

Dr. Plastina

Min Suk CHUNG
(anatomy.co.kr)

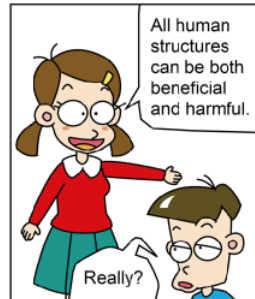
Prologue

I am Min Suk CHUNG,
a Korean anatomist.

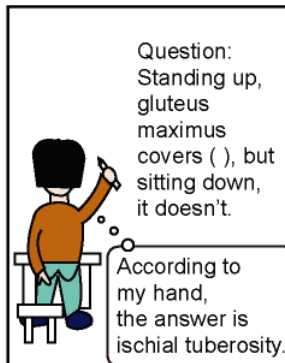


My side job is drawing
anatomy comics.

If you are interested
in my comics,



Anna & Tommy
(Anatomy learning comics)



Dr. Anatophil
(anatomy comic strips)

visit my homepage.

anatomy.co.kr



The comics are
complimentary.

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Nowadays, plastination
is the hot topic.



Plastination is a term
familiar even
to the ordinary persons.

I haven't performed
the plastination.

No experience at all.



But as an anatomist,

I would like to introduce
plastination to laypeople.



Here call me 'Dr. Plastina.'

Fortunately, I could
take counsel from
Professor Hong Jin SUI.



CHUNG

SUI

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Prof. SUI is world famous for the popularization of plastinated specimens.



Why are the cadavers dissected?

Anatomy is the study about the normal morphology of the human body.

Normal → Abnormal

Morphology → Function

Body → Soul

Anatomy is the first subject learned in medical school.

Clinical medicine

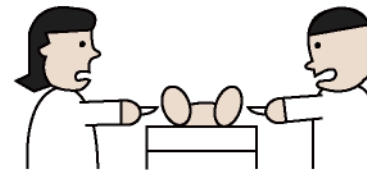


Basic medicine

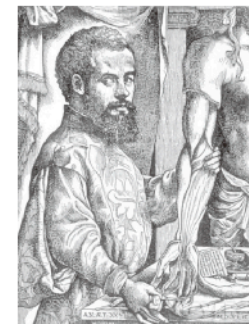


Anatomy

To acquire anatomical knowledge, cadaver must be dissected by anatomists or medical students.

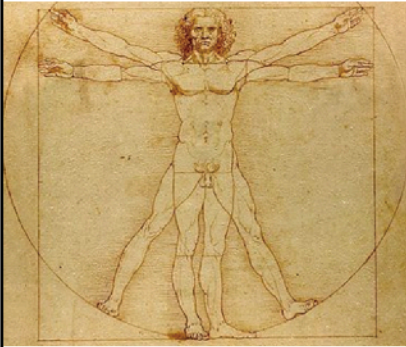


Dissection had actively started in Renaissance.

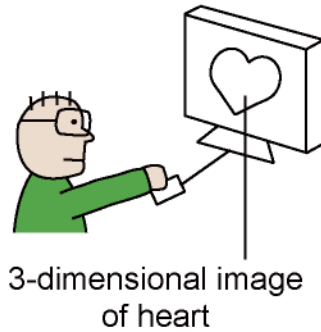


Vesalius (1514-1564)
Father of anatomy

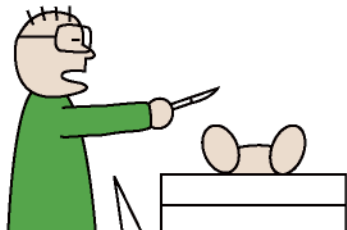
It induced development not only of anatomy but also of medicine.



Virtual dissection on the computer may assist a real dissection.

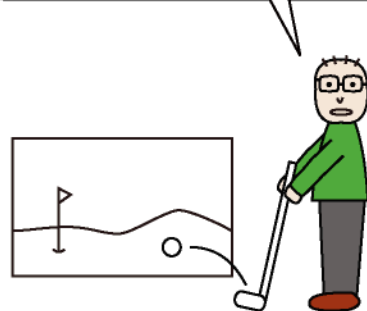


But a virtual dissection may not replace a real one.



The virtual one just assists the real one.

It is like a virtual golf doesn't drive out a field golf.



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Why is the dissected specimen preserved?

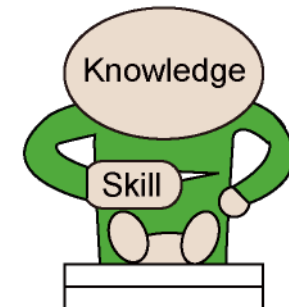
Cadavers are precious.



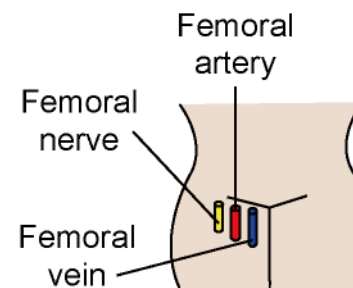
Many thanks.

Anatomists and their disciples are always thankful to the donors.

Cadaver dissection requires both anatomical knowledge and skilled hands.



Through dissection, regional anatomy is demonstrated.

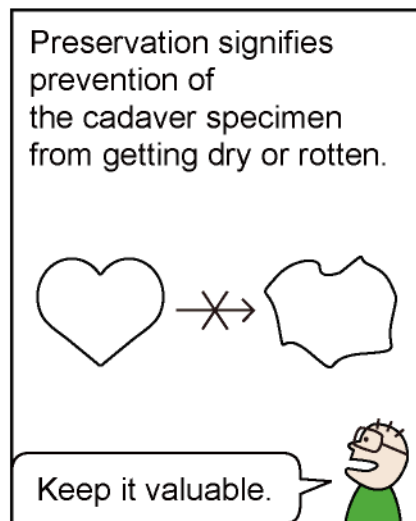
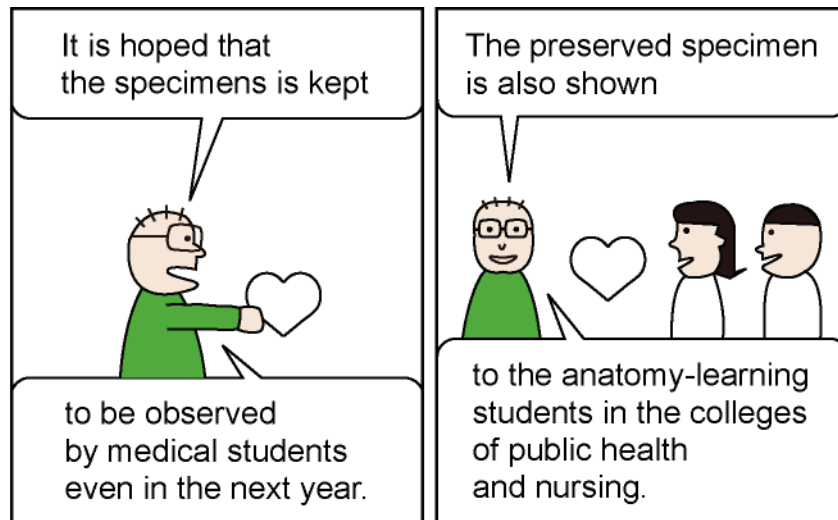


After the meaningful dissection by professional,

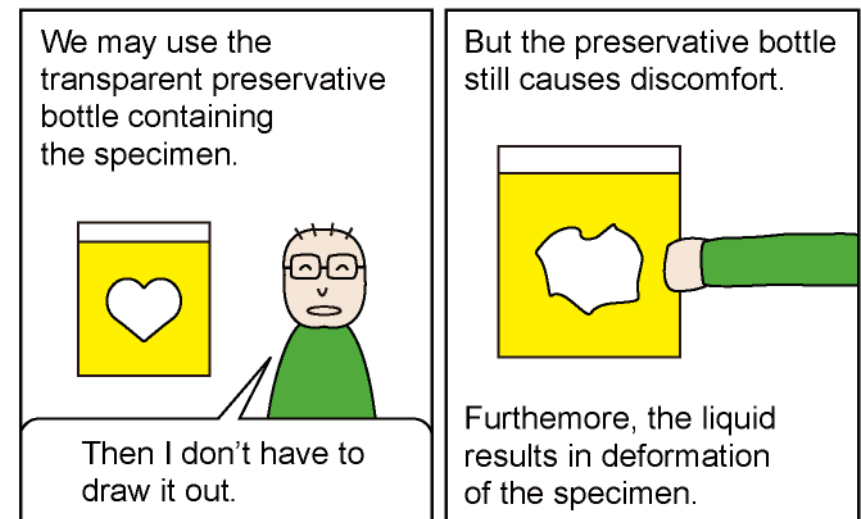
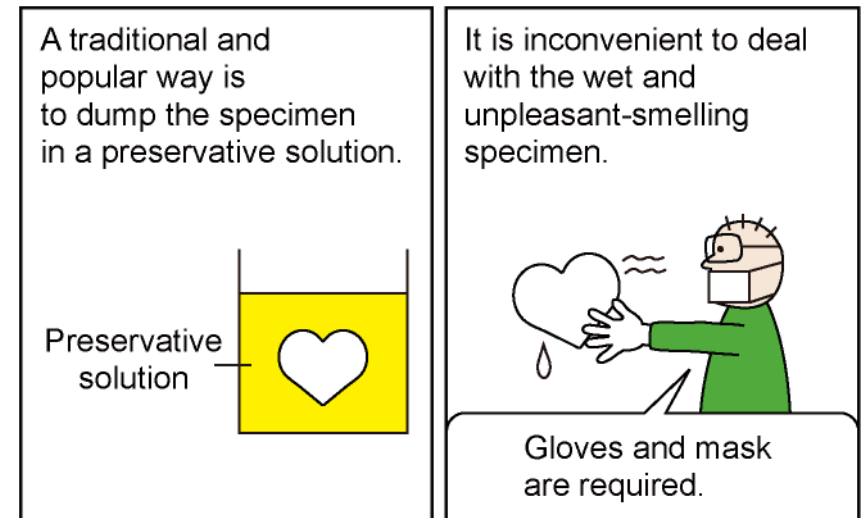
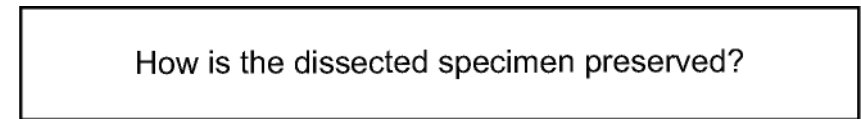


It is desirable to preserve every specimen for a long time.

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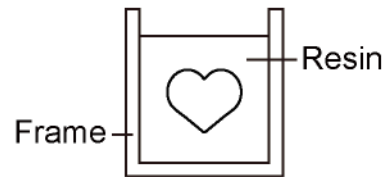


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An advanced way is to put the specimen into a frame and fix it with the liquefied clear resin.



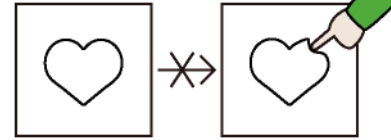
The resin is soon hardened.

After removing the frame, permanent specimen is obtained.



It is like a souvenir made of resin.

Flexible resin and specimen are unthinkable.



In contrast to the real cadaver, the specimen is inevitably hard.

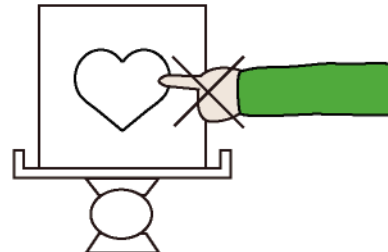


The specimen is neither wet nor nasty smelling.



In the lab, gloves or mask disappear.

But the dissected specimen in the resin is not directly touchable.



It gets heavy due to the resin weight.

How does plastination solve the problem?

In 1997, a German anatomist came up with a brilliant idea.



Dr. Gunther von HAGENS

He removed moisture from dissected specimen, and stuffed plastic instead.



The procedures require special instruments.

The process to fill specimen with plastic instead of water is plastination.

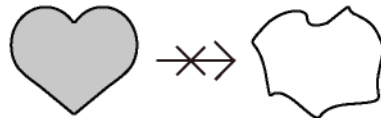


Plastinated specimen

My name is Dr. Plastina.



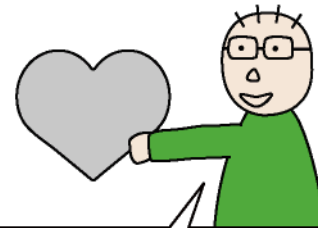
As we know, plastic doesn't decay nor smell.



Likewise, plastinated specimens doesn't decay nor smell.

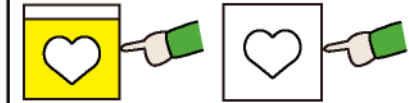
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Surely the plastinated specimen is not wet, so gloves are not needed.



It is like an artificial plastic model.

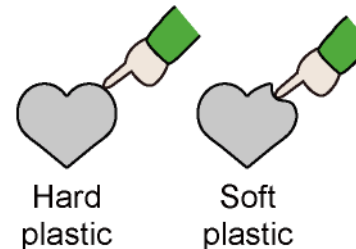
Unlike the specimen put in preservative bottle or covered by resin,



the plastinated specimen is immediately palpable.



According to the nature of the used plastic, the specimen is either hard or soft.



Through plastination, the wet and smelly specimen room has altered to be dry and fresh.

Specimen room



Pleasant environment!

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In spite of the
plastinated specimens,

Dry practice

Wet practice

medical students are
still requested to
dissect cadavers.

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How are the plastinated specimens open to public?

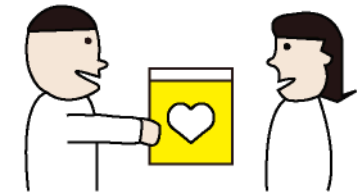
Big medical schools
in many countries
have anatomy museums.

Anatomy museum



There anatomy is
studied by students and
introduced to guests.

Anatomy museum



The museums began
to produce and
display the
plastinated specimens
of the dissected cadavers.



Entire
body



A region
of body

The anatomy museums
often present
the specimens
to other museums

Anatomy
museum

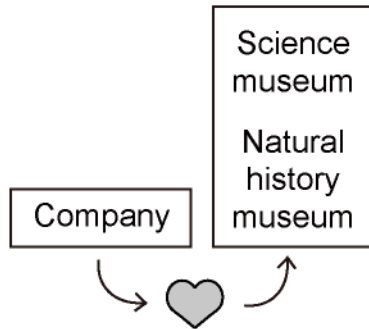
Other
museum



for more popularization.

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Concurrently,
the plastination companies
have been founded
to provide the supply.



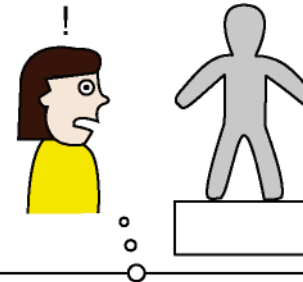
At first,
German specimens
were famous in the world.

Made in
Germany

Made in
China

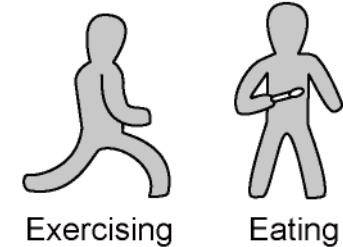
Later,
the Chinese specimens
took over the market.

The people who have no
chance to look at cadaver
are shocked.



This used to be
a forbidden world.

Additional shock is that
the dissected cadavers
are displayed
in specific postures.



Especially, the specimens
made in Dalian, China
got famous for
their quality and quantity.



The permanent or
temporary exhibition
becomes a favorite
of the museum visitors



Best two
public interests

as much as
the dinosaur bones.

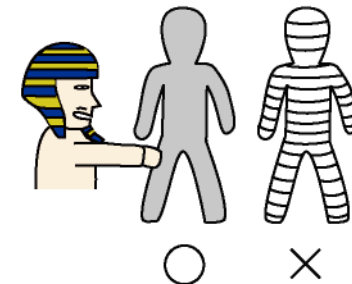
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Suppose that the
plastic had existed and
plastination had been
feasible in the
ancient times.



As the material of plastic,
oil is imported
from the Middle East.

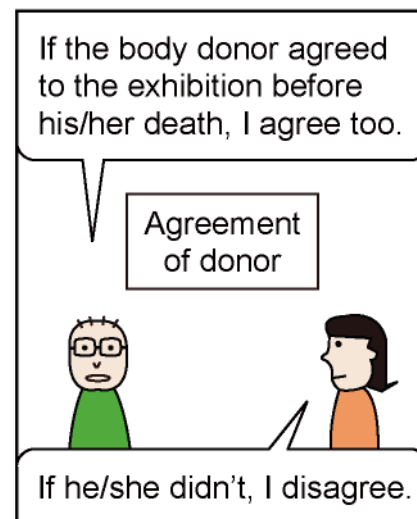
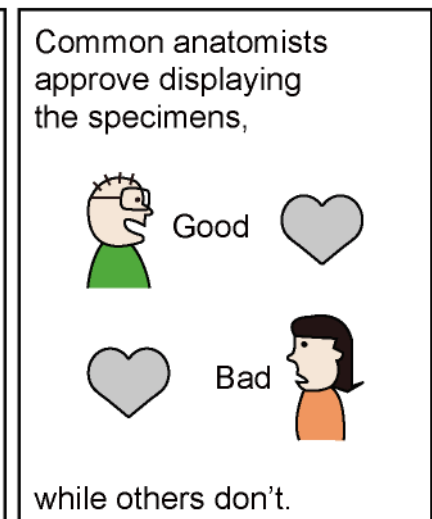
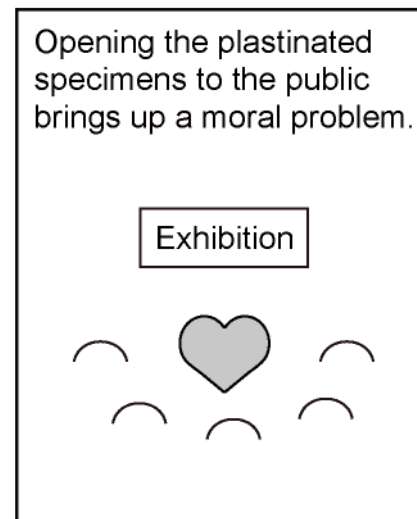
Then the
plastinated specimens
would have been made
instead of mummies.



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How about the ethical issue of public exhibition?



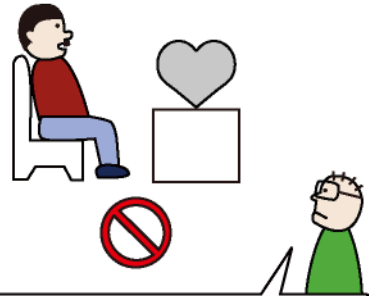
Bad cases of using plastinated specimens solely for marketing

Erotic



include manufacturing the body specimens in erotic posture,

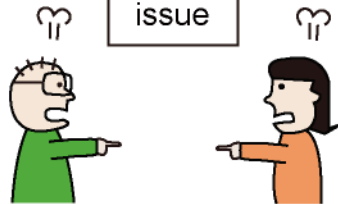
or selling the specimens to individual.



It couldn't be a personal collection.

In reality, the purpose behind the display is in the grey area.

Ethical issue

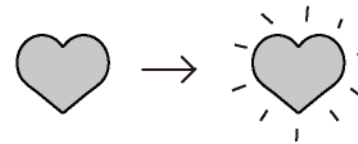


Thus, the discussion never ends.

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Epilogue

There are ongoing works to make better plastinated specimens



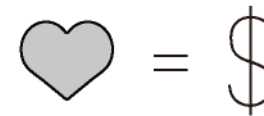
in the different museum and companies of the many nations.

Related international symposium and academic journal have been made (plastination.org).



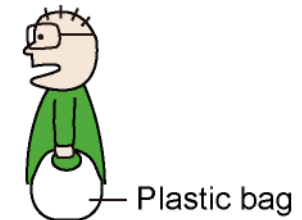
Many anatomists are learning and developing the technique.

The fine dissection and high quality plastination are not for free.



It costs money to make the specimens.

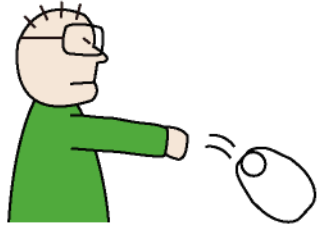
In some countries, the plastic bags of markets are not free.



Similarly, the plastinated specimens are not free of charge.

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Just as the plastic has
environmental concern,



the plastinated specimens
have ethical concern.

Don't forget that
the specimens are
parts of cadavers.
Don't disregard
the specimens.



Thank you for
paying attention
to the plastination story.