material: line, plane, and solid. As sources of line we have wires and threads. As planes we have cardboard, sheet metal, stiff cloth, etc. As solids we have everything from ping-pong balls to lead weights.

Line in the form of threads is used to support weight, as an axis of rotation, and even as a source of energy for motion. A multifiber thread stores up energy as it is wound up by the turning of the elements it supports, and it releases the energy as it unwinds. Mobiles built with monofilament threads are quite static compared with those which use more common threads. Fishline swivels may be used successfully out of doors, where the winds are strong enough to overcome their friction, but generally they do nothing but restrict the motion of indoor mobiles.

Wire is used primarily to carry axes of rotation around one another, and to extend plane fins in order to increase the torque available from the prevailing air currents. Wire can also be used to outline virtual volumes. I once experimented with a *dual* virtual volume and in so doing created an illusion of three dimensional transparency or co-occupation of space. This was done by arranging two spirals so that they would pass through each other.

Plane is used on rods and by itself as area against which air currents may push. Even the slight difference in pressure on the opposite halves of the same side of a symmetrically supported ellipse is enough to cause it to rotate about the axis of suspension. As a line vanishes into a point as it rotates, so a plane vanishes into a line. By painting one side of a plane area the same color as the walls of the room in which the mobile is hung, a more complete vanishing effect can be obtained as the plane rotates.

Solids are used in places where weight is needed and where an area is to be visible at all times. Spheres are particularly adaptable to this use. A rotating solid body with holes going through it at different angles can be used very effectively, but one must be careful not to end up with a Christmas tree. A mobile which could have been a mere collection of ornaments was very well executed by a University of Washington engineering student. He hung different sized spheres by black threads from black rods. When the construction was placed in front of a black background, the supporting system disappeared, and the spheres were left floating in space as an abstract representation of celestial bodies.

Most hanging mobiles are either nonobjective creations or abstractions. One must be careful in selecting subjects for mobile abstraction, because not all subjects warrant the use of kinetic sculpture. Art students are sometimes given the problem of creating abstractions of common motions such as walking or flying. Abstractions of birds or fish are quite common, for the abstract forms can be made to move through the air as the animals move through their respective fluids.

## TWO POEMS

By Albert R. Hibbs

### THE BEATITUDES ACCORDING TO ST. HIBBS

**B**LESSED are the uncertain of principle: for theirs is the kingdom of Heisenberg.

Blessed are they who cut off their low frequencies: for they shall be renormalized.

Blessed are the spin-flippers: for theirs is the parity of Pauli.

Blessed are they who integrate over all paths: for they shall see Feynman.

### THE ASTROSTAT

**N**ORTH star, north star,  
How I wonder where you are.  
Stand you constant on the spot?  
Or do you wander 'round a lot?  
Azimuth and declination  
Should not suffer variation.  
The simple-minded navigator  
Could discover earth's equator  
If you'd stop this hocus-pocus  
'Round celestial polar focus.  
Heed the lesson of mathematics  
And cease diurnal acrobatics.  
North star, north star,  
How I wonder where you are.

## PROFITIOUS

By William Barlow

**H**OW lucky that the moon we have just covers up the sun;  
How sad would be eclipses with too big, too small, or none.

How fortunate that water, which dissolves such varied stuff,  
Can be obtained in purest form quite readily enough.

How lucky that we have *one* sun, instead of two or three,  
To simplify the finding of the Law of Gravity.

How grand to be a scientist on such a place as Earth,  
With naught but probability to praise for all this worth.

## THE GREAT BRAIN

By John Kidder

THE Senator sat at his desk studying a small pamphlet. The misty Washington sun lit a rectangular pattern on the expensive rug. The forms were quite distorted, for it was only nine in the morning.

The Senator was so absorbed in his pamphlet that he didn't take his eyes from the page as he reached for the cup of coffee on his desk. It was quite cool, too strong, and made his first cigarette of the day taste very harsh.

A blinking red dot and an appropriately soothing buzzer indicated a message from his secretary.

"Mr. Worthington is here, Senator."

"Fine! Send him in."

The door opened with an air of reserve and Worthington, hard working, not too intelligent, but eager as a year old dachshund, made his first appearance in three weeks.

"Welcome back, Herbert," said the Senator, rising with a rustle of paper and spilling a little coffee, "you look a bit tanned. California must have treated you well."

"Oh, I enjoyed it very much . . . very much. Crazy people, but a nice climate."

Looking at a littered desk he made an astute observation, "You look busy, Senator."

"Got a report here on G. E. Nothing too conclusive, but well worth note. We'll turn something up there yet. What'd you find?"

"Well, I started up near San Francisco: Berkeley, at the University there."

"The atomic physics branch?"

"No, it's a complete college. They have many universities in California."

"Well, is this one important?" asked the Senator.

A ten-minute discussion followed. Worthington tried to orient the Senator with the way that universities are classified in California. The conversation would have been humorous for anyone except the two who happened to take part. In an attempt to break the stalemate the Senator said:

"Well this Berkeley, weren't they the ones who beat Wisconsin in the Rose Bowl?"

"No, that was S. C., er, the University of Southern California."

"The southern branch?"

"No, that's U. C. L. A."

"Well, let's not go through this again! Just tell me what you found, if anything, at these places."

"I didn't really find anything at these places. But there's one called Caltech . . ."

"The one at San Luis Obispo?" (with a chuckle), "Love that name!"

"Oh, no."

"Well, my God, I don't see how anyone gets to the right classes in California. Where do they hide this . . . this . . ."

"Caltech. The California Institute of Technology."

"Oh my God, that's not related to M. I. T., is it?"

"No, no."

"Well, what are they up to?"

"Some stuff got stolen."

"Secret?" asked the Senator.

"I don't know."

"Well, what was its classification?"

"None."

"Complete incompetence! Don't they ever bother to classify things? How was it stolen?"

"Some kids broke in during the summer. Stole all kinds of stuff."

"Catch 'em?"

"Yes, but they didn't recover everything."

"What's missing?"

"Something they got from the big brain out there."

"Important?"

"Well, some quack was trying to tell me it was insignificant, but then I heard it was the biggest job the brain has ever done."

"What was it?"

"Pi."

"Pie! What the hell's pie? Apple pie?"

"No, Senator, they use it in circles."

"How in the hell do you use pie in a circle—are you trying to be funny?"

"No, Senator, really. It's some number that the Greeks thought up."

"Those Greeks! You can't trust 'em! That place's a hot bed of Reds."

"Well anyway, Senator, they had it to fifteen thousand places. I think that's what the guy told me."

"Fifteen thousand places! What does that mean?"

"It's accurate."

"How accurate do the Russians have it?"

"Five hundred places, they say. Got that from the F.B.I."

"Good work! Well, let's see . . . 500 over 15000, no 15000 over 500, that's 3, one zero, two zeros . . . no just thirty. Thirty!"

"What's the matter?"

"Worthington, we were thirty times more accurate than the Russians, and now they've caught up!"

"Can this be important, Senator?"

"Important! My God, yes it's important! Circles, Worthington. Great Circles. That's how they fly big bombers. We'd have pin-pointed Moscow and they'd have missed Washington by a mile. Now we're even. We've got to stop that paper. And talk to the Brain! Such laxity can't be tolerated. Might even be subversion. We'll see this big Brain, all right!"

"Well, Senator, this Brain. It's not really a man."



"None of these scientists are men, Worthington! That's the trouble with our research."

"It's really sort of a machine, Senator."

"They're all machines! I've seen them. Machine, man, you can't tell the difference with those bright boys."

The Senator punched a button on a brown box that was on his desk and yelled, "Miss Clarkson!"

"Yes, Senator."

"Miss Clarkson, get me on the first flight to California. Er, Worthington, where is this place, San Diego, San Francisco? Where do I go?"

"I guess Los Angeles is as good as you can do."

"Make it Los Angeles, Miss Clarkson. Get reservations for three, a hotel out there included. Cancel everything through Thursday. I'll be gone for three days."

"I'll have them immediately, Senator."

Worthington broke in at this point. "Er, Senator."

"Yes, Herbert."

"About this big Brain, it's not going to do you much good to . . ."

The Senator's jaw became firm. "Worthington, I didn't hire you as a confidence man just to tell me I'm wrong. I know infiltration when I see it. I know the kind of secrets the Reds are after. I'm going to talk with this Brain, whoever he is. Now get out and let me study this G. E. paper!"

"Yes, Senator."

"Be back in three hours, ready to go. Get Robinson. He's coming too."

"Yes, Senator."

★ ★ ★

Three hours later Worthington returned, the eager dachshund ready to follow his master. Robinson followed close behind, his bruising efficiency showing all over.

"Well, Miss Clarkson, everything all set."

"As best as I could do. You're on the four-thirty flight, reservations at the Statler. Sound okay?"

"You always do well by us."

"What are you going to do, or is that classified, too?"

"We're going to investigate the new big Brain at Caltech."

"Is he handsome?" She smiled.

"He isn't really a man. He's sort of a machine."

"A machine! You guys are going to investigate a machine?"

"That's what the Senator says."

"But really, Worthington, you know a machine can't be disloyal."

"How can you tell?"

"How could it be disloyal? It can't think."

"Can't think! It could beat you at canasta or chess or almost anything. You should see those things go!"

"I still think it's funny."

Robinson straightened up. "Miss Clarkson," he said, "I must remind you of our motto: 'Nobody is always faithful.' Now this can mean a machine, a man, dog, anything. The Senator says so."

"I suppose," she answered, resigning herself. "What if it's guilty?"

"I dunno. Ship it up to San Quentin for fifteen years, or so. Be a hell of a moving job."

Openly smiling, she said, "And if it's high treason you'll string the whole thing up on a big platform and hang it!" She laughed out loud.

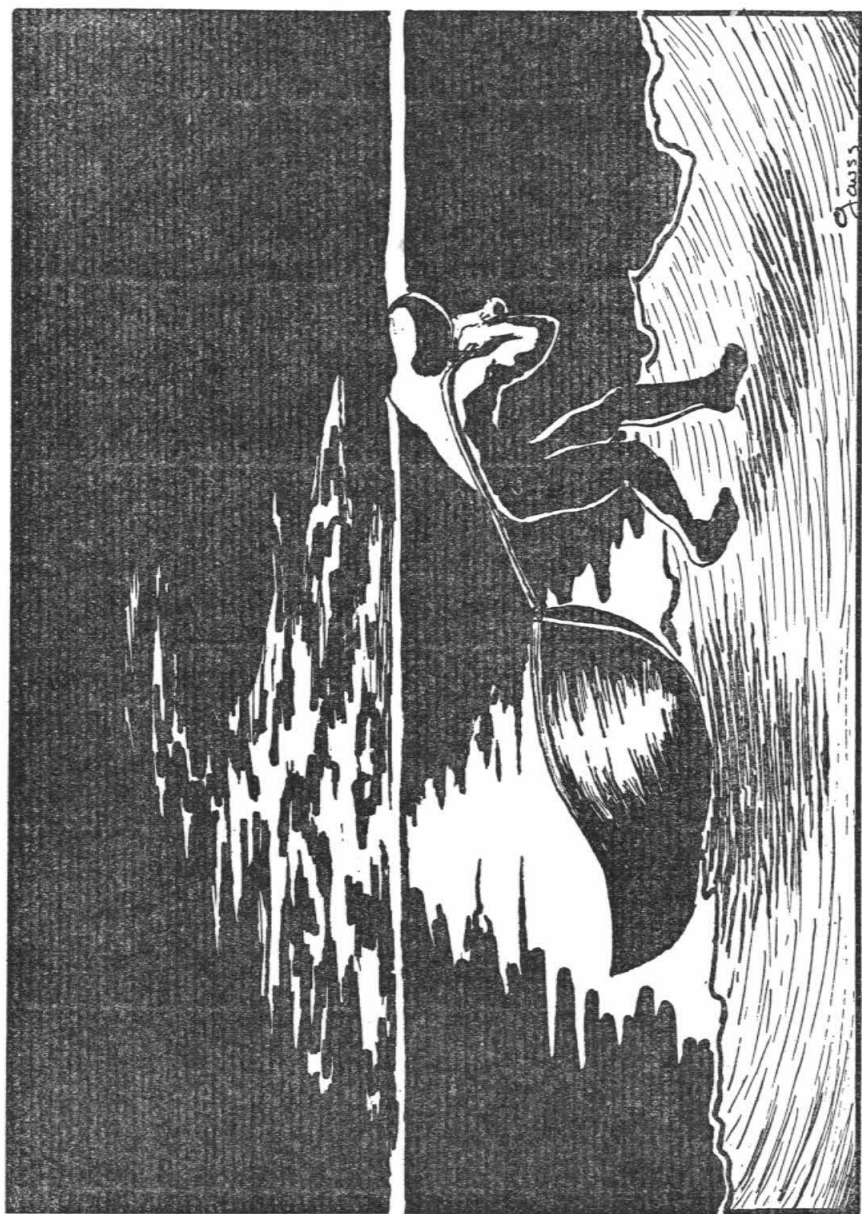
"Miss Clarkson," said Robinson, "I don't think you're showing confidence in our work. We've got to stick together. The Senator says so."

★ ★ ★

The elevator came to the third floor, and the Senator waited for an old lady to leave, then went half running to his office.

"Ah, you're back," he said, smiling at the two men. "Well, if you fellows are ready, we'd best be off."

"Yes, Senator," came the reply, in unison.



## LE DUBOIS

By Dave Yount

**I**T WAS big country, as vast as it was beautiful, and it seemed wasted there so far from everyone and everything. It seemed wasted on the very wild life it supported, for there nature had her own way virtually uncontested by man.

The sun had already passed behind the tallest of the pine trees to the northwest as our canoe coasted silently into shore and stopped with an abrupt scraping sound on the sandy beach. Wearily my companion pulled himself from the front of the canoe, taking the carbine with him and placing it against the trunk of a nearby birch. The soft lapping sound of the crystal clear water against the boat was again interrupted as I handed Jim our pack and waded ashore with the bed-rolls. Though my knees throbbed numbly, I knew we could not rest long before starting the portage to Lac Bastian. It was still a dozen miles to camp Gochet and while a canoe is usually swift, we knew it would not be so at night in the narrow, winding channels of dead water or while being carried over the rocky portages that lay ahead.

As we sat leaning against the packs with legs limp and out-stretched, we faced back across the mile long lake toward the setting sun with its pale color floating gently on the lake's quiet surface. Now and then the pattern was broken as a solitary loon surfaced only to dive again several minutes later. Occasionally it would call sadly as if to a departed mate and then resubmerge, leaving ripples like blemishes in a work of art to be smoothed out by the master painter.

Several hundred yards along shore to our right the perfection of the forest marred, or rather enhanced, by a small cleft revealing a stream, which, like a small child, was unwilling to quit

its nimble frolic even after its mother slept in peace. Here we knew its playthings would be in abundance, darting this way and that in search of an uncautious insect and being ever cautious themselves of a hungry bear who might be on the bank more patiently waiting for his dinner. And near here in a back water we knew a moose might be found, as we had often found them, standing shoulder deep in the water and feeding on the fresh, new roots of the lilies and water plants and protecting himself from the flies, especially the stinging frappabore.

Near the far shore a small but thickly wooded island was dwarfed by a stand of great pines, which might have taken refuge there when fire ravaged the neighboring area a half-century before. They had challenged the hard Canadian winter too and had prospered by it. In their isolation even the hand of man seemed of trivial concern. Aloof and proud they stood as if unwilling to look up to anything or anyone but the sun and the stars.

The nearby call of a timber wolf startled us from our thoughts, and we knew we must go on, for already the stars shown forth as welcome but dim companions. Soon the northern lights would be seen like soft green cotton candy, cascading across the darkening sky, or like spun glass scattered here and there as if by a careless hand. And with a little luck we would lay down tired heads on hard but pleasant ground and know the sleep that comes after a long but happy day.

12 JUNE 1946

By Russ Hunter

**Y**OU could have written this. You were there in the middle of June, 1946, seven years ago. Except you couldn't write much then . . .

This morning was pretty. I like the sun in the morning. I like the birds in the summer. I like summer and morning and birds. I like Saturday too. Today is Saturday. I am at the Circus. Papa, Joe Kellogg, and me are at the Circus. Joe Kellogg plays with me. This place has animals and lions and elephants, mostly elephants. It is in Hartford. We are at the Circus on a holiday. Lots of people go to the Circus today. The street is crowded. Grown-ups are walking around selling fluffy whistling-birds-on-a-stick-for-two-bits. I want one. A big man has some pink stuff. "I want some of the pink stuff, papa. Please? . . . Ohhhh." Let's see *all* the tents . . . "What's the smell in here? Look at the animals. "Look at the green stuff on the hippo-po-what-ever-you-call-its teeth!" Look at the polar bear in the ice water. "Papa? I want to go to the bathroom!" . . . This isn't a bathroom. You mean I've got to tinkle in this trench. Look at all that *stuff* down there. "I don't have to go after all." . . . "What's that on the canvas?" . . . "Oh—that's how they keep the water out. Parafin like mama uses on jelly?" . . . "Oh."

*And you've forgotten already the standard Circus acts and stunts till . . .*

Look, over that K section, where the band is. The tent is burning. "Do we have to go?" "The show isn't over." . . . "Papa!! Let's go out this way. It's shorter." (There weren't many people between the tent wall and you, only the bleachers.) Look, see the flags waving through the hole in the tent. Let's run. People. People all over. That man's hand is bleeding. Why is a

grown-up crying? WHOOSH—————SWEEEEEE . . . what's that? . . . WHOMP!!!! The tent just fell where we were sitting. We were just standing on the ground that's covered with blackened canvas. Everything is black and flat. But we're safe. Wait!! Where's Joe?!?" What'll we tell his Mother? It's hot . . . Oh. "HEY JOE . . . HEY JOE!!! CUMMERE. CUMMERE Joe. Come here Joe" . . . "How'd you get out Joe?" It's hot. "Why are we going home on a bus, Papa?" "How'd you get out, Joe?"

\* \* \*

*This was the Barnum and Bailey, Ringling Brothers Circus fire at Hartford, Conn., on a Saturday, June 12, 1946. 112 were killed. One little girl was never identified. She lies in a grave tended by a Hartford Police Detective (ret.) and another fellow who helped search for her parents. Hartford Florists Association will provide flowers for her from now on. Circus tents are supposedly fireproofed now. For some reason when Barnum and Bailey, Ringling Brothers Circus comes to Hartford they play open-air in a stork-car stadium.*

## TWO POEMS

By M. H. Davis

### COMMENTARY ON COSMIC RAY PHYSICS

I DON'T like mesons,  $\pi$  or  $\mu$   
Or  $\kappa$  to mention a few.  
But I've nothing but praise  
For the various rays:  
 $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $h\nu$ .

### EPITAPH

THE WORLD mourns the passing of Sir Arthur,  
Whose vision stretched to Arcturus, and farther.  
Now he is in his individual heaven.  
Where  $1/a$  is *exactly* 137.



## II. PROBLEMS OF THE MOTION PICTURE

*By* Walter W. Lee, Jr.

**M**OTION pictures have been shown commercially for only about sixty years. In this time a very disturbing pattern of attendance has appeared and has been analyzed by the Audience Research Institute. Though there have been about four-billion paid admissions a year, nearly two-thirds of these may be attributed to the younger one-third of the population. There is a group of about thirty million persons, mostly under twenty years of age, who go to the movies repeatedly and almost by habit.

Consider the basic product of the major Hollywood studios, the "A" feature-picture. About fourteen-million people will see the average "A" film by the time its run is complete; of these, eight-million will be less than thirty years old. The average age of attendance at "B" pictures is even lower.

The simple fact of the matter is that persons between twenty and thirty years old go to a film once in awhile; those over thirty go but rarely, and those over fifty go almost not at all. The millions of people who are physically and financially able to attend motion pictures and do not, stand as a challenge to the industry. Their importance is heightened at the present time because of the promised improvements and expansion of television—a form of amusement with an even simpler habit pattern.

Why do older people stop going to the movies? Elmo Roper's researcher's reported such comments as "silly," "pointless," and "unrealistic." Can it be denied that these are true of all but twenty or so of Hollywood's yearly production of more than four-hundred pictures?

I think that the bulk of the movie makers have underestimated the maturity and intelligence of their potential audience. It is well to bear in mind that the average level of education is in-

creasing steadily in the United States. The average adult over twenty-five has had nine years of school and at the present time 42% are getting twelve years of formal education. It is probable that nearly ten-million people have read Herman Wouk's excellent and mature piece of work *The Caine Mutiny*. James Jones' *From Here to Eternity* is another example of a mature novel that has been eminently successful. Mentor's paper-back books on such subjects as anthropology and psychology have been quite popular for several years. The demand for them seems to be continuous.

Before going further, I had better make clear what I mean by the term maturity as applied to motion pictures. First, maturity does not imply tragedy. Consider Shaw's *Pygmalion*, the Alec Guinness comedies *The Lavender Hill Mob* and *The Man in the White Suit*, or that delightful film *The Moon is Blue*.

What are the characteristics of a mature motion picture? The action and dialog must be compatible with the framework of the story, the characters must seem to be individuals and not stereotypes; and, in general, the story should develop in a consistent manner, the ending should match the overall mood of the film, and the treatment of sex should be honest and not substitute violence for passion. These ideas are not intended to be absolute rules, but only to convey what I have in mind when I speak of mature motion pictures. Any combination of these ideas could probably be violated very successfully in a satire or to achieve a special effect.

The idea that maturity is "box-office poison" would now be laughable were it not still so widely held. Despite the fact that the mature audience must perform the task of separating the exceptional pictures from the hundreds of machine-made movies, exceptional motion pictures such as *Roman Holiday*, *From Here to Eternity*, *Shane*, *Julius Caesar*, and *Stalag 17* were box-office

attractions. Television has not hurt these films; TV's appeal is similar to that of the "B" pictures and its attraction for the mature audience is slight.

Adolph Zukor, Chairman of the Board of Directors at Paramount, has said, "Pictures with abnormal staying power must be made. The public is just not going to a theater for the sake of seeing just any picture."

Producers who pander almost exclusively to the immature tastes of juveniles often attack the "high-brow critics" as non-typical. The point must be granted. The critics are not typical of the people who go to the movies by habit; but, as Gilbert Seldes has said, "if it is true that the critics are more intelligent and more demanding than the average moviegoer, there is a chance that they represent the attitude of the people who have stopped going."

In several of the major motion picture studios I have studied, the factory-like atmosphere was very apparent. I feel subjectively that of the major studios it was least present at Paramount, and at the animation studios of UPA it was nonexistent.

Other factors which work against consistent high quality from the major studios are: front office domination, lack of interest in aspects of film production other than one's specialty, and the common use of many writers for one film. Evelyn Waugh has said, "Each book purchased for motion pictures has some individual quality, good or bad, that has made it remarkable. It is the work of a great array of highly paid and incompatible writers to distinguish the quality, separate it, and obliterate it." Unfortunately this bitter remark is often valid. One of the objectives of the National Board of Review as expressed in *Films in Review* is for "the men and women who create movies to be passionate about every aspect of them—actors to be interested in cinematography, cinematographers in costumes, costumers in scripts, scenarists in electronic tape, and so on."

It is my opinion that the most important single item working against the production of mature films is the present Production Code of the Motion Picture Association. Without the seal of the MPA, a film can be shown in only about five-hundred of the nation's eighteen-thousand theaters—a considerable economic sacrifice even without the handicap of other censorship.

Recently the exceptional comedy *The Moon Is Blue* did not meet the Code's standards. I fail to see how this wonderfully witty film could corrupt anyone. The administrators of the Code also insisted on the deletion of the words "hell" and "damn" from the Hal Wallis picture *Cease Fire*; this was a realistic film shot in Korea which dealt with soldiers on a reconnaissance patrol. This action of the MPA impressed me as completely absurd.

Samuel Goldwyn has said, "Most of our pictures have little, if any real substance. Our fear of what the censors will do keeps us from portraying life as it really is. We wind up with a lot of empty little fairy tales that do not have much relation to anything . . ." The atmosphere of extreme caution created by the fluctuating interpretations of the Code is one of its worst aspects. Specifically the Code forbids: explicit or attractive treatment of adultery or illicit sex, "any inference of sex perversion" (how is this to be interpreted in the light of modern psychology?), the subject of white slavery, "sex relationships between black and white races," and on and on . . . There is quite a list of words that cannot be used.

The Production Code is largely responsible for: the senseless brutality of many pictures, the concept that pure love is passionless and good women sexless, as well as the idea that marriage is about like playing house. Movie divorces with few exceptions are for trivial reasons only—never for sexual incompatibility or adultery. It is "unthinkable" that a film putting forth the ideas

of modern psychology and anthropology in direct opposition to religious dogma could be made. (I believe a really great film could be made using the idea expressed by Sir James G. Frazer in *The Golden Bough*, i.e., that the evolution of human thought has been from magic through religion to science to . . . ?)

Motion picture writers are also extremely limited by the Code. Villains obviously cannot be members of any recognizable minority or religious group and their motivations are also limited by the Code. The result is the run-of-the-mill detective stories and westerns with their nearly indistinguishable villains. The censorship of the Jewish character Fagin in J. Arthur Rank's *Oliver Twist* is a case in point. The MPA's Code is also probably responsible for the word "sexy" which refers to what Gilbert Seldes has called the "superficial and immature aspects of the relation between men and women."

The point I wish to make is simply this: while the basic idea may be a good thing, in practice the Production Code of the Motion Picture Association has caused a general substitution of the violent, the "sexy," and the juvenile for the real and the mature. Bosley Crowther of the *New York Times* has said that it has long been an "apparent fact that the Code as written and administered is an ambiguous and antiquated thing." The Supreme Court seems willing to include the motion picture under the freedom of speech and the press established by the first amendment to the Constitution. The Supreme Court decisions imply that there are no Constitutional grounds for the pre-release censoring of motion pictures. (Pornography and slander are, of course, illegal and punishable by law.)

It must be admitted that what is mainly communicated by a motion picture story is emotion, but the great social content of such films as *Grapes of Wrath*, *The Lost Weekend*, *The Ox-Bow Incident*, *Gentlemen's Agreement*, *The Big Carnival* (*Ace in the*

*Hole*), and many others cannot be denied. I find it deplorable that Hollywood has not fought for its freedom of expression; instead, the industry has submitted meekly to censorship and has even imposed their own Production Code. I do not advocate complete abolition of the Code but I agree with Mr. Samuel Goldwyn's remark that there is "need for revision of the motion picture Code so that the motion picture industry will be on a basis of sound and decent self-regulation in keeping with the times. I believe that the Code can be revised so that our pictures can have more substance and the public can have better entertainment without any departure from the fundamental moral standards we all believe in."

Those sincerely interested in the actual protection of the innocent from inaccurate or misleading information and traumatic experience have my sympathy. They would do well to speed the process of enlightenment so that the innocent will be capable of recognizing error and of withstanding the many unusual experiences they will encounter, not only in movies, but also in real life. Those who are interested only in promulgating their own standards of "right" and "wrong" as absolute, and in forcing these standards on creative work of any kind are guilty, not only of considerable egotism, but also of working to stifle science and art. Anthropologist Margaret Mead has said, "those who care about literature and art, about science and medicine, and about protecting the young, should be trained against labeling anything pornographic when it is *not* pornographic."

It must be remembered that there are financial and social problems involved in having some films for adults only. But separation of audiences will probably remain. There is also considerable risk in changing the basic appeal of the majority of films from children and adolescents to the older two-thirds of the population. This risk is well worth taking—especially since

the presentation of mature stories done with great talent and technical care is the field where the motion picture is at present vastly superior to television.

In the previous discussion I have frequently mentioned anthropology and psychology. How woefully ignorant of these subjects were the authors of the Code. Their loose talk of perversion and their calling adultery the love "which society has always regarded as wrong" are only two examples betraying their lack of knowledge of two subjects which should be very familiar to anyone who would censor the work of others. In other times and cultures adultery was, and is, considered completely acceptable. What is called perversion in one age and society is the accepted form of behavior in another.

All those who wish to censor the motion picture in particular and art and literature in general would do well to have as deep a knowledge of anthropology and psychology as is available. What do the censors substitute for a knowledge of man and his thought processes? Their common attribute seems to be an intuitive feeling of absolute moral dogma.

The reason for not revising the Code which has been put forth—i.e., that standards of right and wrong are permanent and do not change—seems to me to be in conflict with the findings of anthropologists that the abnormality which we call wrong is simply failure to adopt socially-valued drives. Which drives are valued is known to be very much culture-linked, and cultures evolve. I believe that there should be a complete revision of the Production Code. I suggest that a group of executive producers such as Samuel Goldwyn and Stanley Kramer and directors William Wyler, Fred Zinnemann, George Stevens, and Billy Wilder should collaborate with a psychologist and an anthropologist to draw up a new Code, a flexible document amenable to liberal interpretation. The new Code should be one to which

the film makers would willingly conform in their film production. It should stand as an example of what is considered good taste, not as an absolute law which all must strictly obey.

The business management, as a practical matter, should not interfere with production after the creative personnel have been selected. Production should be independent of distribution—i.e., the exhibitors should not be a power in production because their talents certainly lie elsewhere. A sincere attempt should be made to win back the lost audience without trickery, for their continued patronage is desired.

While the film makers are producing films of adult interest, the publicity men have the very difficult task of convincing the people that motion pictures are worthy of their attention as a form of entertainment. This job will be quite as hard as that of the directors, writers, and actors. The gradual change in appeal will not be easy; I feel that it needs to be done for the economic good of the industry as well as for the entertainment and artistic value of the medium.

The regeneration of motion pictures is even now going on. Probably the most important aspect is the increase in the number of really good films which are dealing with problems that are of interest to the mature mind. A study of the films over the last few years and those now being produced clearly shows that the proportion of mature films is increasing.

The successful defiance of the Production Code by the recent United Artist release *The Moon Is Blue* and other films and the recent Supreme Court rulings which are favorable to increased film freedom are favorable signs. The interest in the new means of photographing and presenting pictures is also a sign of enthusiasm for the improvement of the medium. People in Hollywood have been getting pretty excited about such new film processes as 3D, CinemaScope, Cinerama, and VistaVision. The



excitement is to a large extent justified. Though at the time of writing no exceptional dramas have been released in any of these new processes, the creative atmosphere is heartening.

It seems to me that the benefits of the earlier gimmicks were misused. The only purpose in life for most 3D films has been to shock the audience, and some of them did just that quite well. The producers should have waited until some of the minor bugs were ironed out, but I refuse to believe that 3D is permanently dead.

CinemaScope with its aspect ratio (width to height) of 2.55 and its stereophonic sound seems to be best suited to scenic-spectacular films. Twentieth Century-Fox is concentrating on this type of film and is shooting them all in CinemaScope. The mural-like pictures are great for large scale action, but the picture shape is not well suited for—and has as yet not achieved—a feeling of sustained intimacy. It is also true that the anamorphic process now in use spreads the 35mm picture to the extent that photographic quality suffers considerably, not only in resolution of detail, but also in the projection of emulsion grains which boil madly over the screen. This could be corrected by use of the VistaVision process which will be mentioned later.

Cinerama is exceedingly well suited for scenic presentation, and its high-fidelity stereophonic sound is by far the best system in use. Cinerama is an engulfing and overwhelming medium; it could probably be used with spectacular effect for a very restricted type of story telling, but this has not been tried. Cinerama is, of course, quite justifiable and financially successful without story exposition.

Cinerama's strength is also its weakness. It uses three special projectors, a special screen (75' x 26') and a six track sound strip. Only eleven large population centers have Cinerama theaters, and film production is technically difficult. Two minor distract-

tions are the slight jiggling along the two boundaries between the three pictures and the fact that the screen is not continuous but is composed of ribbons. In any case, there is little doubt that Cinerama will have a place in commercial exhibition for quite some time.

Paramount Pictures Corporation has made what I consider to be the most basic step forward in motion picture production. Their process is called VistaVision and its use is freely available to all film makers. VistaVision's most important contribution is improved picture quality (better resolution and less grain effect combine to allow sharp, clear photography of objects both near the camera and in the distance). The better results are obtained by running the film through the camera (not the projector) horizontally and exposing nearly three times as much negative as is standard. The print released to exhibitors is made from the negative by a system of optical printing which rotates the picture and reduces it in size without loss of quality.

It is very important to remember that VistaVision is a special system of photography and printing only; VV is unique among the processes mentioned in that it does not require any special equipment for exhibition. When shown with regular equipment VistaVision presents a picture with improved technical quality.

Exhibitors will applaud the fact that their front seats are now as good or better than any others, and that the viewing from all positions is greatly improved. I've watched showings on Paramount's 62'6" x 35'3" screen from a distance of a few feet back and saw a remarkably clear picture. I would personally prefer to watch VV from about two screen widths back, but the process acts to make good seats run closer to the screen than before; the number of good seats possible for a given screen is greatly increased for VistaVision films.

Paramount sensibly recommends seamless screens as large as

possible, but no special size is required. The exhibitor may also use standard sound with his present equipment or, if he so chooses, he may distribute the sound over a three horn system using special equipment. This form of directional sound is effective in theaters having very large screens. The exhibitor also has free choice as to what shape of picture he prefers to show. By using aperture masking or a variable prismatic expander lens, projection versatility is increased.

With all the unusual ways of presenting films in use today, it is well to recall that the process is only a recording medium; when it dominates the production, artistic and entertainment value is usually lost. Early 3D and CinemaScope films were examples of this fact.

Stanley Kramer has told me that he believes the most important aspect of the new development is the choice now allowed a film maker in the form he desires to present his story. A producer can select which of the many recording mediums will be best suited to the motion picture story he wants to film.

Thinking back over the films of the past few years, I find no picture that would not have been enhanced by VistaVision. I wish Paramount had developed the process in time for *Shane*. Recently I mentioned this idea to Loyal Griggs, Academy Award winning photographer for *Shane*. It was interesting to watch his eyes light up at the suggestion. Kramer's film *High Noon* would have been greatly improved with VistaVision; color, however, would have detracted. Subdued and very carefully handled color might have added to *From Here to Eternity's* already great impact. VistaVision would certainly have added.

In connection with VistaVision, incidentally, Paramount has worked out a system which will greatly improve dissolves. This technique would have improved William Hornbeck's beautifully artistic, long lap-dissolves in *Shane*. An improvement in

dissolves is a very important improvement indeed: they add greatly to the smooth flow of a motion picture. *The Four Poster* abounded with magnificent match dissolves which added much to my enjoyment of the film. *From Here to Eternity* edited by William Lyon, also had considerable creative work. One dissolve stands out. The beach tryst of Karen and Warden ends in a shot of ocean spray which dissolves into smoke. The smoke is then revealed to come from Prew's cigarette as he holds Lorene in his arms. These concurrent scenes of parallel action are exceptionally well tied together by this editing effect. These examples indicate how improved optical effects could add to films. The improvements in photography and optical effects now possible with VistaVision constitute a huge step forward in the art and science of motion pictures.

Paramount's contribution to technical quality is paralleled by a sustained high standard of production. Throughout 1953 they released *Roman Holiday*, *Shane*, and *Stalag 17*—three films which averaged more than six Academy nominations apiece. Their technical Award winner *War of the Worlds* upped their total of Academy Awards actually won to seven. Columbia came in first, winning eight Oscars—all for one film, the exceptionally well made *From Here to Eternity*.

Considering the unreleased films at the time of writing Paramount has the largest number of mature and exceptional films. As yet unreleased are *About Mrs. Leslie*, Shirley Booth's second film; *Sabrina Fair*, producer-director Billy Wilder's film with Audrey Hepburn, William Holden, and Humphrey Bogart; *The Bridges at Toko-Ri* with Fredric March and William Holden, directed by Mark Robson; *Conquest of Space*, George Pal's fourth science fiction film with excellent technical effects by John Fulton; and *Rear Window*, which is Alfred Hitchcock's best film to date—James Stewart and Grace Kelly are featured.

Paramount in the last few years has had the benefit of many of the best directors in Hollywood. As I pointed out in my article in the preceding issue of *PENDULUM*, directors are the most important individuals connected with film production. Directors serve as the most infallible single index of a film's merit. I will here mention in alphabetical order a few of the directors who seem to turn out good work most consistently in spite of the restrictions placed on them by the Production Code.

Edward Dmytryk is an expert in camera angle as a means of interpreting dramatic content. Dmytryk has learned much from the great films of the past and is effectively using his knowledge to enrich his own work. Edward Dmytryk is a careful worker who is very conscious of the composition of his scenes; he often works with sketches. *Crossfire*, *The Sniper*, *The Juggler*, and *The Caine Mutiny* are examples of his work. They illustrate his special talent for psychological films.

John Ford has shown a strong preference for constructing films around natural incidents. His recent films *The Quiet Man* and *Mogambo* which strive for the mood of the location are good examples. The former captures exceptionally well the lyrical atmosphere of the Irish countryside. It must be admitted that Ford's work is uneven, but he has to his credit such excellent films as *Stagecoach*, *The Grapes of Wrath*, *How Green Was My Valley*, and *The Informer*. The last three films each won Ford an Academy Award for best direction as did *The Quiet Man*. His four Oscars constitute a record in the best direction category.

John Huston, like Dmytryk, has a keen eye for camera angle. He also makes exceptional use of camera movement related to film editing; this technique is utilized even in his recent light-hearted film *Beat the Devil* with Humphrey Bogart. Huston directed Bogart's best performances in such films as *The Maltese*

*Falcon*, *The Treasure of the Sierra Madre*, and *The African Queen*. Huston's feeling for the motion picture medium is also apparent in his *The Asphalt Jungle* and *Moulin Rouge*.

Elia Kazan obtained his experience on the stage, and his passion for actuality probably is the result. Kazan makes dramatic use of plain people and their environment and daily routine. *A Tree Grows in Brooklyn*, *Boomerang*, *Gentlemen's Agreement*, *A Streetcar Named Desire*, and *Waterfront* are good examples of his work.

Joseph L. Mankiewicz holds two consecutive Academy Awards for 1949 and 1950 for his *A Letter to Three Wives* and *All About Eve*. Mankiewicz also directed *Five Fingers*, *Julius Caesar* and *The Barefoot Contessa*.

Mark Robson is included as a very promising young director. He has to his credit *Champion* (in which Kirk Douglas achieved stardom) and *Home of the Brave*; both are exceptional films directed for Stanley Kramer. One of his early pictures was the unusual horror film *The Cat People*. At the time of writing he just finished *The Bridges at Toko-Ri* for Paramount. Robson has had a broad background in many aspects of film making including the film editing of Orson Welles' *Citizen Kane*. Robson is careful of camera position as related to the point of view of the audience.

George Stevens won an Academy Award for *A Place in the Sun* in 1951. Stevens also received the 1953 Irving Thalberg Award. His recent film, *Shane*, is an artistic triumph which makes effective use of Loyal Griggs' photography. Stevens manages to get good performances from everyone. George Stevens stresses simplicity and humanness in his pictures and strives for honesty of approach.

Billy Wilder's best films to date have usually had a rather cynical twist—*Double Indemnity*, *Sunset Boulevard*, *The Big Carni-*

*val (Ace in the Hole)*, and *Stalag 17*. His outstanding competence as a director won him an Academy Award for *The Lost Weekend*. Wilder is now working on a film version of Lindbergh's *Spirit of St. Louis*. It will be interesting to observe what he will do with this story which is basically idealistic.

William Wyler has consistently made fine films that draw attention to real problems. His technique and command of the medium seem to be continually improving. Camera placement and cutting construction are important elements of his films, but Wyler frequently draws his themes from the stage. William Wyler has won Academy Awards for his direction of *Mrs. Miniver* and *The Best Years of Our Lives*. Some of his other fine films are *Dodsworth*, *Wuthering Heights*, *The Little Foxes*, *Detective Story*, and *Roman Holiday*.

Fred Zinnemann's last two films, *High Noon* and *From Here to Eternity*, are as good as any I have ever seen. His other films, *The Search*, *The Men*, *Teresa*, and *The Member of the Wedding* are remarkably fine. Zinnemann seems to work best with naturalistic, realistic stories. He favors, when possible, the use of unfamiliar faces but has used all-star casts to great effect. Director Zinnemann says he prefers to work on location and to use non-professional actors. Fred Zinnemann likes to tackle fresh problems.

These are the directors who have made the motion pictures I have most enjoyed in the last few years. William Wellman, Alfred Hitchcock, Anthony Mann, and many others very often make excellent films. They are all to be congratulated for the difficult job of making interesting films in the face of the MPA's Production Code.

The fact that the creative work of these directors is frequently hampered by the Production Code is what I consider to be Hollywood's greatest immediate problem. It is true that they have made fine pictures by working around and with the Code;

nevertheless, the restrictions that have been placed on directors are obvious in most motion pictures, and the play-it-safe approach has scuttled many a film's claim to maturity.

Producer Stanley Kramer is another man who has consistently worked with sincere effort to create good motion pictures. He has worked in dozens of different jobs including three years of film editing. Kramer's first few films (*Champion*, *Home of the Brave*, and *The Men*) were produced with considerable financial difficulty, but they were very successful. Kramer has the unusual talent of selecting top-flight acting and production personnel before they are earning top-flight salaries.

The three films just mentioned were of primary importance in the careers of actors Kirk Douglas, Frank Lovejoy, and Marlon Brando as well as directors Mark Robson and Fred Zinnemann. Kramer also "discovered" Grace Kelly for *High Noon*. His bit players are invariably well chosen. Stanley Kramer's selection talent is also evident in his early purchases of *The Caine Mutiny* and the film he is now working on, *Not as a Stranger*. These were both purchased before their astronomical success would have put them out of easy financial reach.

I like to stress Kramer's sincerity of approach as one of his greatest assets in film production. He made *Cyrano de Bergerac* come to life through José Ferrer's magnificent portrayal. Some of Kramer's other excellent films are *Death of a Salesman*, *My Six Convicts*, *The Four Poster*, *The Sniper*, *The Member of the Wedding*, *The Wild One*, and *The Juggler*. Stanley Kramer's record for fine films is, I feel, not equaled by any other producer. It is unfortunate that some of them have not been financial successes. The trend seems to be that even the slower ones will ultimately make money, for they have lasting significance and are usually successful in other countries. I think that a lot of the difficulty with such fine films as *The Four Poster* is the result of unsure publicity handling.



I believe that Kramer's success will be assured if he follows each film from story selection to publicity and works only on one film at a time. Now releasing through United Artists where he got his start as a producer, he has told me that he intends to do just that. In a letter to *Films in Review* Stanley Kramer said he believes that "the future is bright, one way or another, for the company that hand-tools its product. There is a need for the producer who makes only a few pictures—slowly, with great care, and with imagination. For this kind of picture there will always be a market. The only certain thing today is that there will always be a market for quality entertainment."

Hollywood has great problems in its very organization and in the Motion Picture Association's Production Code. However, I can only agree with Stanley Kramer that the future is bright—if the film makers will meet the challenges which face them. They must meet these problems honestly and with a sincere interest in improving the quality of their productions.



*High Noon* (Stanley Kramer-United Artists) directed by Fred Zinnemann



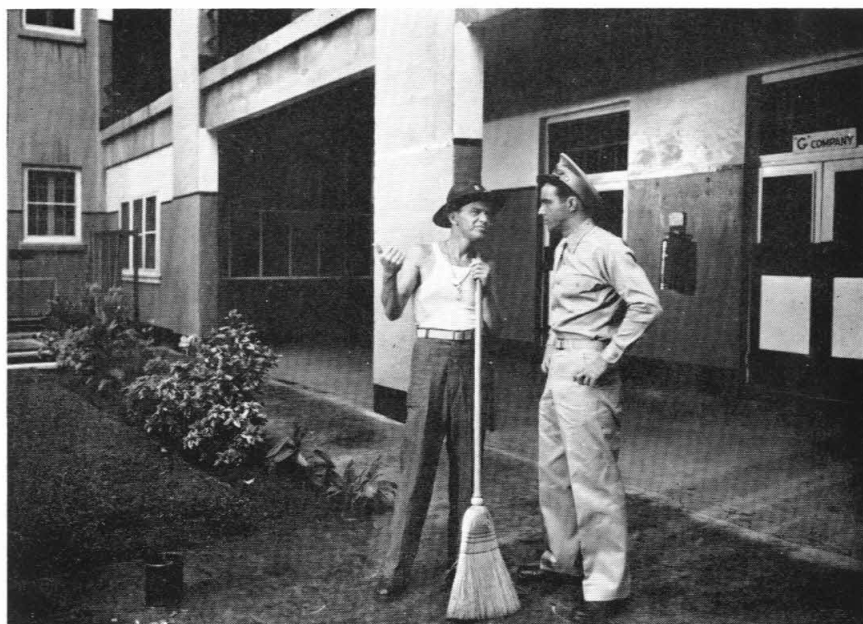
*Sabrina Fair* (Paramount) directed by Billy Wilder



*Stalag 17* (Paramount) directed by Billy Wilder



*Shane* (Paramount) directed by George Stevens



*From Here to Eternity* (Columbia) directed by Fred Zinnemann



*Sunset Boulevard* (Paramount) directed by Billy Wilder



*The Caine Mutiny* (Stanley Kramer-Columbia) directed by Edward Dmytryk



*The Caine Mutiny* (Stanley Kramer-Columbia) directed by Edward Dmytryk

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