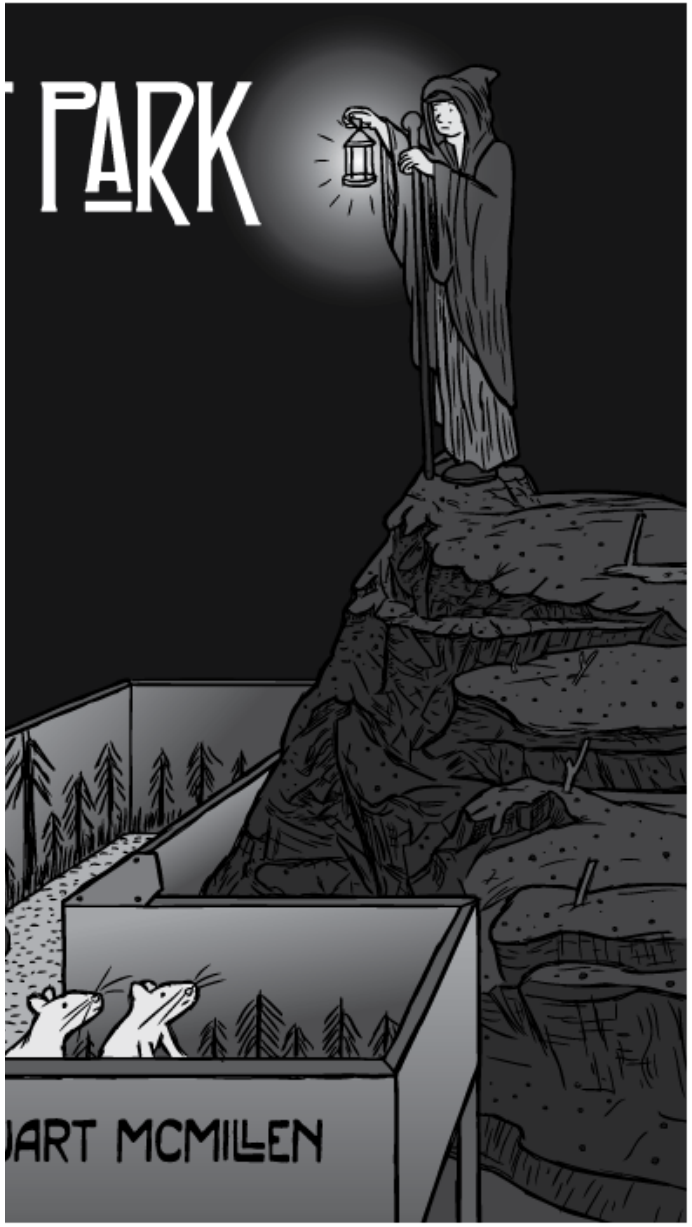

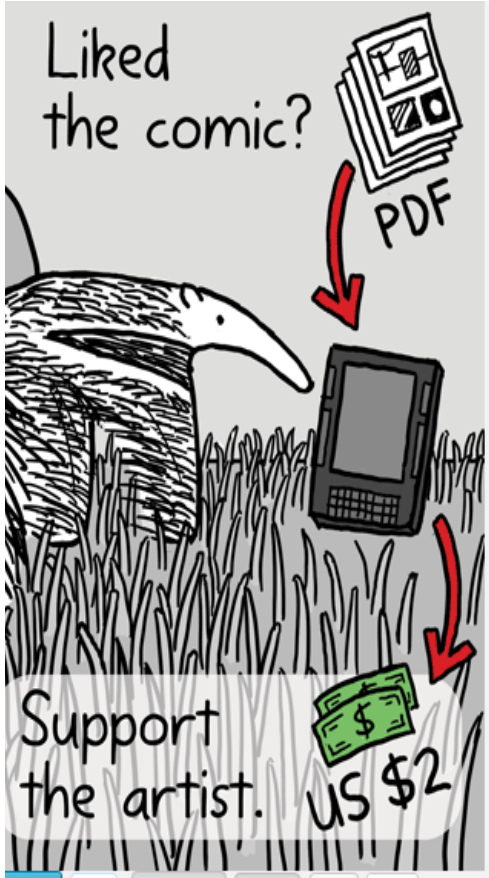

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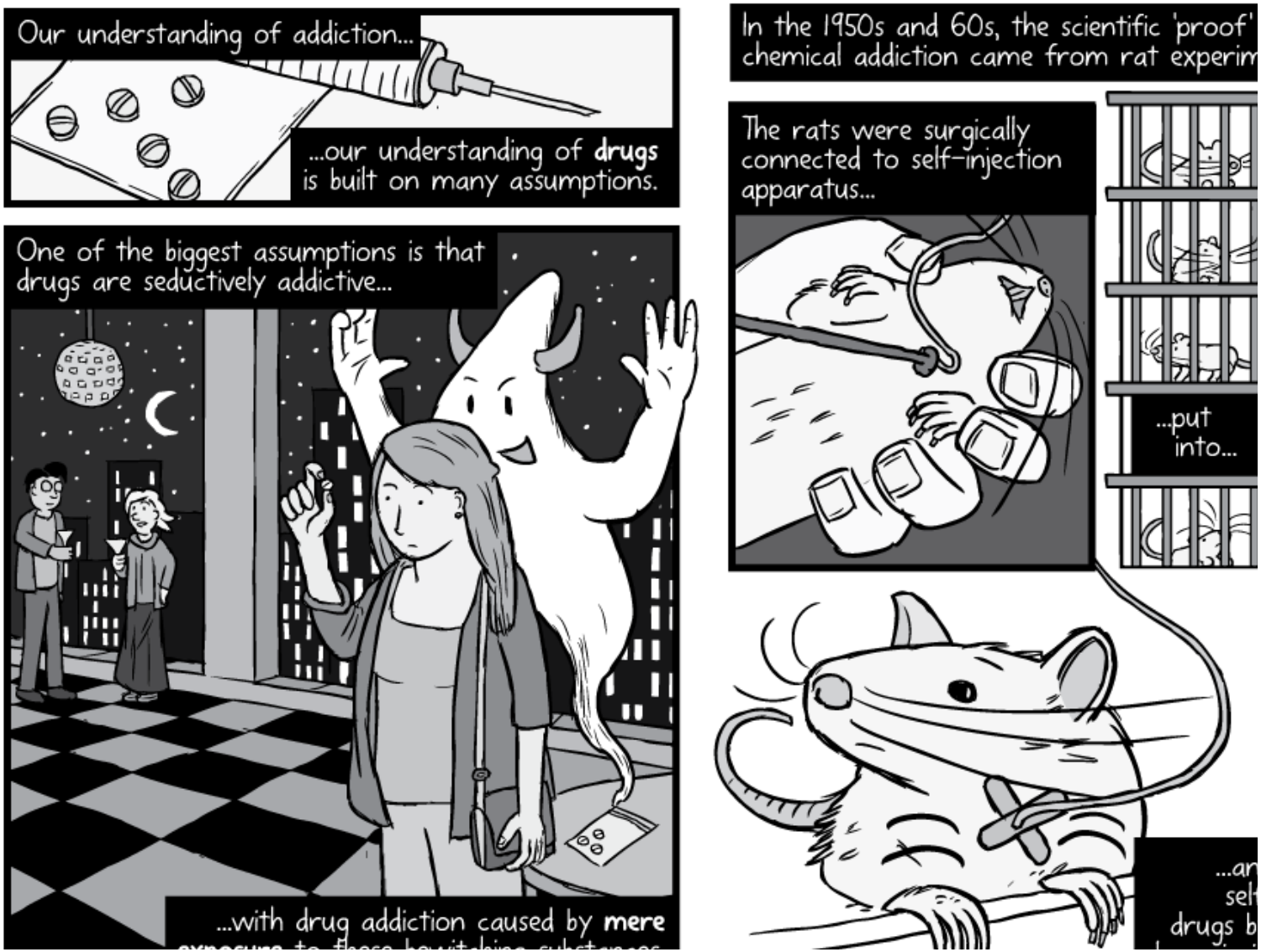
out the Rat Park drug addiction experiments, see:

Park: extra information about the real-life experiments
diction: the post-Rat Park research of Bruce

sons learnt from researching *War on Drugs* & *Rat Park*
ny personal experiences with responsible drug use

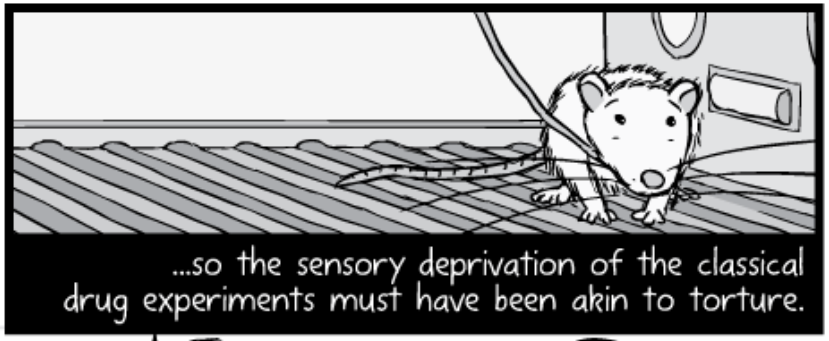

Our understanding of addiction...
...our understanding of **drugs** is built on many assumptions.
One of the biggest assumptions is that drugs are seductively addictive...
...with drug addiction caused by **mere**
In the 1950s and 60s, the scientific 'proof'
chemical addiction came from rat experim
The rats were surgically connected to self-injection apparatus...
...put into...
...ar
sel
drugs b

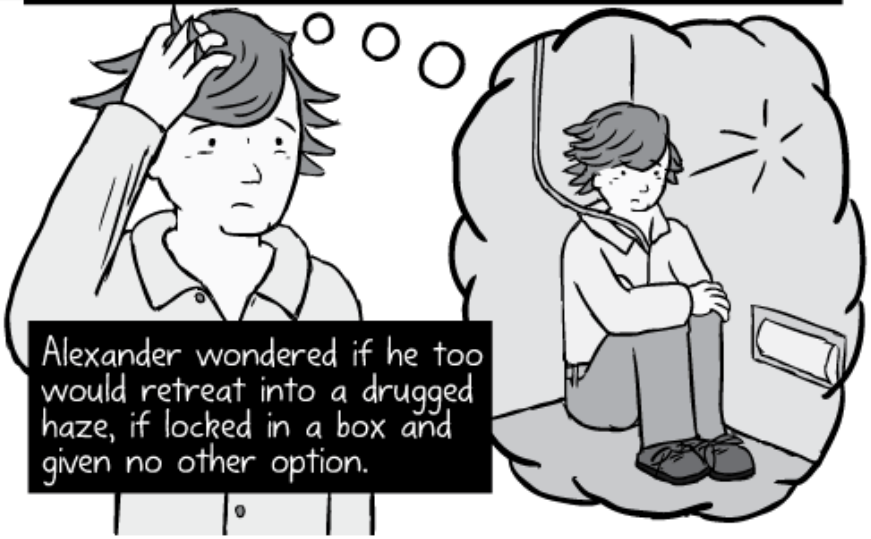
The researchers watched on as the caged rats self-injected powerful psychoactive drugs.

Dominated by their habits, some of the rats would choose drug injections in preference to food and water.

The implications were bleak and worrying.
It seemed tha
capable of ru
to individuals'
...and if drugs were available to people as freely as they were to the lab rats...
...mass-addiction and

ed how
nt into
iction
thered
rats.





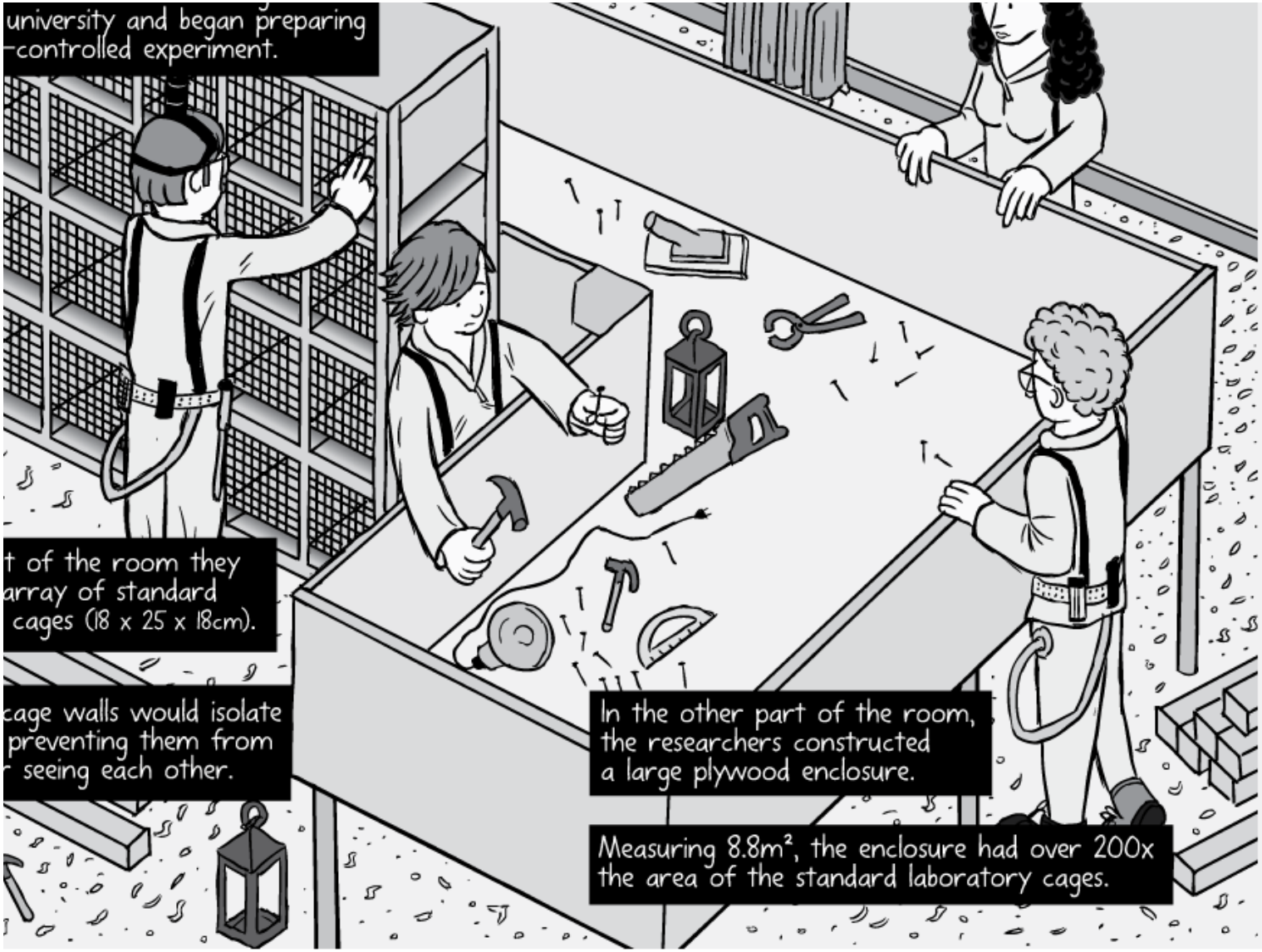
In 1977, Prof. Alexander assembled a team of Simon Fraser University researchers.
Bruce Alexander
Barry Beyerstein
Robert Coambs
Patricia Hadaway

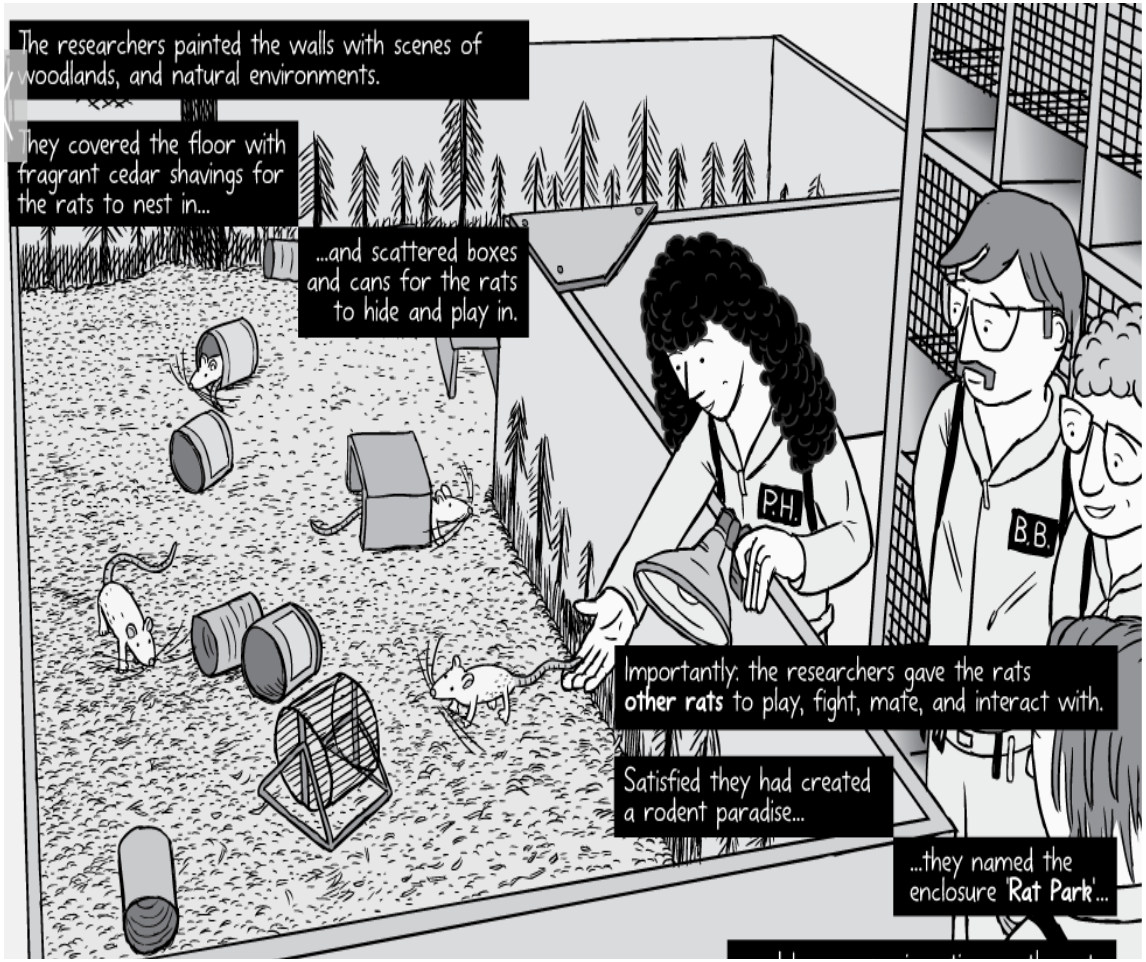
The team decided to repeat the classical rat-drug studies...
B.A.
B.B.
R.C.

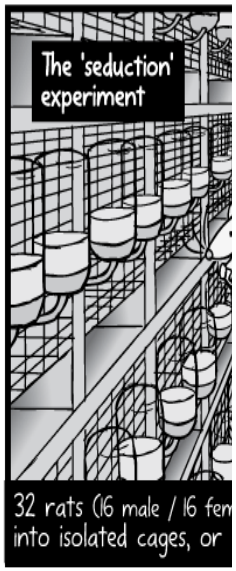
Their experiment would test the power of drug addiction using morphine...

...a close co
notoriously
'life-destroy

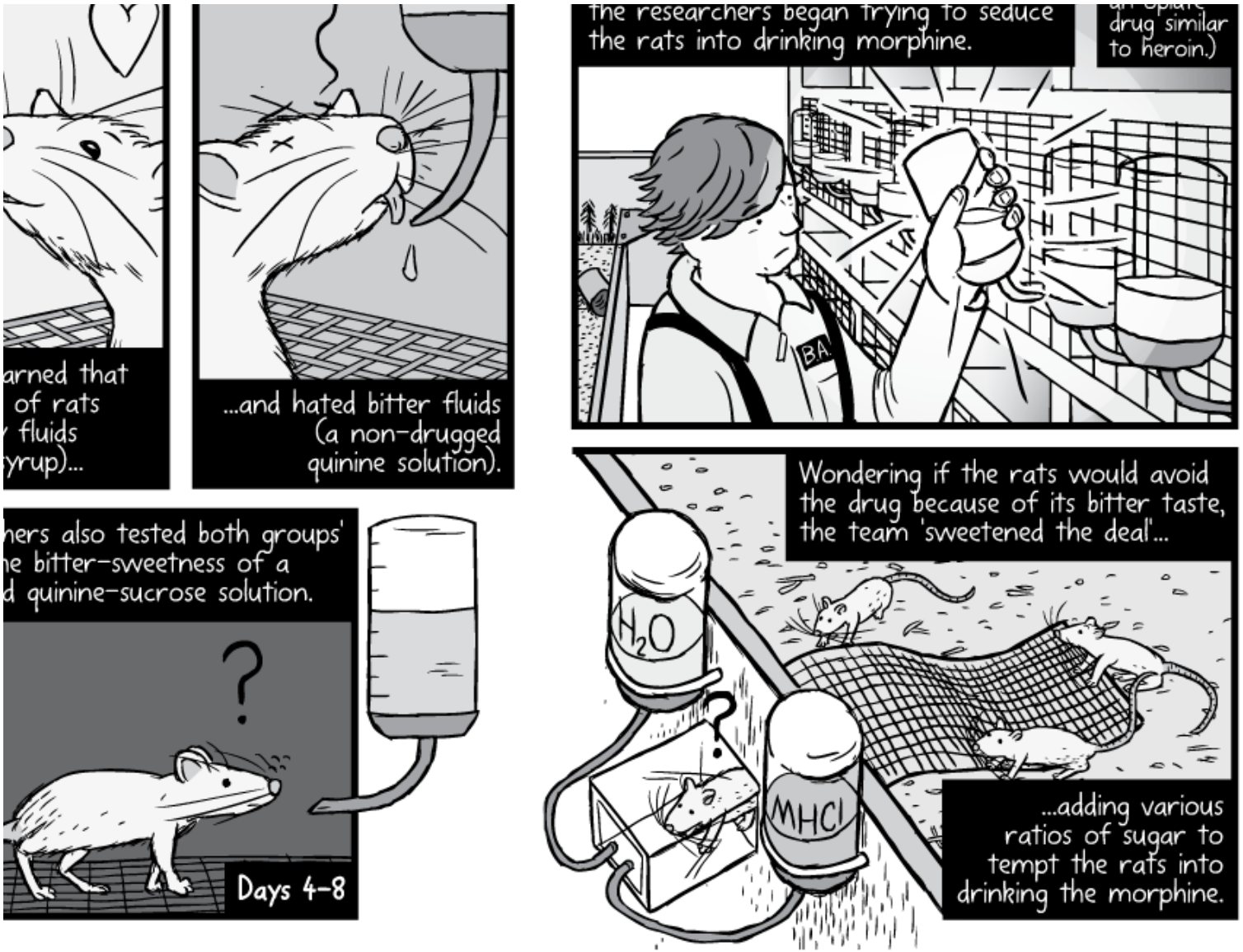
The team ventured bravely into the dark


university and began preparing
-controlled experiment.
t of the room they
array of standard
cages (18 x 25 x 18cm).
cage walls would isolate
preventing them from
seeing each other.
In the other part of the room,
the researchers constructed
a large plywood enclosure.
Measuring 8.8m², the enclosure had over 200x
the area of the standard laboratory cages.


The researchers painted the walls with scenes of woodlands, and natural environments.
They covered the floor with fragrant cedar shavings for the rats to nest in...
...and scattered boxes and cans for the rats to hide and play in.
P.H.
B.B.
Importantly: the researchers gave the rats **other rats** to play, fight, mate, and interact with.
Satisfied they had created a rodent paradise...
...they named the enclosure '**Rat Park**'...


The 'seduction' experiment
32 rats (16 male / 16 fem
into isolated cages, or

The researchers g
rats the choice o


arned that
of rats
fluids
yrup)...
...and hated bitter fluids (a non-drugged quinine solution).
hers also tested both groups'
e bitter-sweetness of a
d quinine-sucrose solution.
?
Days 4-8
the researchers began trying to seduce the rats into drinking morphine.
drug similar to heroin.)
BA
Wondering if the rats would avoid the drug because of its bitter taste, the team 'sweetened the deal'...
H_2O
MHCl
...adding various ratios of sugar to tempt the rats into drinking the morphine.

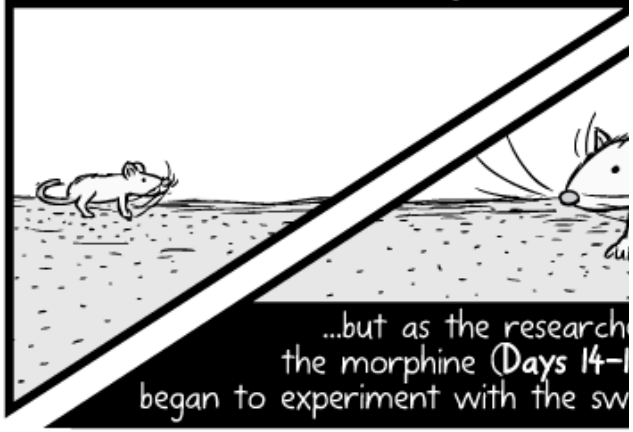
The researchers 'stepped down' the mixtures every 5 days.

Gradually transforming the bitter narcotic fluid into a sweeter, but nonetheless drugged brew.

Alexander and team keenly observed how much the rats would tolerate this bad taste in order to experience the effects of the morphine drug.

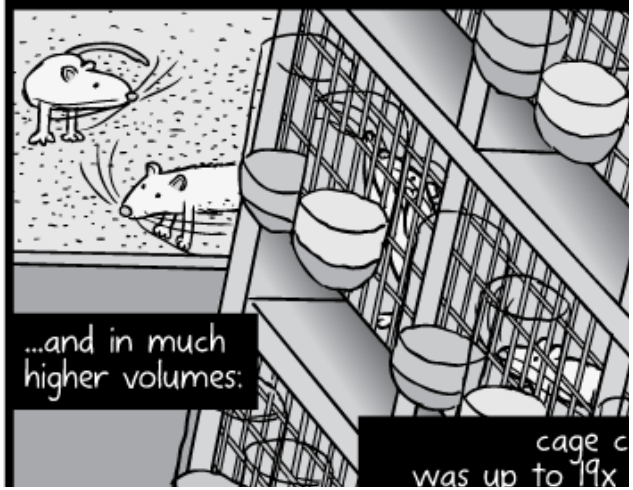
Would the two groups of rats

Days 9–13: At first, all rats avoided the extremely bitter morphine-sugar solutions



...but as the research
the morphine (**Days 14–**
began to experiment with the sw

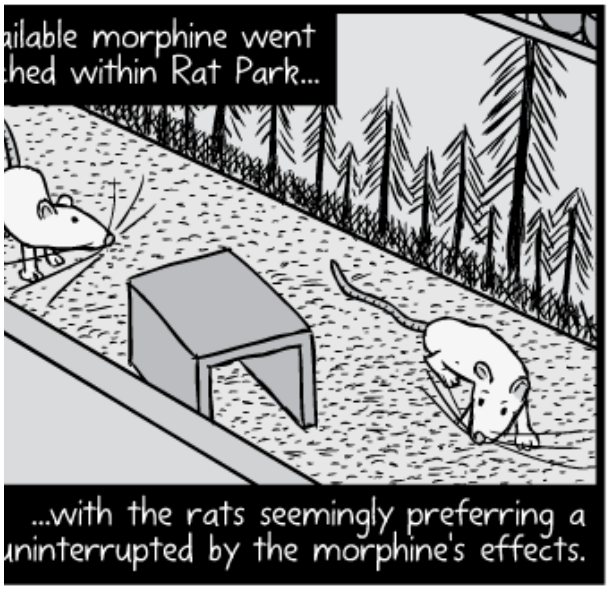
The isolated cage rats began drinking the far earlier than the Rat Park rats...



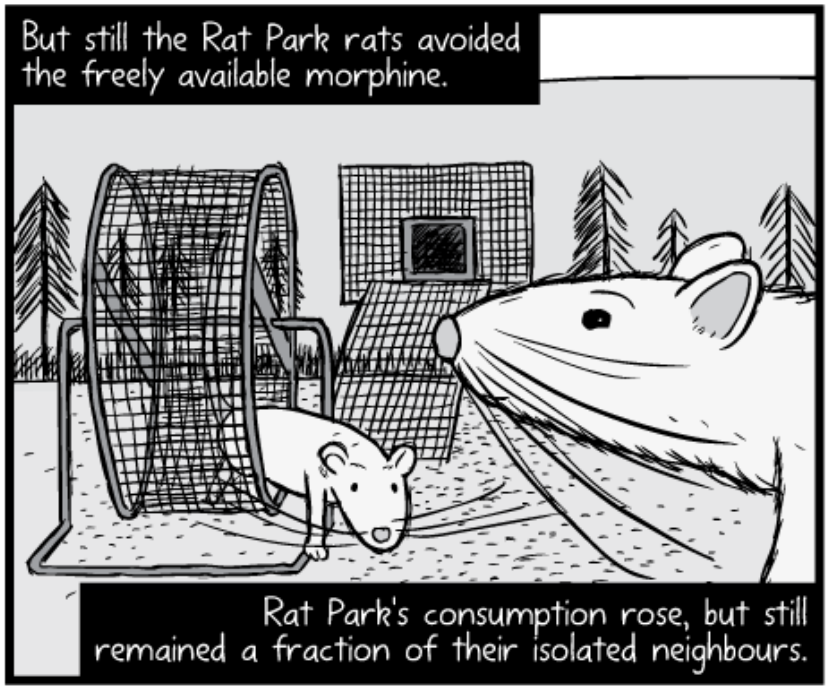
...and in much higher volumes:

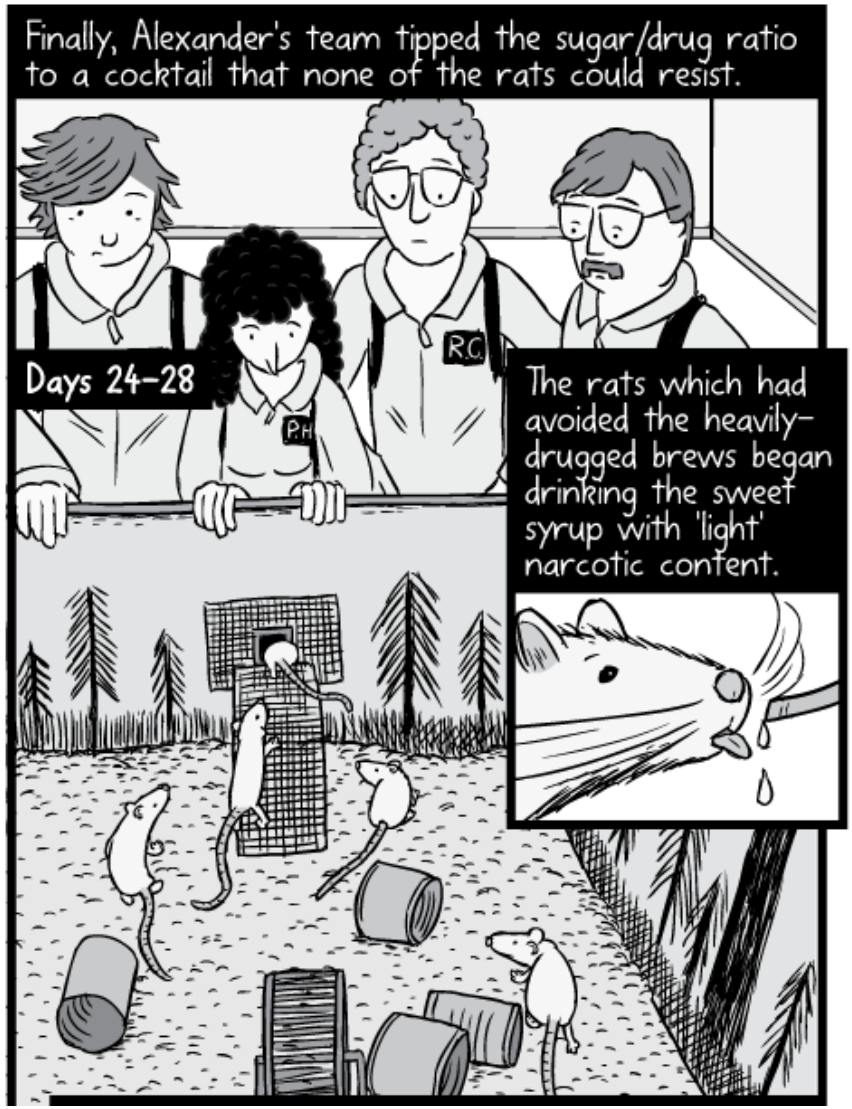
cage c
was up to 19x

Rat Park
s resisted.


ilable morphine went
hed within Rat Park...
...with the rats seemingly preferring a
uninterrupted by the morphine's effects.

The researchers upped the sugar...
...and the caged rats slipped further into their narcosis.

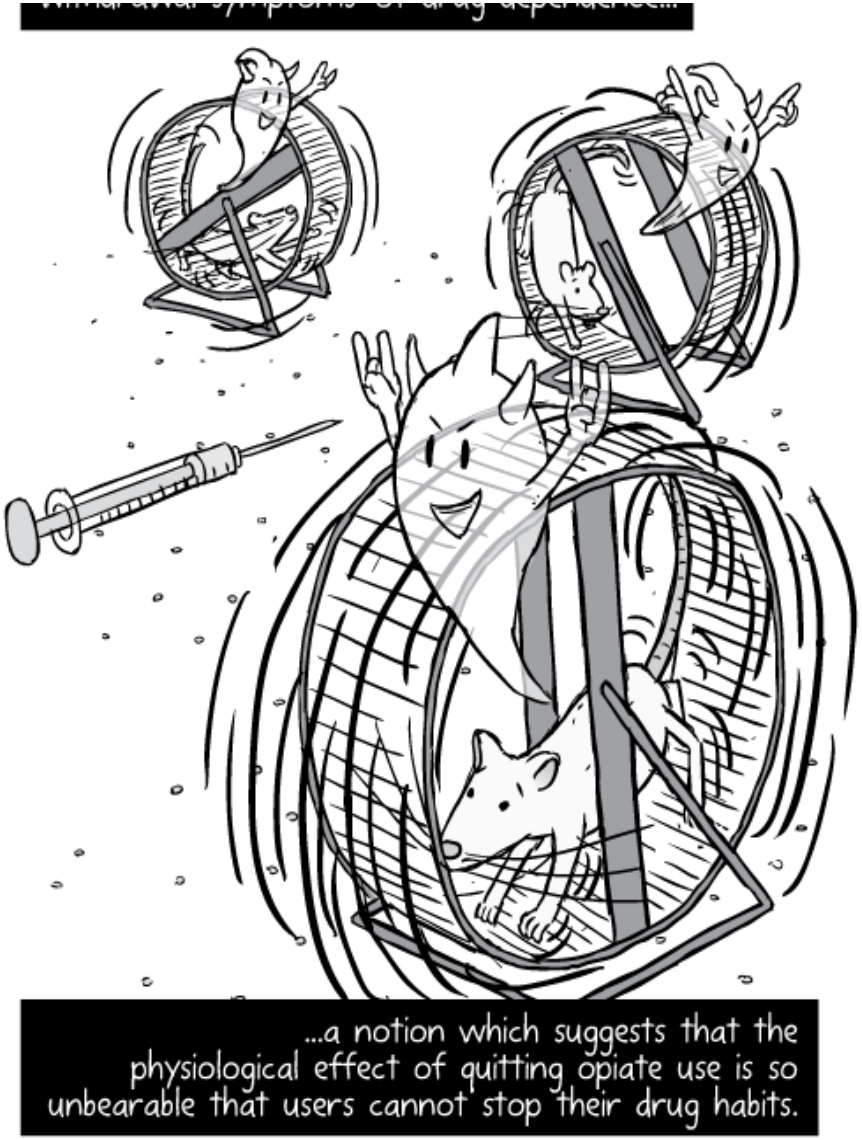

But still the Rat Park rats avoided the freely available morphine.
Rat Park's consumption rose, but still remained a fraction of their isolated neighbours.


Finally, Alexander's team tipped the sugar/drug ratio to a cocktail that none of the rats could resist.
Days 24–28
The rats which had avoided the heavily-drugged brews began drinking the sweet syrup with 'light' narcotic content.

In a side-experiment, the team found th
aversion to morphine-sugar water coul
by adding Naltrexone to the liquid.
The additive worked as an antidote to the morphine: counteracting the effects of the drugs, while sparing the sugary taste.

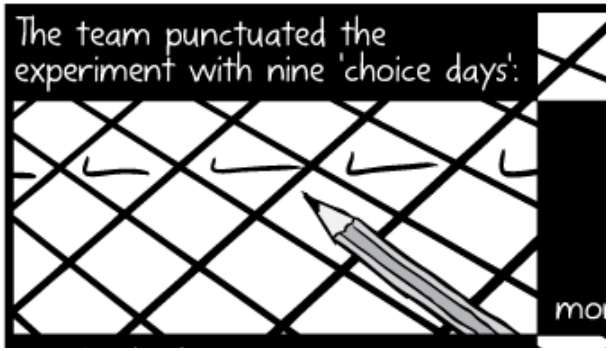
The rats would lap up prev
drug mixes spiked with Nalt

Another Rat Park experiment tested the 'addictive' nature of opiates from the opposite direction.
trying to tempt
voluntarily
rphine habits...
...the researchers deliberately made junkies out of the rats, and then watched what happened when given choice again.


...a notion which suggests that the physiological effect of quitting opiate use is so unbearable that users cannot stop their drug habits.

The researchers took 32 new rats...
(10 in isolation, 22 in Rat Park)
MHCl
H_2O
...and put them on a fluids regime

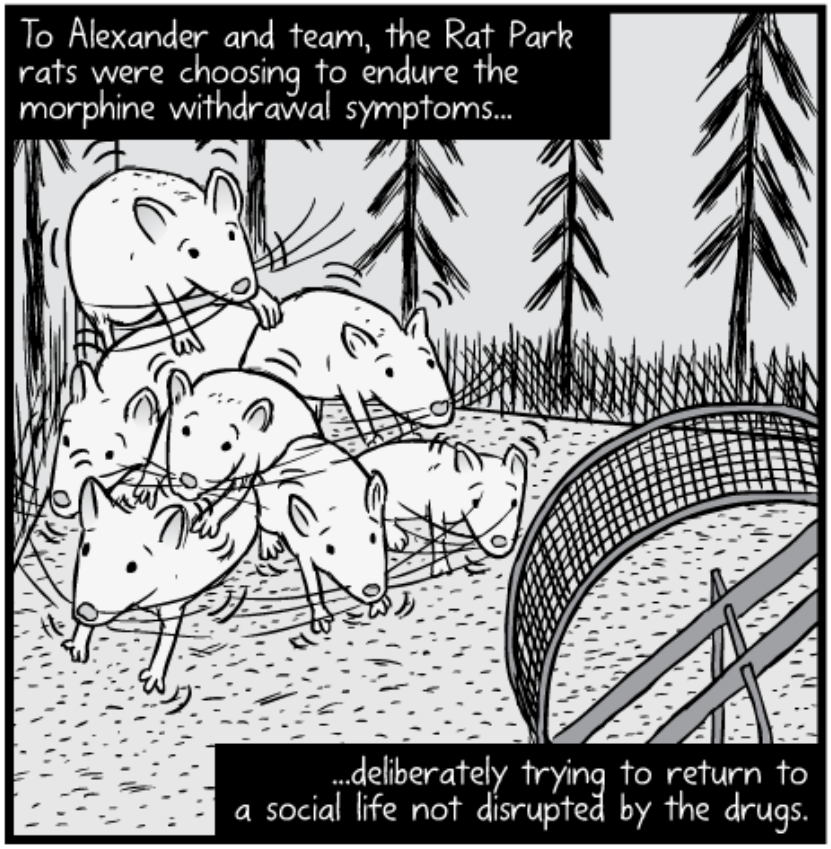
On most days, the rats were given no fluids besides drugged morphine-water.
MHCl

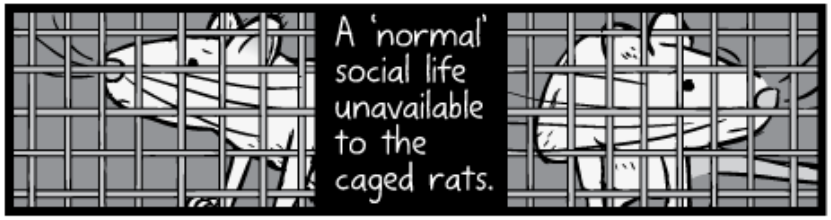

The team punctuated the experiment with nine 'choice days':

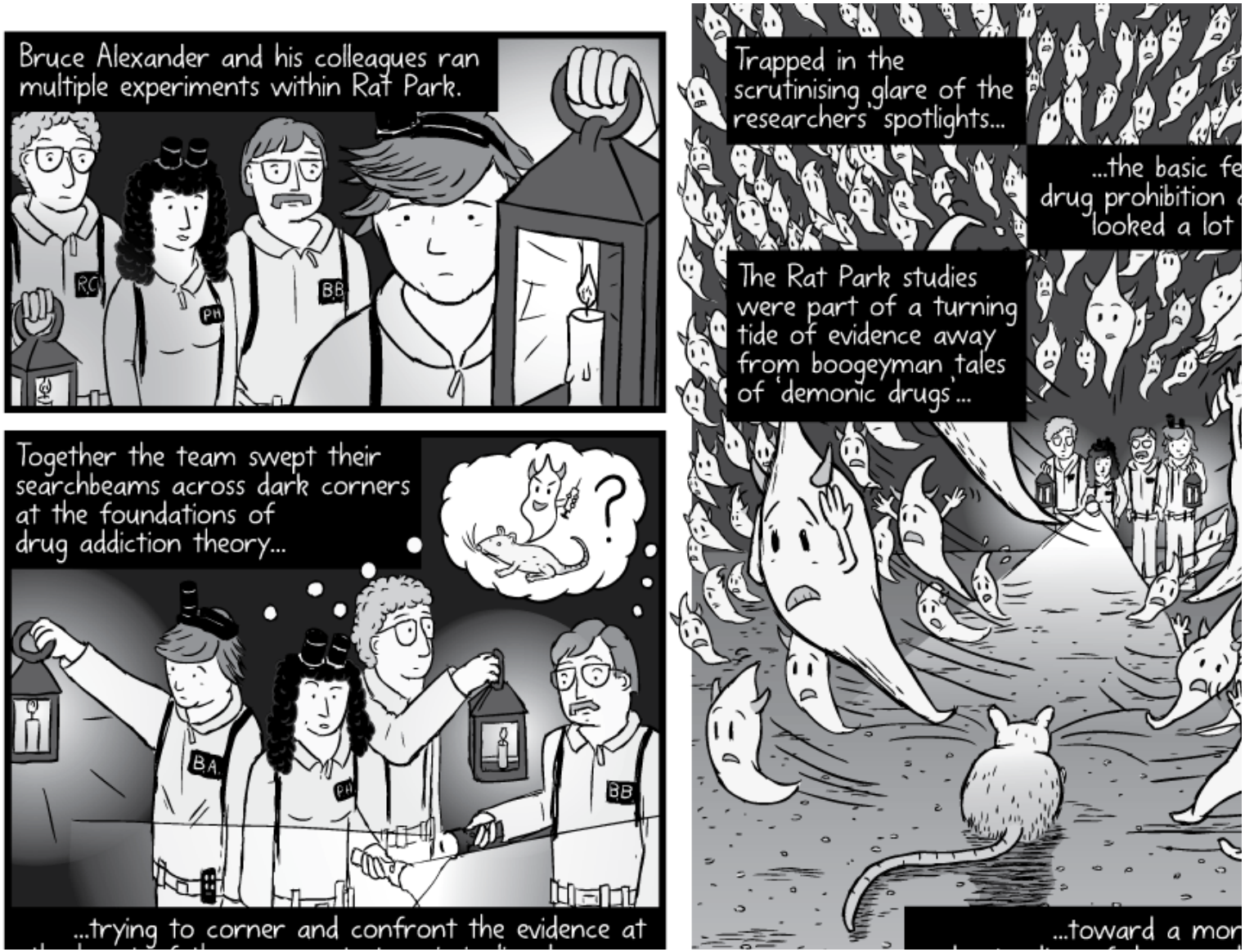
he story across the room,
Rat Park was different.

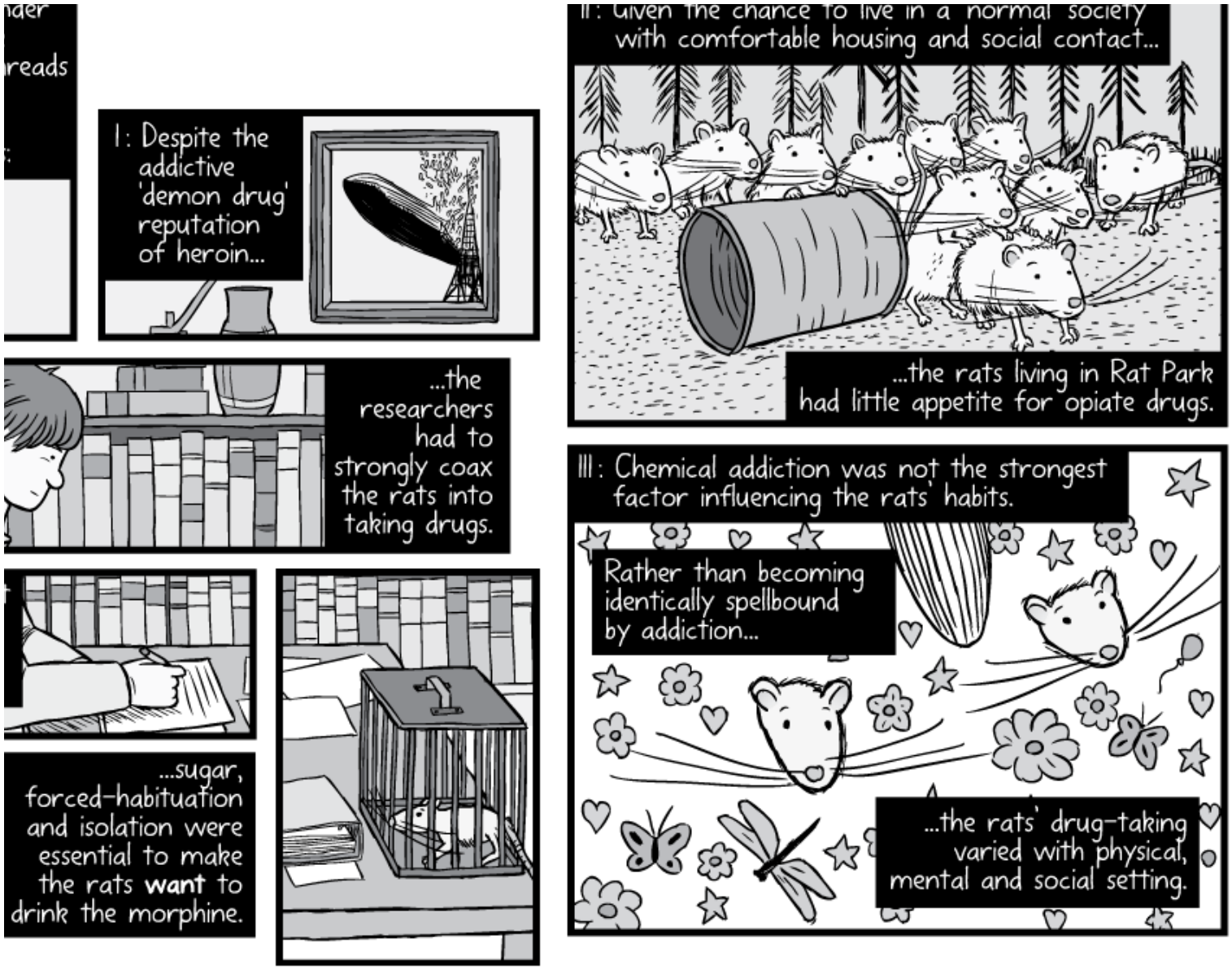
ally dependent on morphine, the Rat
reased their drug use on 'choice days'.

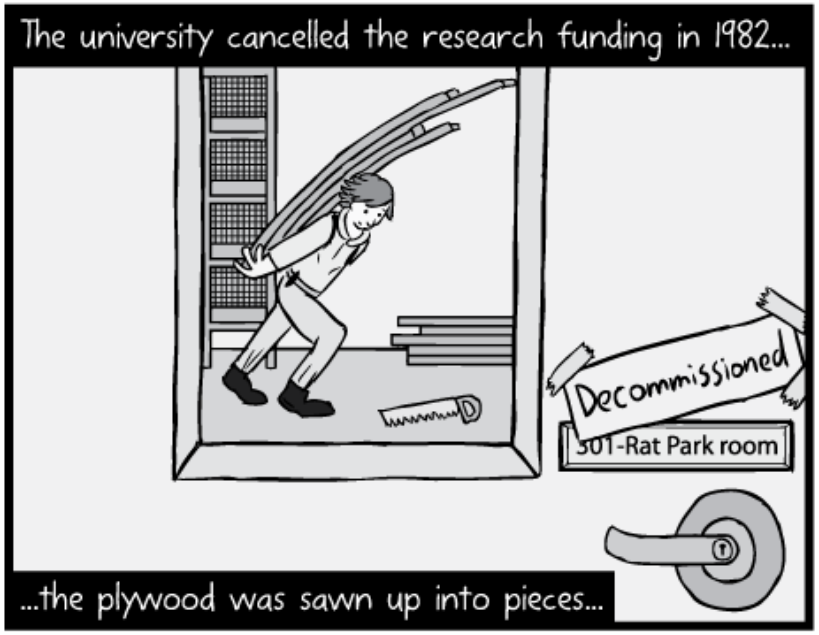
mptoms were noted in the twitchy rats.
t Park rats avoided the morphine.

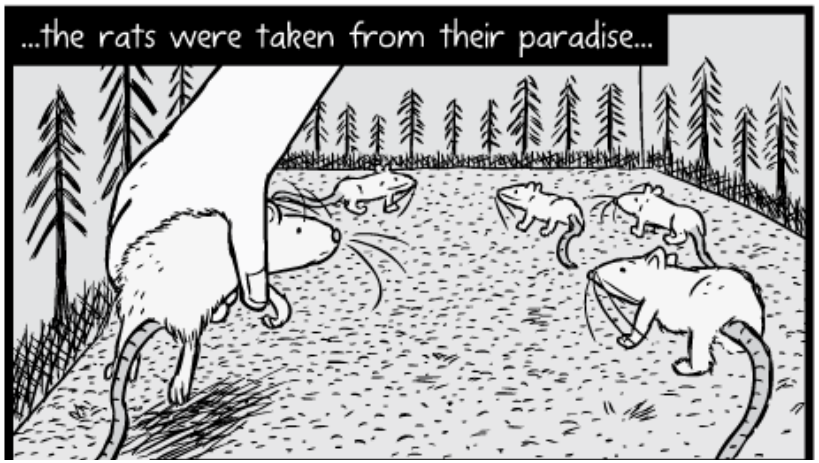




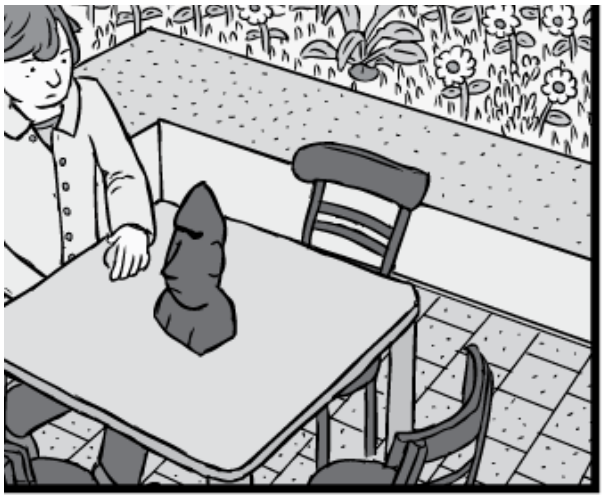

Bruce Alexander and his colleagues ran multiple experiments within Rat Park.
RC
PH
BB
Together the team swept their searchbeams across dark corners at the foundations of drug addiction theory...
?
BA
PH
BB
...trying to corner and confront the evidence at
Trapped in the scrutinising glare of the researchers' spotlights...
...the basic fe
drug prohibition
looked a lot
The Rat Park studies were part of a turning tide of evidence away from boogeyman tales of 'demonic drugs'...
...toward a mor


ader
reads
I: Despite the addictive 'demon drug' reputation of heroin...
...the researchers had to strongly coax the rats into taking drugs.
...sugar, forced-habituation and isolation were essential to make the rats **want** to drink the morphine.
II: Given the chance to live in a normal society with comfortable housing and social contact...
...the rats living in Rat Park had little appetite for opiate drugs.
III: Chemical addiction was not the strongest factor influencing the rats' habits.
Rather than becoming identically spellbound by addiction...
...the rats' drug-taking varied with physical, mental and social setting.


The university cancelled the research funding in 1982...
Decommissioned
301-Rat Park room
...the plywood was sawn up into pieces...


...the rats were taken from their paradise...

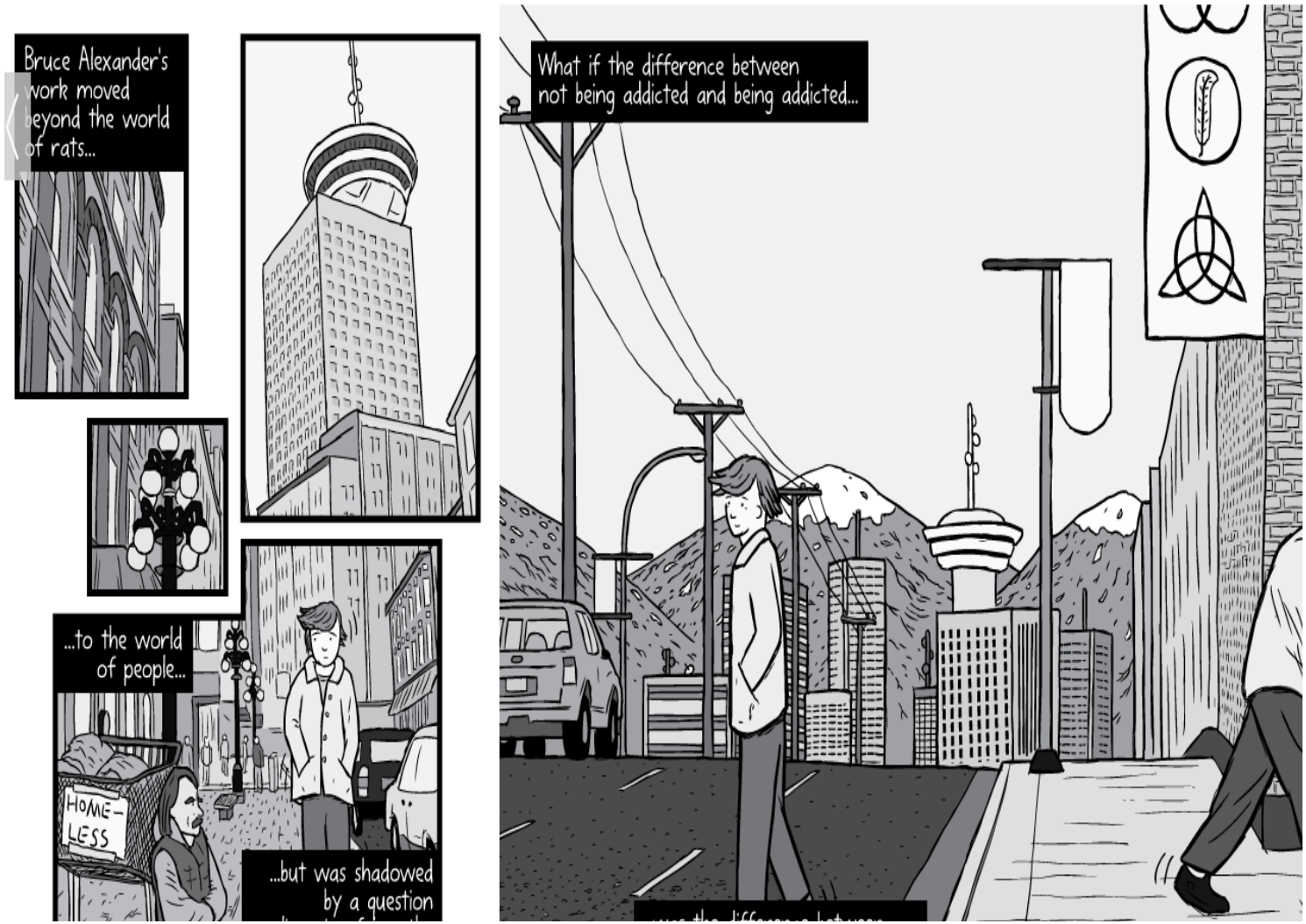
Bruce Alexander was wary of overgen
the findings of Rat Park...
...and making the



Would humans need to be locked in a cage to feel the same way?

about 'Rat Park', which allowed
o avoid addiction...
RIO
THEATRE
...despite drugs being readily available?

Or are there other types of isolation which might lead to addiction?


Bruce Alexander's work moved beyond the world of rats...
...to the world of people...
HOME-LESS
...but was shadowed by a question
What if the difference between not being addicted and being addicted...