

DOUBLE PLAY PASSIVE HEATING AND COOLING

A business plan concerns investment
Even if it destroys life

A poem, the opposite, concerns life
Even if it destroys investment

Our invention calls for a poem, a business poem

The Double Play is a passive system to heat and cool buildings
It has no moving parts except water flowing in tubes

It requires no outside power though it may use a PV pump

The cooling works in all climates
where evaporative coolers suffice

The heating works wherever there is sun and the days' highs
rise above freezing

THE SUN IS HOT THE SKY IS COLD HEAT RISES

THE SCANNER

For our poem and then our plan you need an instrument

This is an IR scanner, it looks like a pistol, its infra red eye sees the temperature

PROSPECTING FOR HEAT

One prospects with the infra red scanner
A parking lot on a sunny winter day
is perfect

We are not after veins of gold, we look for color
The color dark and slopes of heat

Red, blue, green, black, and we need orientation
What faces the sun?
What do we find?

Snow and ice on the ground
You say 120°F for the dark door on that Toyota?
Typical luck for winter prospecting

How hot do you want your house?
Won't 65°F or 70°F do?
It looks as if there is heat to spare

SELECTIVE BLACK

But we have hardly started our prospecting
there are colors hotter than black , though nothing cooler than white

The door on the Toyota would be 150°F not 120°F
were it selective black

No animal ever ran on wheels
No plant ever grew its own greenhouse
Nature left out selective black

Selective black is so stingy, absorbing but never radiating
Maybe nature did not want it
It listens, but never speaks, you must touch it to know it

Its opposite, selective white, is nature's favorite
white snow, white wash, white sands
white is so polite
"No Thank you" as it scatters sun away

Though last among colors to absorb sun
Snow white or white wash radiates infrared as easily as the dirtiest dark

Nature likes white, generous sacrificing white
and non selective white?
we don't call that white, we call it shiny
It reflects sun, reflects infrared, radiates nothing

Our scanner can't see such surfaces
Our hands feel them
Shiny aluminum, shiny chrome

They all get hot, much hotter than white
in the sun, feel the bumper on a car

PROSPECTING FOR COOL

Return to the parking lot at night
a clear night is best

Any car roof is fine
they all stare up at the sky

They all get cold, all colors the same
in the middle of the night

Any color, any direction up
any hour of the night
but the vein for cool, though huge
is not as rich as the vein for heat

The Toyota door hit 120°F on a 40°F day
and we said could go to 150°F with selective black

The car tops, they all
sink but only 10°F maybe 15°F below air temp

It's 80°F at midnight the top is 70°F
It's 70°F at dawn the top is 57°F

HOW DO WE MINE?

How do we, prospectors,
mine what we have discovered?
We needn't lift a finger Nature provides
free heat, free cool and She provides free delivery

THE SUN IS HOT THE SKY IS COLD HEAT RISES

Open the valve in October, maybe not until November
Let water flow through dark sunlit wall panels
Better even through selective black wall panels

And rise in the winter sun to give us heat
That's how we mine in winter and must
you close the valve every night? Not at all
Remember heat rises
Close the valve in May

In summer we work at night
As warm rises cold must sink

Let water flow through the roof
cool and sink

And to where does
the warm rise to in winter?
A place above the walls

And to where does the cool sink in summer?
A place below the roof

THE CEILING

There is such a place, the ceiling

Out of the way
overhead, plenty of room
just move another foot up
into space

And ceilings are large enough
they grow to match the floor

No one has to walk on a ceiling
Nothing falls into its cracks
Ceilings have waited
an eternity for something more to do

THE SUN IS HOT THE SKY IS COLD HEAT RISES

In summer
the cold from the sky gathered every night
settles in the ceiling, is intimate with rooms below

The ceiling's coolness and the room's warmth
Radiate at one another and search for each other
with every plume of air current

All summer there is close affection
between ceiling and room

This intimacy is fortunate for the comfort of the building
Cooling forces are gentle, sometimes only faint
Some nights there are clouds, blankets holding in heat

Our water flowing at night, sleeping every day
must suffice
There is no other cooling
no compressor, no a/c, no swamp cooler

But if you must you can mist,
mist the roof at night

HEATING IN WINTER

In winter heat stratifies, the ceiling and floor trade no air
their only intimacy
is a good view of each other

All heat passes by radiation, by the glow of overhead heat
It is better for floor and ceiling
to not be married in winter as they were all summer,
to have shutters and privacy

The sunniest day delivers more
heat than the floor could ever wish
So close the ceiling shutters, the ceiling's heat disappears
it is saved for when you need it

WHAT DO DOUBLE PLAY SYSTEMS COST?

The first? The tenth? The hundredth?
The thousandth? The millionth?

If there isn't a
first and a seventh and an eleventh
there can't be a hundredth

Maybe our tools don't want to build
such things
Or our bankers

Fortunately accidents
supply us with everything

The Double Play system
is merely lost irrigation parts
fiddled together in a house
that moves heat by moving water
but who would buy one?

A dam upstream which
threatens tens of thousands
is built anyway

The dozers carryalls and
cement mixers go at it out of
range of worried housewives

And the dams do break, hundreds drown
Yet they build more dams
But our campaign can be defeated though no one
could get more than splashed

Water overhead in the kitchen? the living room? the bedroom?
no way! the housewife is right

It will leak, it will flood, ruin her carpet
But only the first dozen or the first few dozen
and not even all of them

Number 1,000 won't leak nor number 101,000
But there won't be a number 1,000 nor 101,000
because if mom is ok with it
Dad's cherished notion of mom is she will say
"no way"

Or maybe it's the money folks
and the strange guidance from the polarized dollars
they shake their heads
"never happen"

POWER PLANTS

Our newspaper says we need 80,000 new
megawatts of electricity
in the Southwest in the next 20 years

How could even a hundred million of us consume this?
What if the power plant demanded to be paid back in kind?
Could we crank that much power backwards?
Try generating a horse power for that will be your share
a few seconds for most, a few minutes for a few
then exhaustion

A brochure at Glen Canyon Dam
says our households use 34 kwh per day

Electricity
(ours uses less than 6)
what do these houses do with the power?
are they dragged back and forth through the dirt,
lifted into the sky

The electric clothes dryer as it tumbles another load
tells the clothesline hanging in the sun
“we both dry clothes but that’s all you can do,
I could just as easily lift the water 147 miles as dry it from the clothes”
But it only dries them like the clothesline

MAGNIFICENT POWER PLANTS

Our dams and power plants are
magnificent athletes and should be admired
but we don’t need their power
unless you need to lift your wet wash 73 miles up
or your whole house a mile up
in a week’s time

We use power where all we really need is
heat, or light, or cold

Keep the power plants
every year they could have contests
running each other backwards

The power plant dips one end in water
and the other in a huge coal fire
Out comes 1.5 billion watts
But to do what?

Let’s not despair even as “progress” ravages nature
the flood leaves a silt of accomplishments
in which new things grow

BUSINESS PLANS

Too many business plans become confessions, then surrenders,
Then enlistment in an alien cause for dollars
while the kernel within the venture
had nothing to do with money

Jealous paper money, ever more out there than should be,
must close down and drown what could grow to threaten it

ENGINEERING

Our problems are engineering problems
they are off the charts but not out there where
the rocket scientists play

Our problems are down there near the bottom left corner
near the origin buried in the width of lines “real” engineers
use on other parts of the page for their
“real” problems

Our water hardly flows, more a drift than a flow
our pressure drops are not in inches of water
but hundredths of inches

As these terms shrink to insignificance
compensating parts of ours grow. They must or
our designs can't work

We are in the same business as the “real” engineers
We have less speed, less splash, less power, and no noise -
While in compensation we
have more mass, more time more space
We do exactly what they do; exactly
We hold the same temperatures
Our pipes are bigger, our bends more gentle

How can there be
Time enough in a day? Space enough in a house?
Well there is and it is because things grow
More comfortable as they spread out,
Slow down and go easy

Engineers sweat to make
machines lighter, faster, smaller because people
want to race and fly
The slope the engineers struggle up slopes down
as well as up and just
as steeply going down as up
buildings can be large, slow, heavy, relaxed

To go half as fast takes one quarter the power
so lets cut the speed by
10 and the power
by 100!

POLARIZED MONEY

Somehow - I have no idea
how this works
the Federal Reserve polarizes
the money it prints

It is more and less than wealth
it is a guide
the public, like migrating birds
in polarized sunlight is guided by polarized dollars
even through the clouds

Some can't read
or won't read
the polarization

They die misguided
ignorant, going the wrong way

OUR BUDGET

How do we pay the minimum
for the selective surface aluminum?
100K

How do we pay for the blow mold
for the tanks
110K

And to change the molds when
the first doesn't work?
another 100K
and how do we pay for a minimum run
200K and 60K transportation

And how do we pay for the
roll former, the two roll formers
100K and then rebuilding them
another 100K

How do we get the money
while the whole idea
is being attacked by the wise ones
"It'll never fly" and
the dry ones "I'll never have water over my head"
that's a good million
better triple it - 3 million

but real money we are advised doesn't awake from
its polarized slumber at sums
less than 5 million and 10 million more likely

CRINGE DESIGN

I watched them in the
film "death of the electric vehicle"
shred the electric cars

I have see the pictures
of Frank Gehry's many
multit million dollar titanium roof monstrosities

What is next?
I have watched all
the best products we made, fade

Cringe design thrives
Cringe planning too and cringe engineering

"You can't sell that
no one will want that"
and of course with
disgusting cowering motions
They are right - become right
Cringe before the dollar
and sneer at the sun

HISTORY

Our stuff is new
New and old at the same time but
mostly old
Tucson in the 1950's
Ray Bliss heated in the day
and cooled at night
with unglazed absorber/radiators

Don't forget Japan
don't forget Mananosuke Yanagimachi's 1958 Tokoyo houses
though the Japanese certainly have
forgotten him better than even
the Americans forgot Bliss

What Bliss and

Yanagimachi still needed
to make things cheap and simple
Hay soon demonstrated

Harold Hay our great genius
Check out his roof ponds
Do the tests yourself
A garbage bag full of water and a beer cooler
That's all you need

Hay is from an age
before they completely polarized the dollar
A straight shooter

Hay led the way
but no one followed
unless you count us

Hay climbed the mountain
they said
"flatten the mountain and
we will stand beside you".

And Harold Hay said
"f--- you"
and climbed higher

The public
Stricken by an electric spell
want huge power plants
and enormous dams or wind generators

They are sold electric motors
to torque compressors
that cycle R-22, R-134A
the public doesn't understand
another way
Our way

Water sleeps days
in the summer then
loops through its own tiny
waterfall every summer night

It trades nature, it doesn't fight
It gives the sky the heat

compressors battle with

In winter it sleeps nights
Sometimes turning to ice and flows days
through the wall

It can do all the cooling
and most of the heating
across most of the Western United States

It can vastly reduce
demand for electricity
propane, gas, coal and wood

The buildings it serves
can cool and heat
right through power outages
and best, it works
through money outages

What will it cost to operate?
Repair and maintenance

We will only know after decades
we expect minimal

It uses no power and
no water, after filling

unless you choose to
supercool the roof by misting

THE SUN IS HOT THE SKY IS COLD HEAT RISES

Heat rises through
the wall in winter
rises to the ceiling

And in summer
the same water, at
night, rises to the roof, cools and
sinks back to the ceiling
the heat knows where to go

Otherwise the
water sleeps all day everyday
in summer
all night every night
in winter

There are two vacations around and following
the equinoxes
The heating goes off in April
and we wait and wait to turn the cooling on
Then in September
the cooling goes off and we wait and wait
Then we need heating

Harold Hay found that like a cop
who never need pull his gun,
just be there
whole regions of Southern California can
be made comfortable with the ceiling
of water alone

LUXURY

A truth we slowly discover is silence,
silence and calm
No motor noise, no fan drafts, no ducts creaking
in thermal cycling

We get what we never set out for
Absolute comfort.