

手の内・角見の働き

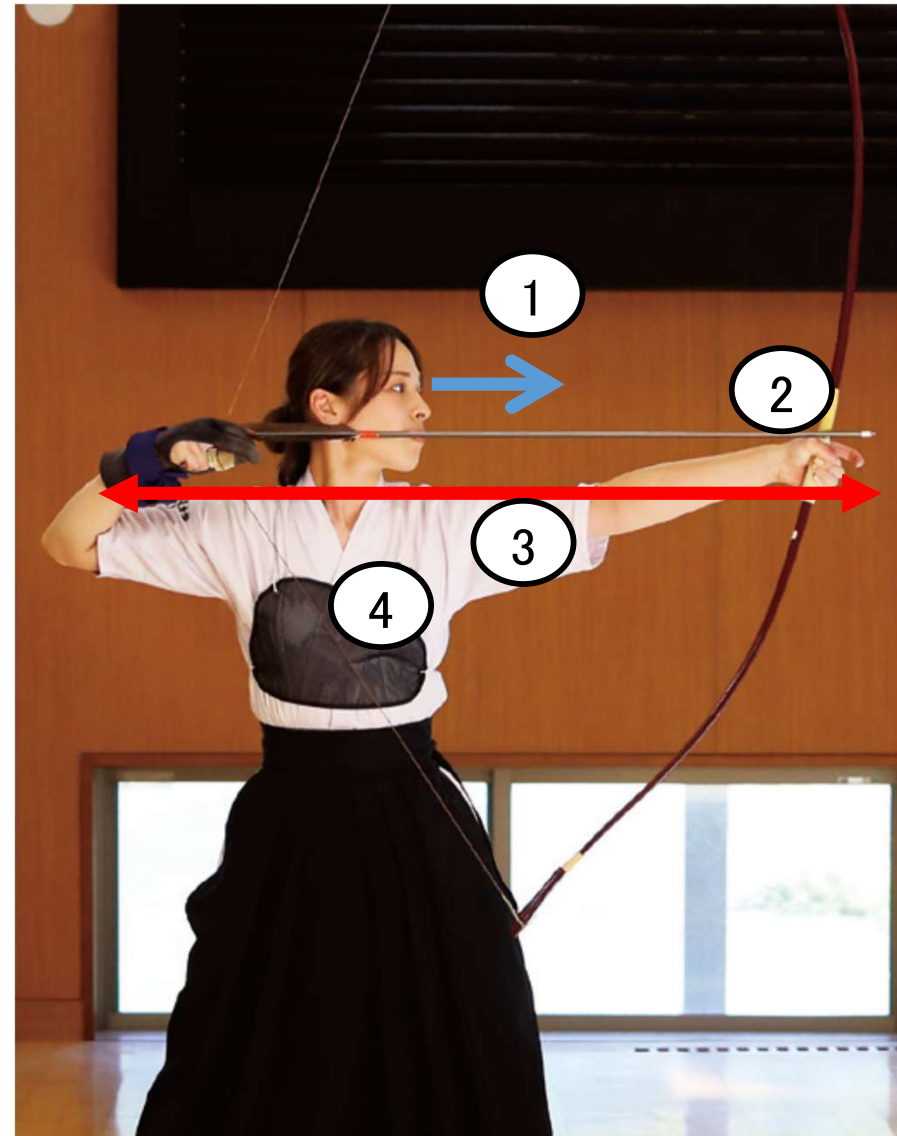
Tenouchi・The effect of Tsunomi

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(International Budo University)

Essential points when shooting

- ① 狙い Nerai
➡ Aiming
- ② 角見の働き
Tsunomi no
Hataraki
- ③ 伸合い Nobiai
➡ Uniting the
Expansions of the
Body
- ④ 心気の働き Shinki
no Hataraki
➡ Function of the
mentality



Essential points when shooting

① 狙い Nerai

② 角見の働き Tsunomi no Hataraki

③ 伸合い Noh

④ 心気の働き

It must be worked on first and foremost in the process of mastering the Kyudo. Its work makes a big difference in the “hitting”.

- The majority of beginner to intermediate archers who cannot hit the Mato continuously do not have sufficient Tsunomi technique.
- To work Tsunomi no Hataraki accurately, it takes more time to learn it than with other techniques. More time is needed to work on it.

- ❑ The method of gripping the bow with the left hand in order to shoot is called “**Tenouchi**”.
- ❑ When preparing the Tenouchi, the area between the thumb and index finger (Koko) is placed against the grip. At this point, the place at the base of the thumb where it touches the grip is called “**Tsunomi**”.
- ❑ Torque is applied to the bow with the Tsunomi at the center. This movement of the Tenouchi during the shooting is called “**Tsunomi no Hataraki**” and is regarded as important.
- ❑ In particular, in the Heki-ryu Insai-ha, the way of preparing the Tenouchi is called “**Momiji Gasane**”.

Tsunomi, Tsunomi no Hataraki, Momiji Gasane

➡ Kyudo terminology

Tenouchi

➡ Multiple meaning as Japanese usage

Japanese-language dictionary

1. Palm。 「Tenouchi ni Ase wo Nigiru」
2. Within the sphere of influence。 Under control。 「Tenka wo Tenouchi ni Osameru」
3. Skill。 Ability。 「Tenouchi wo Haiken suru」
4. Thinking and planning in your mind。 「Aite no Tenouchi wo Yomu」
5. Money and rice given to mendicant priest, etc.

Tenouchi wo Akasu

Revealing important information about the skills you have and the plans you have.

Tenouchi wo Yomu

To understand the psychology and tactics of your opponent in order to gain an advantage for yourself.

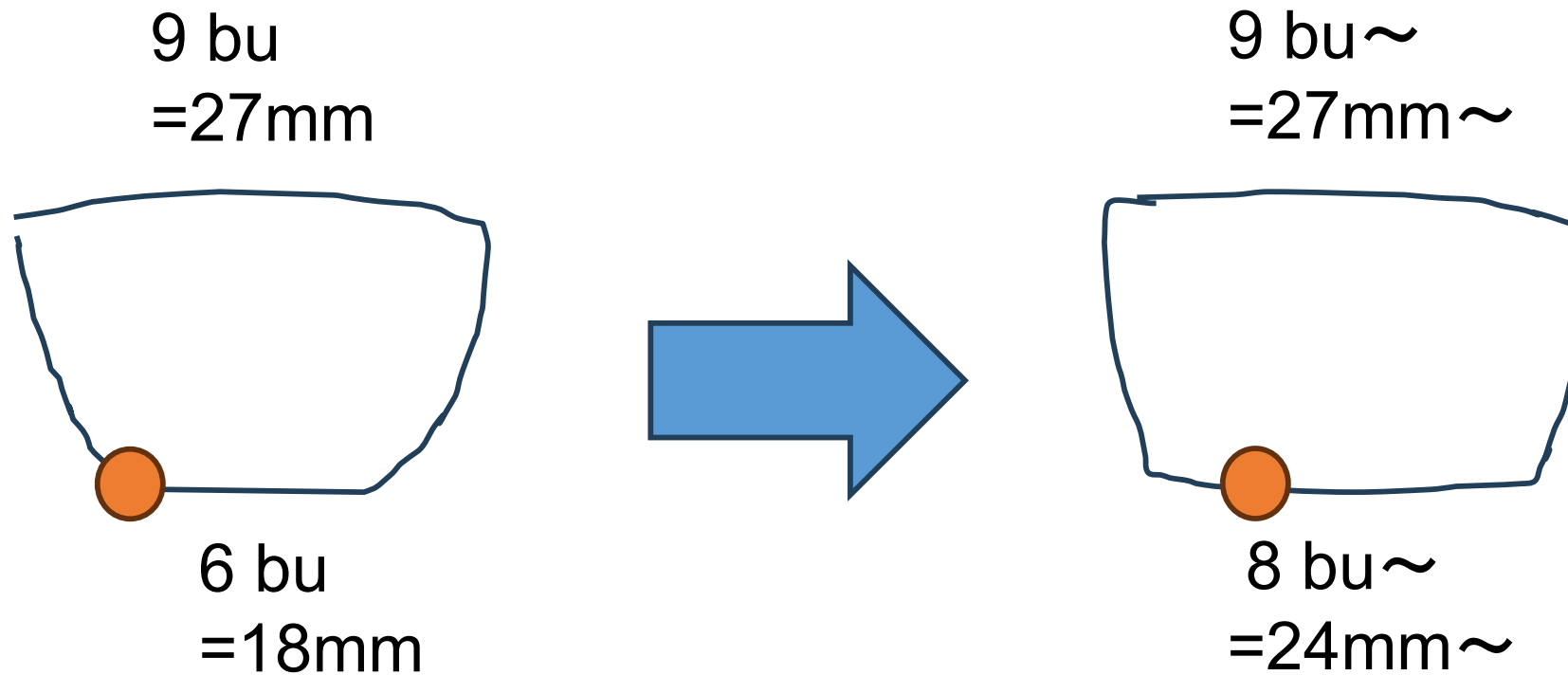
Tsuno mi

角 見

The pointy protruding part of an object; a corner.

- ① See. See by eyes
- ② the way one looks at things
- ③ Meet someone

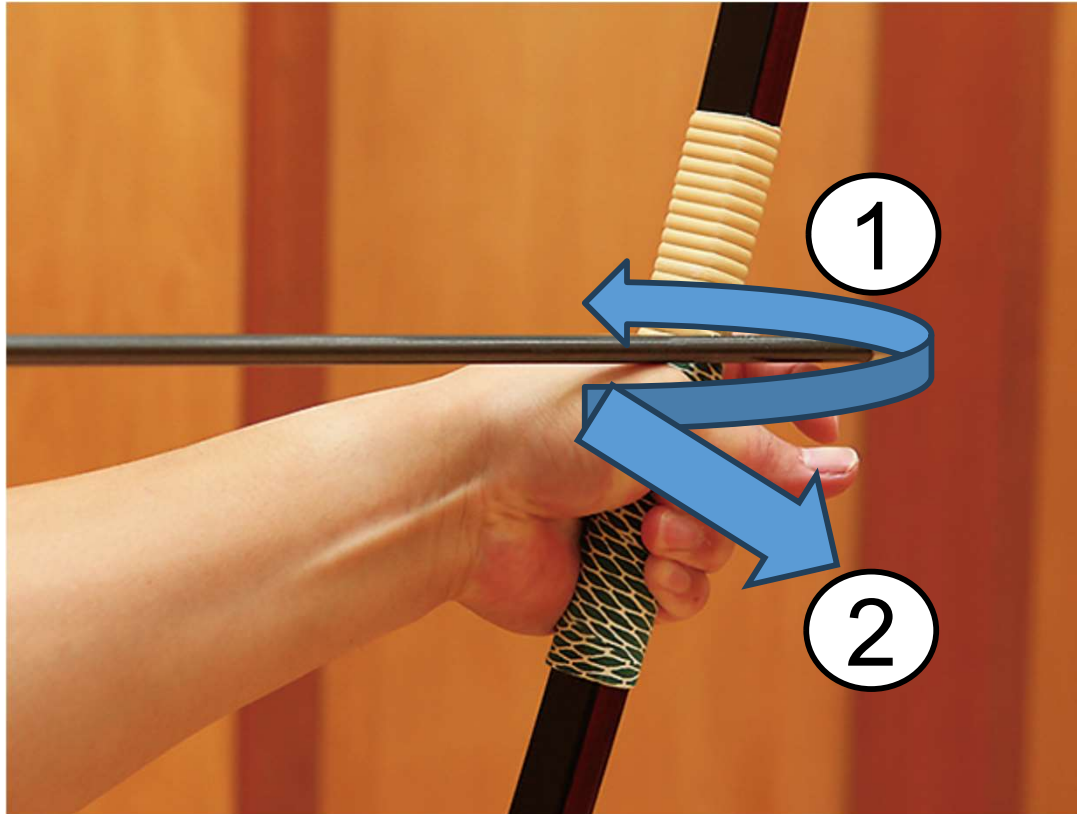
- In the old days, Yumi was sharpened with a standard of 6 bu inner bamboo and 9 bu outer bamboo. It was considerably thinner than today's bows.
- With a bow made in this size, it was just right to make the Tenouchi by placing the Koko on the "corner" of the left side of the inner bamboo.
- The name "Tsunomi" came to mean "seeing" the "corner" and preparing Tenouchi.
- Since the current bows have an inner bamboo length of more than 6 bu, it would be too left if it is placed on the corner.



Reasons for the widening

- Adhesive change (Nibe → synthetic adhesive)
- Ease of maintenance

Tsunami no Hataraki



- ① Apply torque in a counterclockwise direction (when looking at the bow from above)
- ② Apply a downward force that pushes the top of the bow down toward the target.

$$\textcircled{1} + \textcircled{2}$$

Tsunomi no Hataraki & Effect

Tsunomi no Hataraki

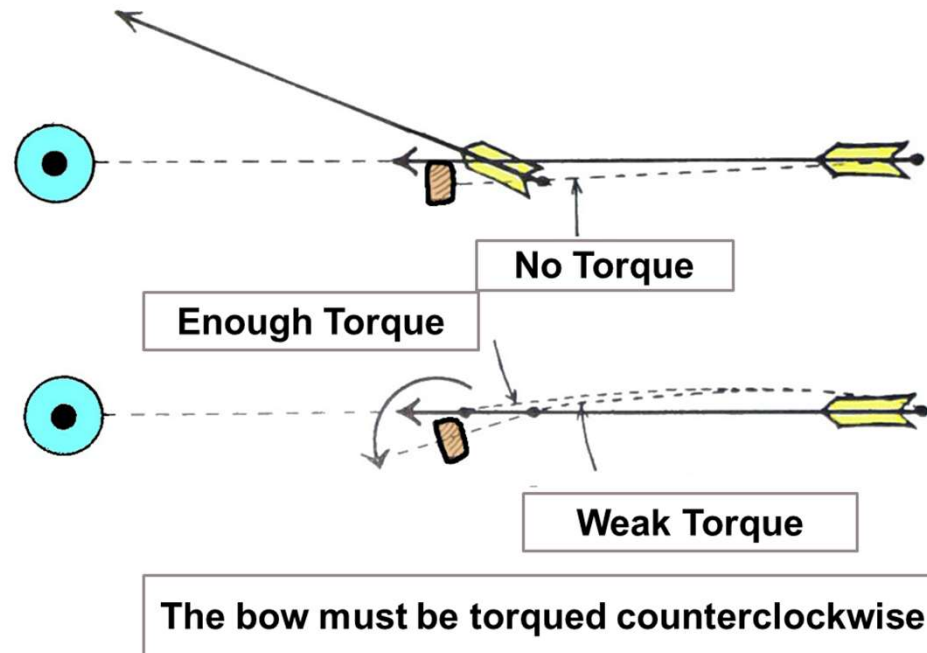
- ① Make the arrow fly straight
- ② Avoid hitting the face, arm, etc. with the string
- ③ Increase the power of the arrow

Effects as a result of Tsunomi no Hataraki

- ④ More accuracy
- ⑤ Nobiru Yazuma (Arrow does not swing in flight)
- ⑥ The feathers will not be scraped by the bow
- ⑦ Quick Yugaeri
- ⑧ Tsurune sounds clear
- ⑨ Fewer broken Tsuru
- ⑩ No dropping the bow when Hanare
- ⑪ Archers with good Tsunomi no Hataraki & Nobiai less likely to cause shooting problems

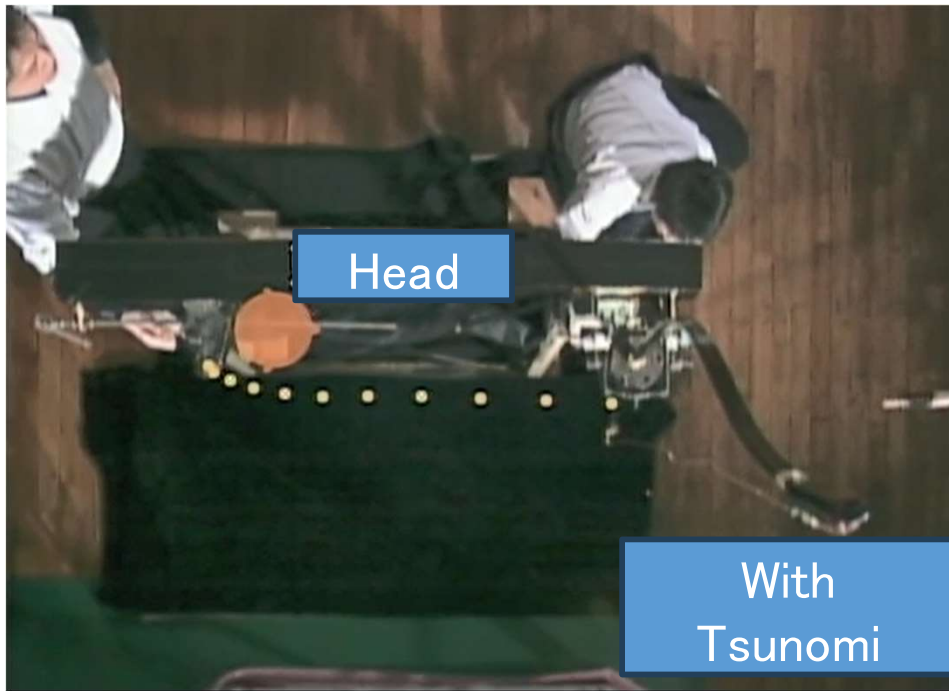
① Make the arrow fly straight

- If Tsunomi doesn't work well, the arrow flies to right.
- In Kyudo, the technique of letting the arrow fly in the direction it is facing in Kai is considered the correct technique.
- Since Tsunomi does not work, aiming at the left side and hitting the target is considered to be an inexperience of the shooter's technique.



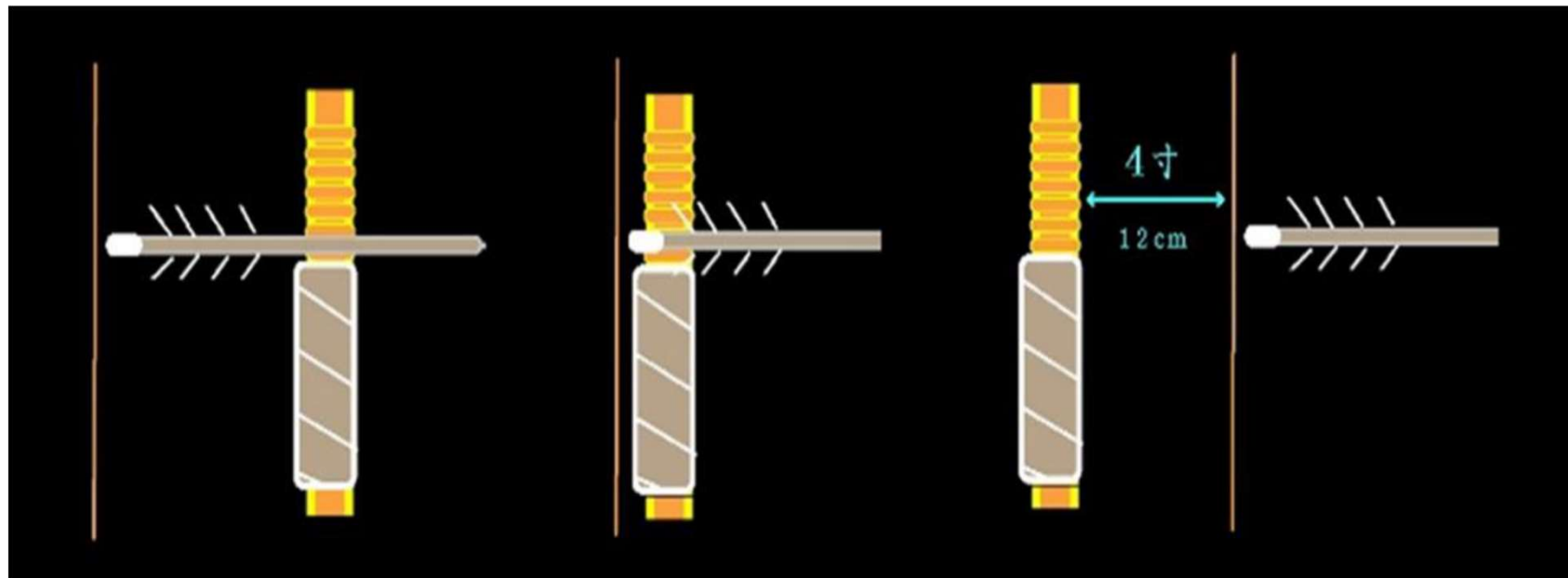
② Avoid hitting the face, arm, etc. with the string

- If the bow is properly twisted, the string will be restored as it passes in front of the face.
- If not, the string will hit head, ear, arm, etc.



③ Increase the power of the arrow

- If the Tsunami works well, the point where the string and arrow separate will be on the target side.
- Therefore, the string will push the arrow for more time, and the energy of the arrow will be greater (higher penetration force)



Weak

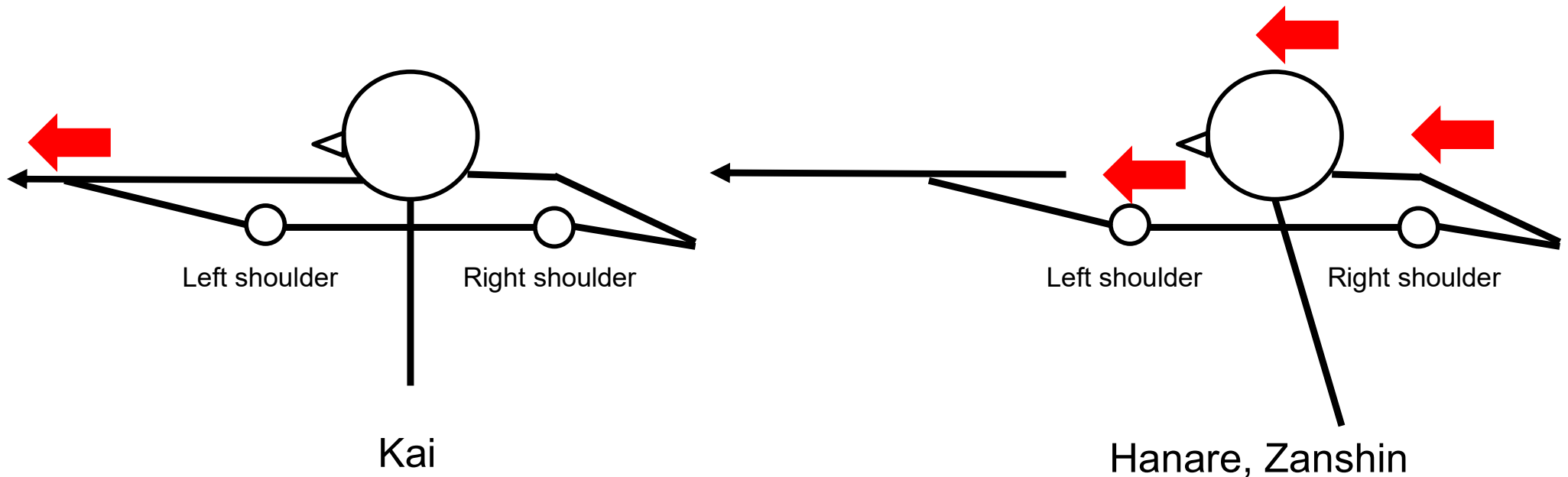
Good

Strong

- ① Do not twist the bow. The bow (or Tenouchi) must be pushed in the direction of the target
 - ✓ I vary the wording (Twist, Torque, Push, etc.) depends on the condition of the archer
- ② Tsunomi can work without bending the wrist. Bending the wrist at Hanare & Zanhin is not a good idea.
 - ✓ I check to see if the wrist is bent as a result of Tsunomi no Hataraki or if it is bent intentionally.
- ③ Both arms must not be lowered in Zanshin.
 - ✓ I check to see if the arms are dropping as a result of Tsunomi no Hataraki, or if they are swinging the arms for some other reasons

① Do not twist the bow. The bow (or Tenouchi) must be pushed in the direction of the target

Push in the direction of the target."



- If archer pushes (applies force) in the direction of the target during Kai, after the bow loses its restorative force (i.e., Hanare), the entire upper body will move horizontally in the direction of the target to which the force was applied due to inertial force.
- Physically, applying a "pushing" force in the direction of the target results in what is called "Tsukkomi Banare".

It should be noted that

Physical Phenomena or Movement Sensation

- From a physics phenomenon, the bow must be torqued in a counterclockwise direction when viewed from above + Apply a downward force that pushes the top of the bow down toward the target.
- “Pushing in the direction of the target” is not correct from a physics standpoint.
- However, no matter how much the instructor talks theoretically, some archers are unable to master the movements they seek.
- One of the reasons for this is that in motor learning in sports, the images of movement (motor representations) held in response to expressed words differ from individual to individual.
- In other cases, the instructors themselves do not understand the above and speak only in their own image.

Expressions about how Tsunomi works

- **Push** the Yunde in the direction of the target
- **Twist** the Yunde outward (to the right)
- **Wrench** the Yunde like a torque wrench
- **Tighten** the Yunde like squeezing a rag
- The Yunde receives and **supports** the force from the bow.

- When speaking among instructors, be careful at what level they are speaking.
- When instructing students, be mindful of which expressions shall be used to ensure that the motor is learned appropriately.

② Tsunomi can work without bending the wrist.
Bending the wrist at Hanare & Zanshin is not
a good idea.

Not beautiful to bend the wrist?

- Some say "It is not beautiful" to have a bended wrist in Zanshin.
- In most cases, there is no rational reason for this, and it is assumed that the argument is based on the typological beauty (➡stylistic beauty) found in the expressive form of kyudo techniques.
- Kyudo techniques should be rational and efficient, and that rational techniques that meet a given objective (i.e., to hit a target) should be considered "beautiful" (➡beauties of functionalism).
- It would be nonsense to discuss the pros and cons of the phenomenon of wrist breaking itself beautiful or not.

Bending the wrist in Zanshin, is it

As a result of Tsunomi working?

or

Just bended without Tsunomi?

Effects as a result of Tsunomi no Hataraki
is a good reference to judge

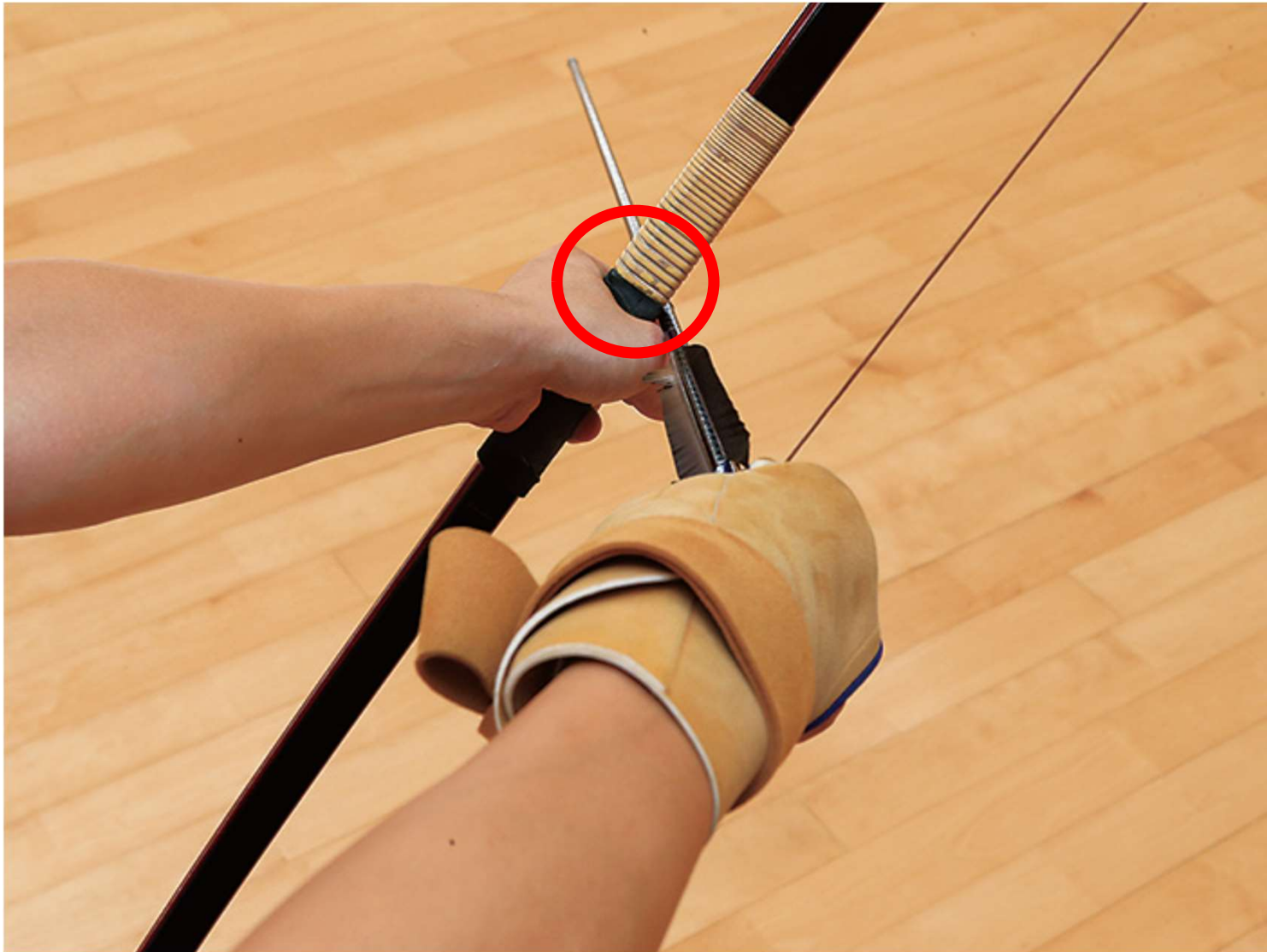
During IKYF Nagoya Event 2024

- Many beginner-intermediate archers with bending wrists did not have a good Tenouchi.
- Insufficient rolling up the Koko, not keeping the little finger close to the thumb, not aligning the nails, the thumb and middle finger being far apart, changing the shape of the Tenouchi during the Hikiwake, slipping, bending, etc.
- As a result, Tsunomi is weak, and if the wrist is not broken during Hanare, the string strikes the face or hand, etc., and the wrist-breaking action becomes the norm.

Momiji Gasane no Tenouchi

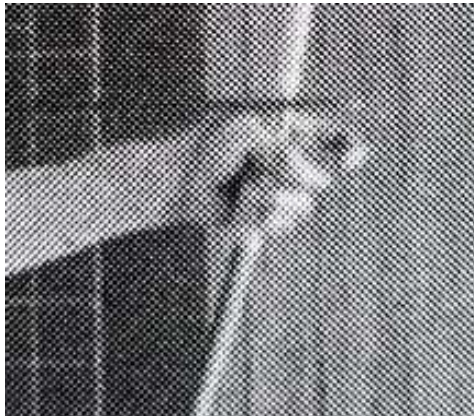
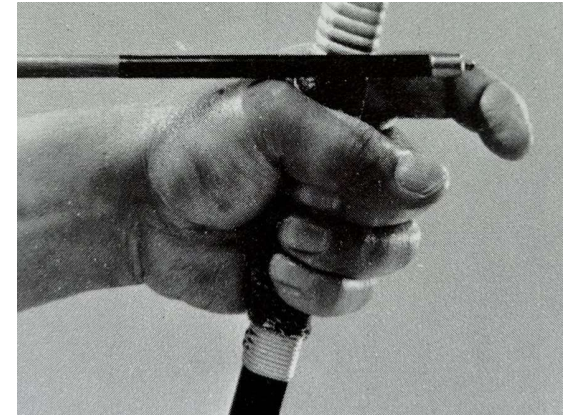
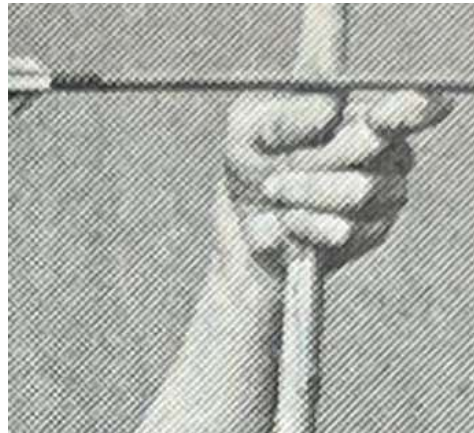
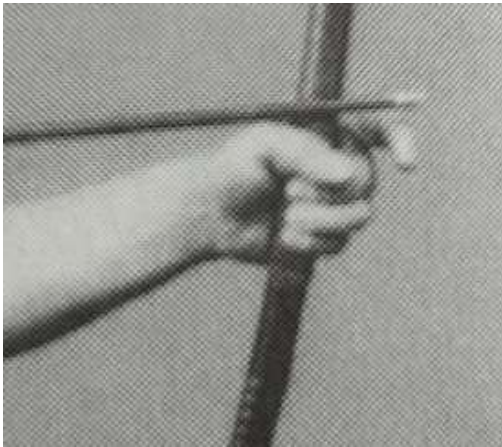
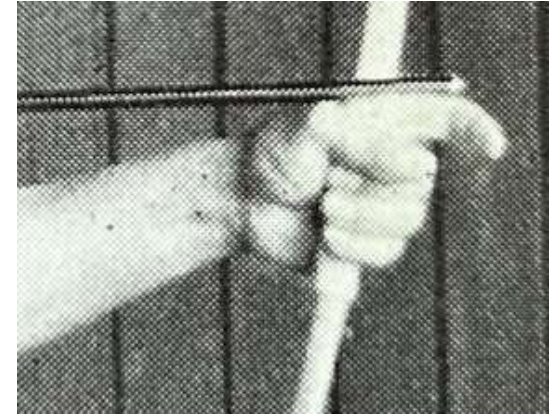
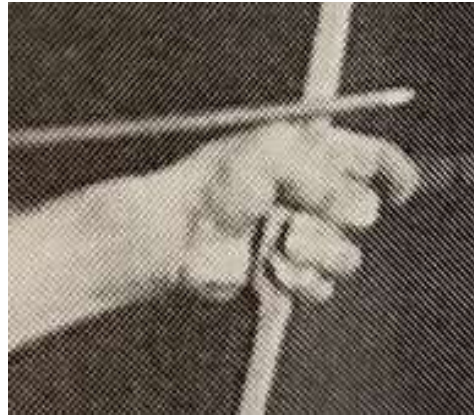
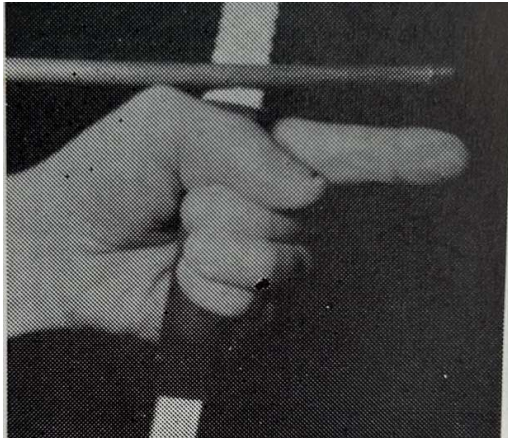
If the Tenouchi is properly made, even if the force to twist the bow is not applied strongly, the skin that adheres to the bow is entangled with the bow, and as long as the wrist is not broken, the bow is twisted in a counterclockwise direction with a strong force.

Keep Tenouchi even smaller!



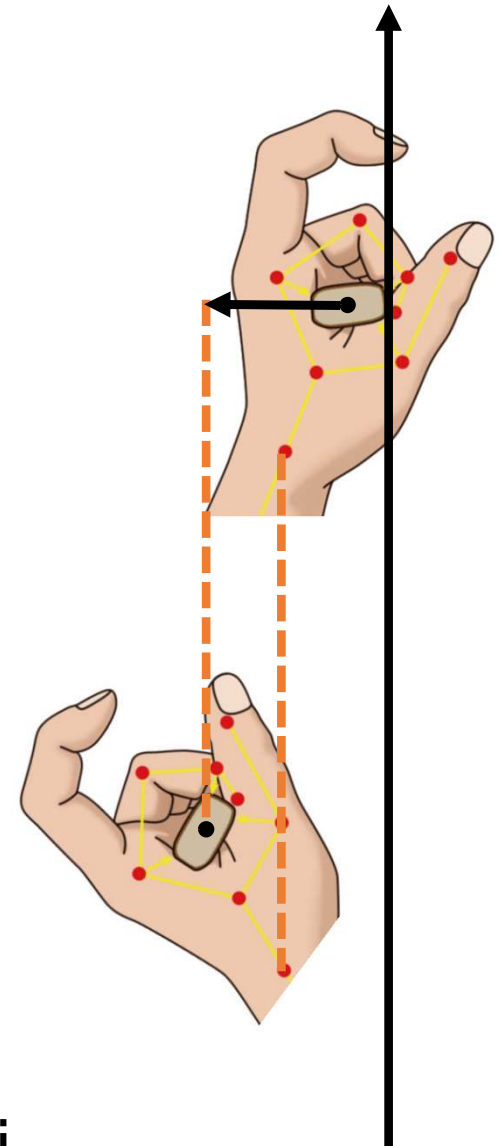
Roll up the skin as much as possible.

Keep Tenouchi even smaller!

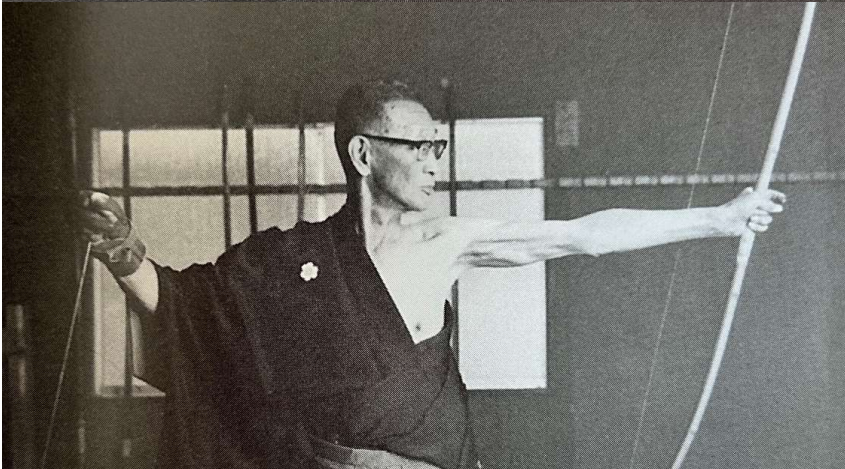


Bending the wrist while Hanare

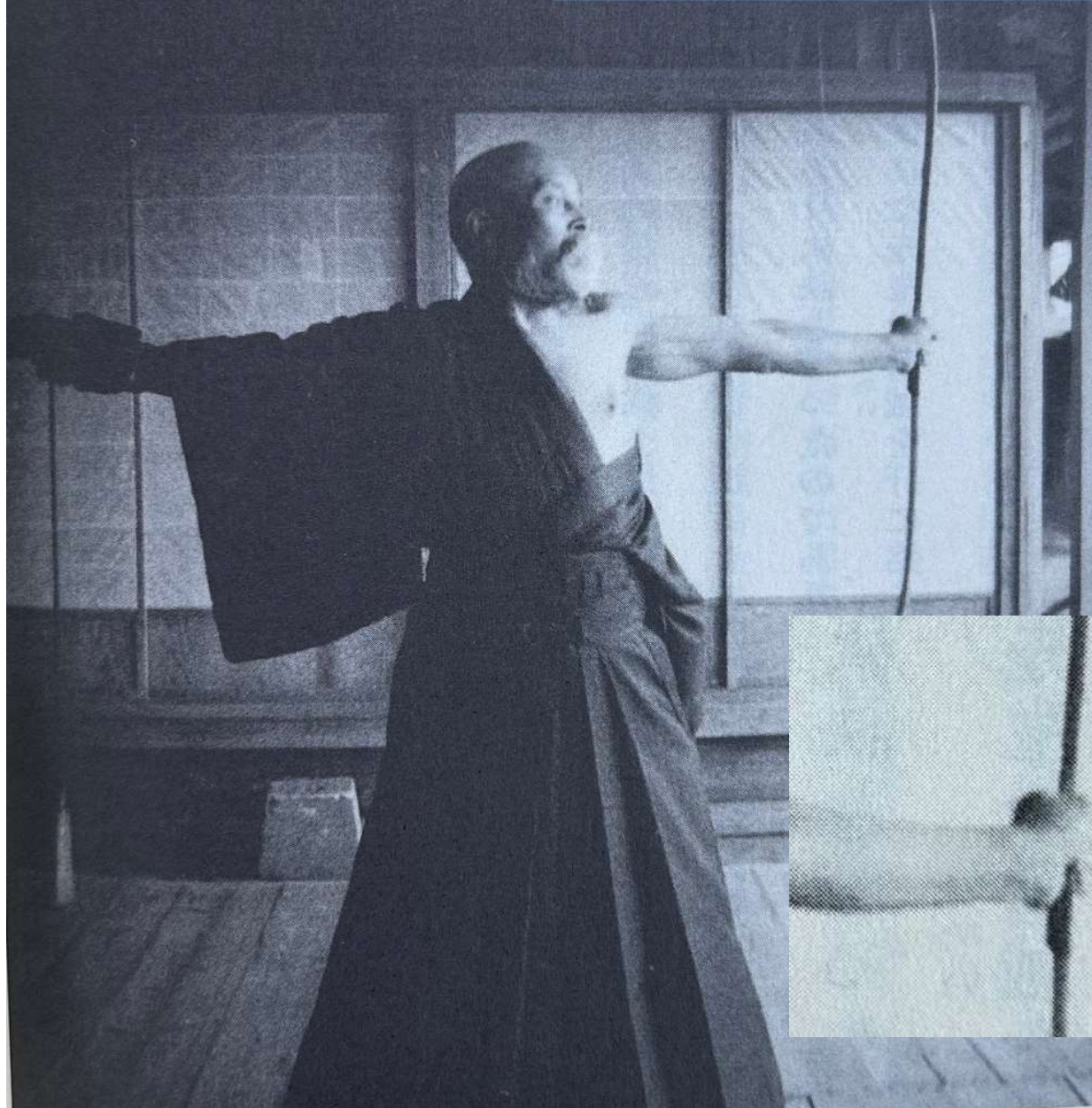
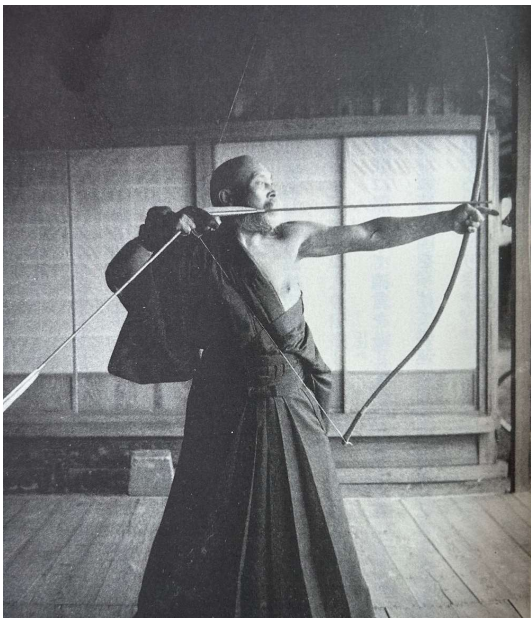
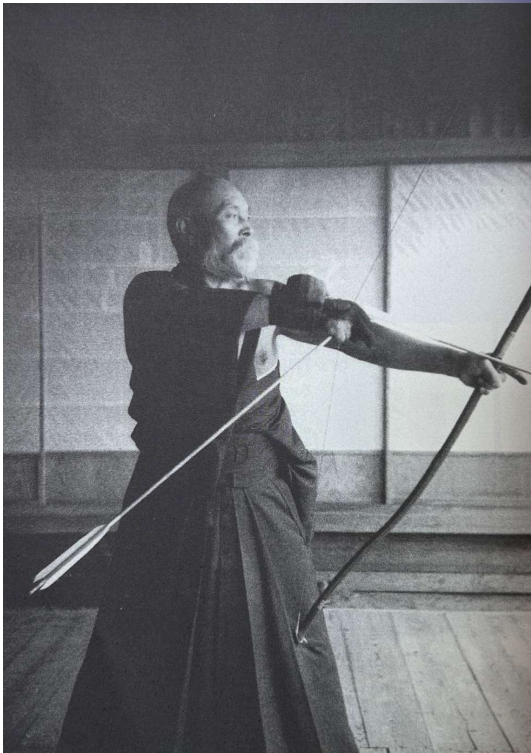
- ✓ If the Tsunomi works correctly and results in the wrist breaking due to inertia, then no problem.
- ✓ The archer doesn't have to bend the wrist extremely hard to get the Tsunomi to work.(concept of Momiji Gasane no Tenouchi)
- ✓ It's hard to do the wrist break technique at the same time, at the same speed, and at the same angle every time.
- ✓ From the viewpoint of drawing a bow rationally and efficiently, the archer should pursue the technique of making the Tsunomi effective with a minimum of movement.



Zanshin of Great Sensei



Mr. Takashi Kawashima, Hanshi
He was using "Sunkyu" 寸弓.

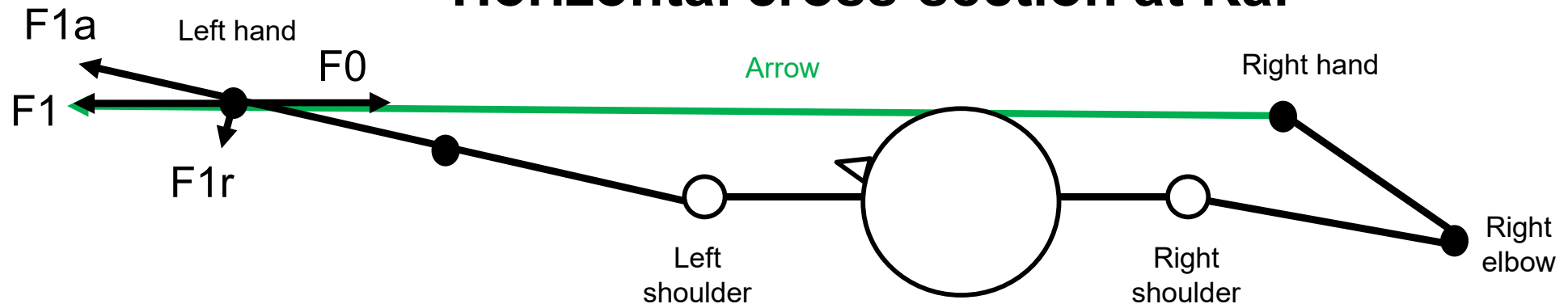


Takashi Kawashima (1883-1957)
Dai Nippon Butoku Kai Kyudo Hanshi, Heki-ryu Sekka-ha

③ Both arms must not be lowered in Zanshin.

Why does the left arm move at Hanare?

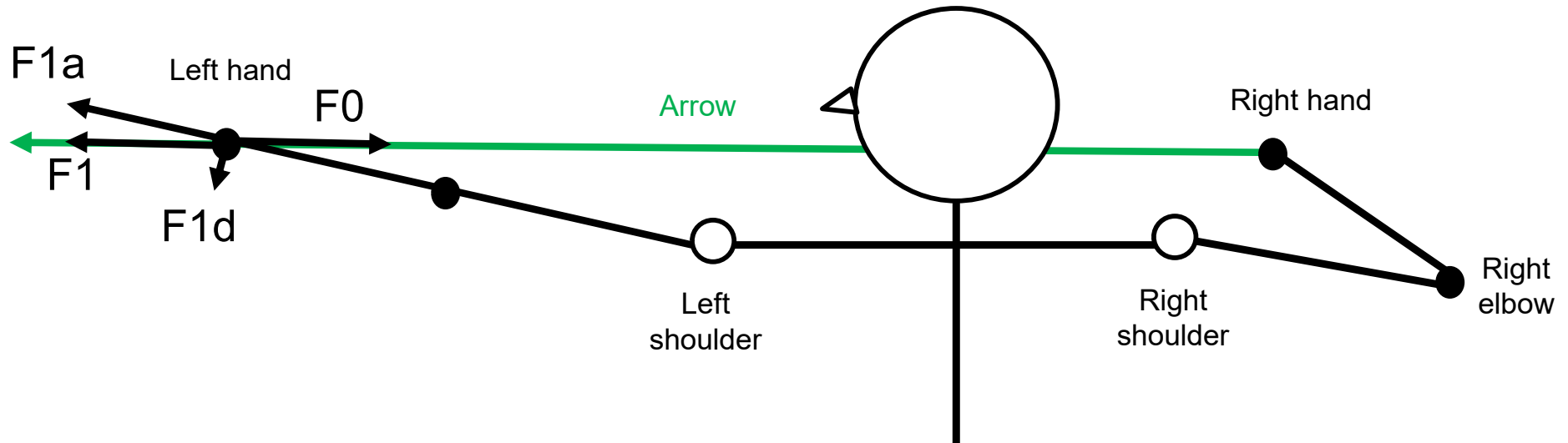
Horizontal cross-section at Kai



- ✓ Consider the state of equilibrium of power in the Kai.
- ✓ The archer maintains Kai by responding with F_1 with the left fist to the F_0 force. ($F_1=F_0$)
- ✓ The force of F_1 is the combined force of F_1a and F_1r .
- ✓ When the arrow is released, the inertia of the F_1r will cause the left fist to move backward.
- ✓ The same applies vertically (Next Page). As a result, the left fist moves backward downward.

Why does the left arm move at Hanare?

Vertical cross-section at Kai



- ✓ The same applies vertically.
- ✓ As a result, the left fist moves backward downward.
(Horizontally F_{1r} , Vertical F_{1d})
- ✓ 四寸八寸の離れ ”4Sun 8Sun no Hanare“

Why does the left hand move at Hanare?

“Momiji Gasane • Hanare no Jiki” Sakae Urakami

“... When Hanare, this force acts at 45 degrees, i.e., in the lower left direction... Inertia always accompanies a force that has worked... It is only natural that it should move to the lower left... This force of nature was used to define the 4Sun and 8Sun...”

「Kyudo Techniques」”Kyudo Shido no Riron to Jissai”

Genshiro Inagaki

“The current common practice is to believe that the upper limbs should be extended when shooting, and to teach "push" (left) exclusively, while the right is taught "don't drop down" or "don't lower"..... They should adopt a rational Zanshin that is not for show.”

It is against the laws of physics that the left fist does not move from the Kai position in Zanshin.

But....

- The Yunde is lowered as a result of the correct Tsunomi working. If the archer is swinging the arm, that should be corrected.
- Some archers are doing different technique. For example, there is a technique called “Enpi no Sha”.

猿臂の射”Enpi no Sha”

The elbow of the left arm, which is bent during Kai, should extend when it has Hanare

曲がっている左手の肘が離れるときに伸びること

「尾州竹林派射法」魚住文衛

(『現代弓道講座』②射法編』より)

(打起しの動作)

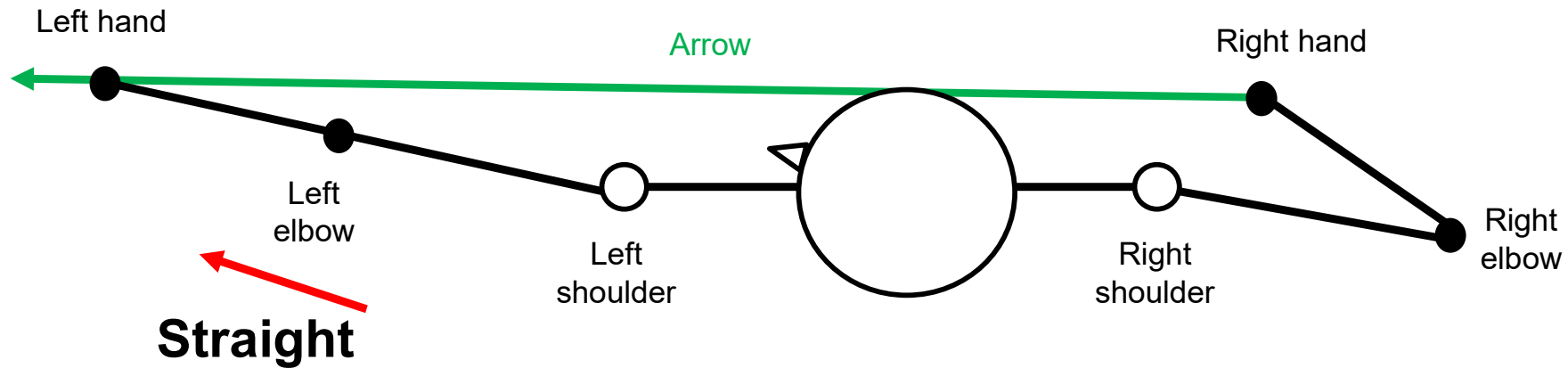
「打起しの際に、左手を始めからいっぱい伸ばして打ち起こすことは片釣合となり右手離れになりやすいので、当流はこの方法を好まない」

「左腕は肘に少しの余裕を残しておく。この余裕を残すことを「骨を残す」と称し、離れに際しこれが延びて弓の反発力を強めるためであって当流では重要な教義の一つとされている。」

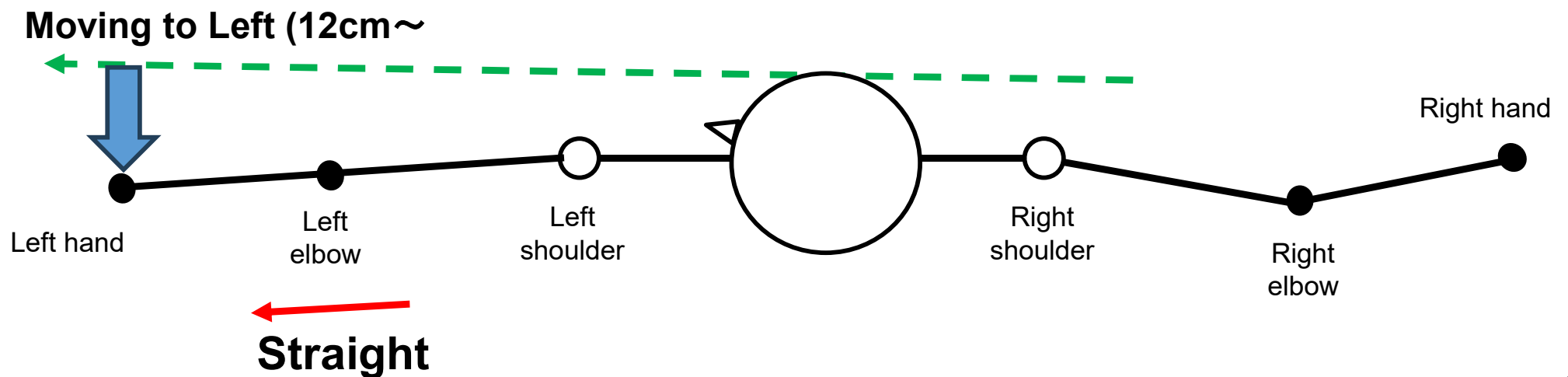
(猿臂の射)

「左腕が延びきってしまえば、離に際して、さらに延びる余裕がなく、逆に縮む結果となる・・・肘に少しの余裕を残して引分け、会の詰合において延びを利かせ、さらに離るとき、その反動で爆発的に延びて矢を真っすぐに、強く発するという射法であって、これは当流の得意とする射法である。」

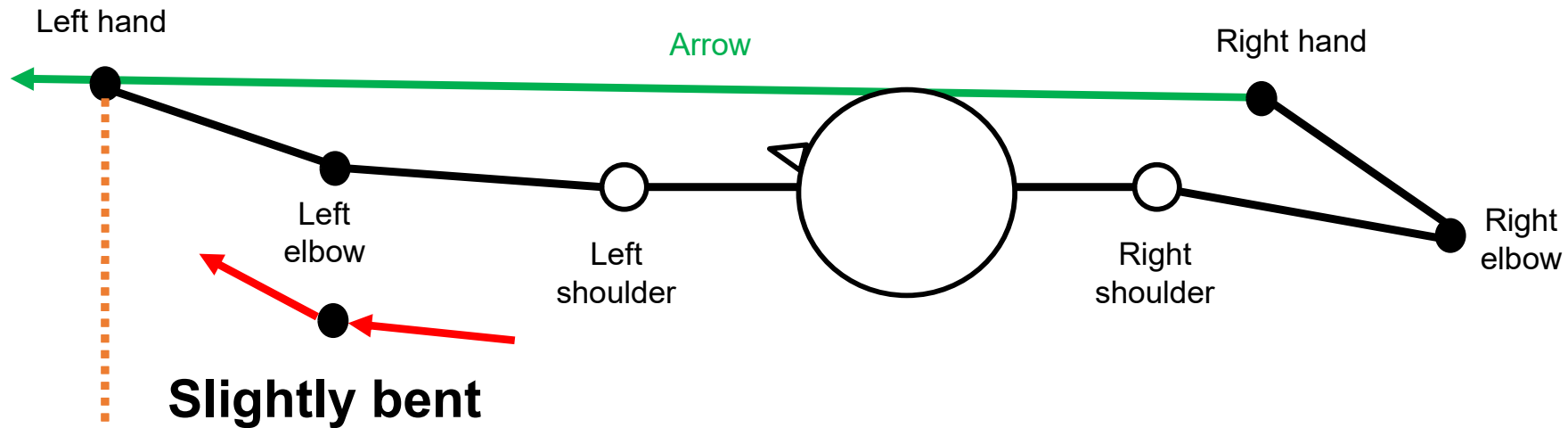
Horizontal cross-section at Kai



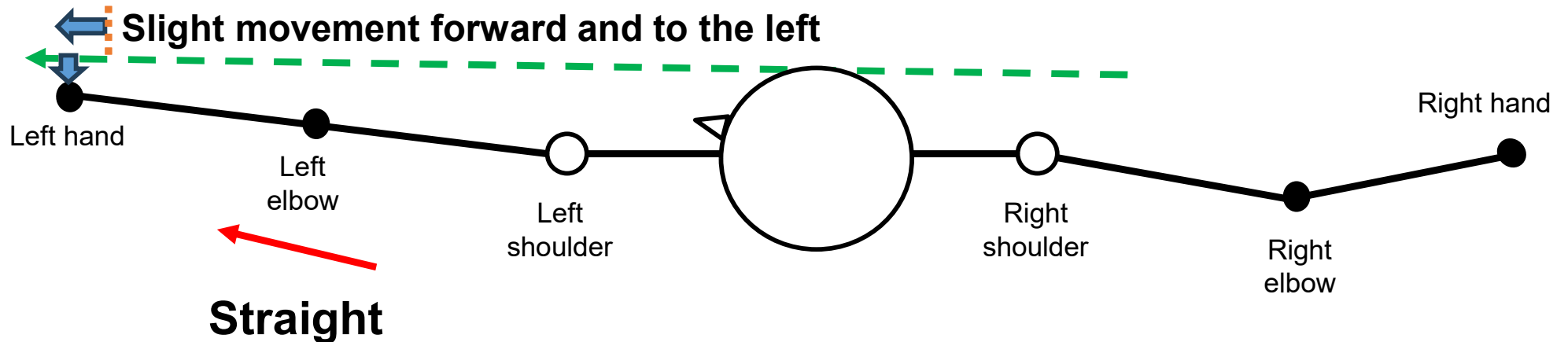
Horizontal cross-section at Hanare



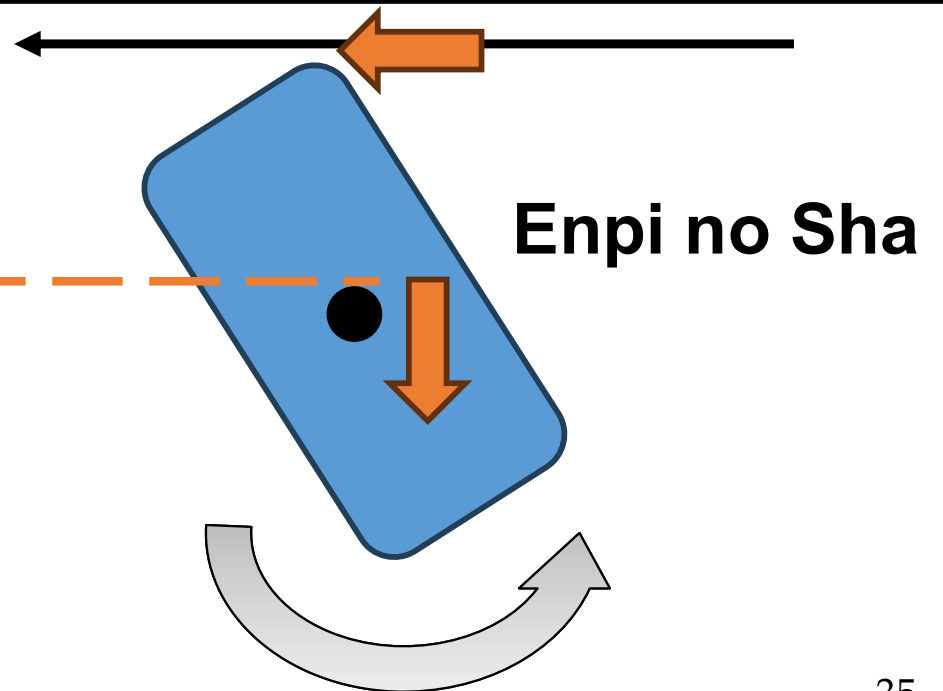
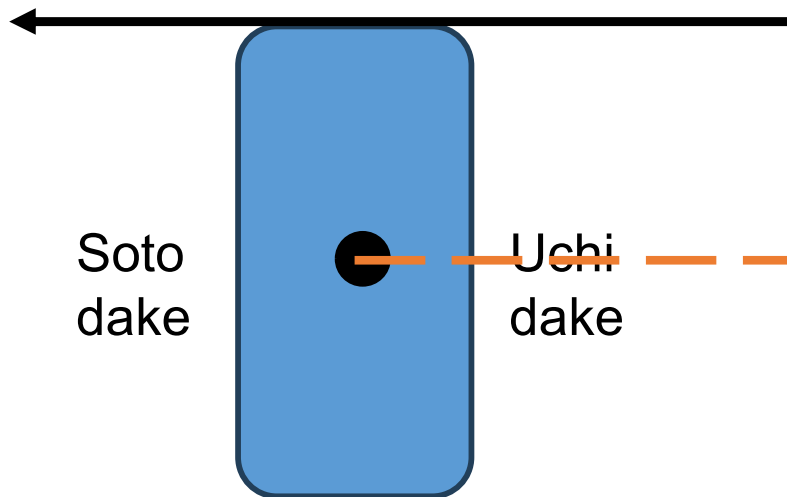
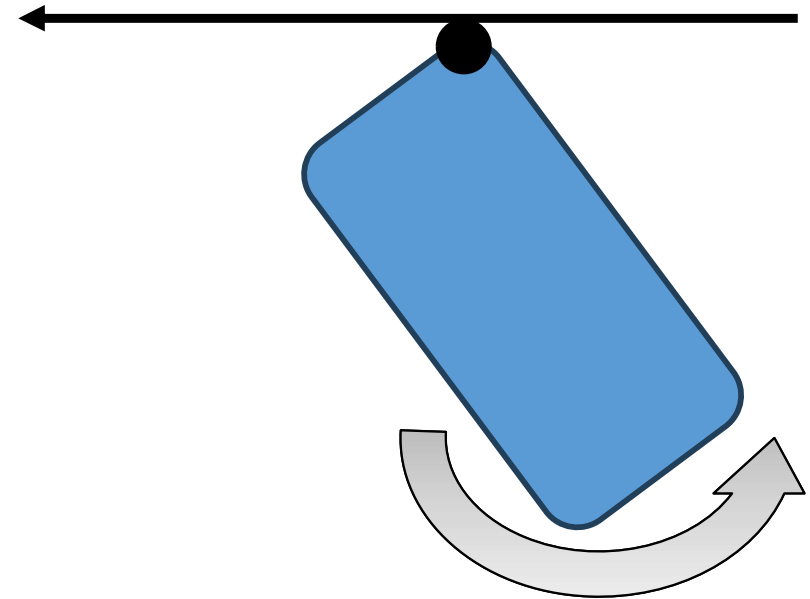
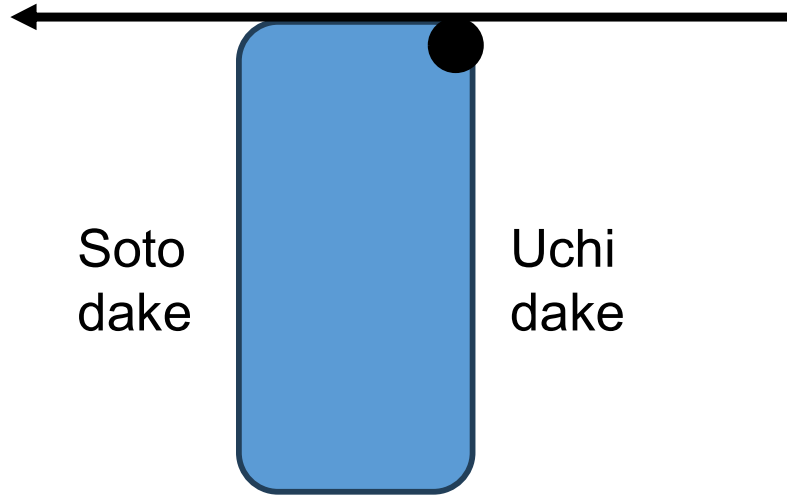
Horizontal cross-section at Kai



Horizontal cross-section at Hanare



The difference of Tsunomi Technique



My Student days



残身 (右) 大和流の名手・市川虎四郎範士。
伝統的歩射の残身で、理想的な姿である

