### Effective way of intention for our advantageous use (Part 2)

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# **3.** Manage multiple objectives with adequate allocation of intentions.

### Multiple tasks and multiple objectives

There could be multiple tasks (or actions) in an activity. We usually move some different parts of the body for a single activity. In playing violin, for example, some tasks in terms of movement could be "move the fingers and hold a certain part of a string" and "move a bow". There are other tasks in terms of carrying an violin such as "hold a violin with the left hands, chin, and shoulder", "hold a bow with the fingers in the right hand". Furthermore, there are other tasks in terms of playing such as "more volume", "playing faster". Since it is an artistic performance, there are also other tasks in terms of expression such as "express such a beautiful scene", "convey joy to audience", "get into sad feeling".

Each task has its objective. Although a task itself is already an objective of an action, each task could have some different variation of objective. For example, in the task of holding a bow, while "holding a bow" itself is already an objective, the variations of objective could be such as "hold a bow easy", "hold a bow in a particular angle", "hold a bow with feeling the tip of fingers". We thus could say that there are multiple objectives in an activity as well as multiple tasks.

Now we have another task that is to support own body while we do an activity. There we have some more tasks and we could have variation of objectives in the task of supporting own body such as "standing with the whole feet contacting ground (not deviated in the heels so much)", "making the pelvis in a particular angle", and "the head is rested at the highest position". We could set more objectives about supporting the arms such as "hang the arms as much as possible at the playing position of the arms (not holding the elbows and shoulders up excessively)".

### Hierarchial feature of objectives

These multiple tasks and objectives in the activity of playing violin could be divided into some aspects such as expression, playing, the movement of the body parts, and supporting own body. These aspects seem to have a hierarchy. That is, an objective could become a process of another objective in the higher layer. For example, moving fingers is a process of playing music (another objective). Playing faster is a process of expressing elation (another objective). Both holding an instrument and supporting own body are processes of playing music. Since they seem to have a hierarchy, it is possible to describe them with using layers below.

Layer 1: Expression Layer 2: Playing notes or music Layer 3: Movement of the body parts Layer 4: Holding an instrument Layer 5: Supporting own body

This characteristic can be applied to any activity not just to playing instruments. A notion implied by this hierarchial feature of objectives is that a process will be an objective, and vice versa an objective will become a process (of the higher objective). Process (means) and objective (end) are interconvertible, and we can just think that there are just a bunch of objectives in some hierarchial layers.

### Is "end gain" negative?

Frederic Matthias Alexander (the founder of the Alexander Technique, FM) introduced the notion "end gain" and "means whereby". What FM means by "end gain" is that people tend to just think of gaining an end of a certain activity and not to think of its process. The response pattern in the process then would not be changed any in this way, and people would keep using their body with disadvantageous habits. FM recommends people to be "means whereby", which is to think of its process and manage them in favorable condition while doing the activity. There are particular means which FM thought important such as "the head forward and up", "the neck to be free", "the back lengthen and widen". These are processes, and at the same time these could also be the objectives to be accomplished. In this sense, FM has already recommended to have multiple objectives and to manage them in an activity.

Since the expression "end gain" is used for our negative response pattern in the AT, people may think like "gaining end is not good, just keep working on processes". Especially people who are beginners of the AT and told "don't be 'end gain'" may think like "try not to pursue the end". This is misunderstood. Trying to get an end is not a negative thing by itself. "Just thinking to get an end without thinking its process" could be negative. We had better have an end, goal, or wish when we do something, so we could have more chances to get it or get closer to the desired end. However, it's not just AN end, and it's usually multiple ends. From this point of view, we are better off having the attitude of not "end gain" but "multi-ends gain".

### Integration: allocation of multiple intentions

Sometimes we forget to intend the objective of an activity in the higher layers in the hierarchy scheme, in other words, the goal or ideal output of an activity by focusing

on intending the objectives for the use of the body which belongs to the relatively lower layers. For instance, a tennis player may focus too much on the way of his/her swing pattern and doesn't so much intend to hit a ball back to certain place with certain speed. The tennis player could hit a ball back with this intention, but he/she may not be able to hit a ball back to an ideal direction with enough speed. This is something they don't want to be happened in actual games. In actual games their intention to hit a ball back to a certein place with certain speed affects directly to the goal (winning the game in this case).

We had better keep intending the objectives of an activity in the higher layers like the ideal output in an activity even with intending other objectives in terms of the use of the body in the lower layers (more about process). This is important especially for performers and athletes. These people who really matter the output or the result of their performance had better have the objectives of their particular activity in the higher layers in mind, especially when they perform on stage, in competition, or in game. So, if a performer or athlete who has disadvantageous habits in their use wishes to perform better with fixing those habits, they pay partial attention to their disadvantageous pattern and intend advantageous pattern while they keep intending the ideal output of the activity at the same time.

The less they pay attention to intending advantageous use, the more they can pay attention to intend the ideal output. If they can pay attention more to the ideal output, they will have more chances to accomplish the ideal output or be able to carry out the closer output to the ideal one, assuming they actually fix their disadvantageous habits. In order to allocate certain enough parcentage of attention to the ideal output when on stage, in competition, or in game they had better practice advantageous use which belongs to the objectives in the relatively lower layers repeatedly when they are in training. Once they will get used to it, they are able to carry out the new advantageous use with less attention to it and to allocate more attention for the output. I call this process "the integration of multiple intentions", and we learn to manage allocation our multiple intentions is also something we need to learn in training, and we manage integrated multiple intentions in actual performance.

We have such an ability to integrate multiple intentions. All of us have used this ability and have done this in many activities, though most of the intentions have not been sophisticated or selected carefully. Through this process with effective intentions we become more dexterous and do many things better.

However, not many of us are conscious of this integration and allocation of multiple intentions, so some people who intend to fix their disadvantageous habits in their use may end up with focusing too much on intending the use of the body when in real performance without having enough intention to the desired output. Their use could be fixed to the advantageous one, but the derived output could not be fully desired one. In the case of the tennis player above, for example, after the tennis player practiced his/her new swing pattern with the new use of the body enough times in the training, he/she is able to intend more to hit a ball back to the ideal place with desired speed while he/she also secures to intend the new advantageous way of swing. Now the tennis player has integrated multiple intentions, and he/she will actually have more chances to make shots closer to the ideal output with more advantageous use (swing). When in games the tennis player had better have more intention to the desired output through re-allocating his/her intentions.

### 4. Fundamental intentions

### **Fundamental intentions**

There will be really many tasks we have in an activity as I described above in the example of playing violin. It is impossible for us to manage all of them. We had better think like prioritizing some of those that affect its result more or relate to own disadvantageous habits. The next question is thus "which to intend?"

Simple description of what we do in an activity is that we try to get an output by moving something (some parts of the body) with supporting the body. These tasks are fundamental ones. We should intend their original objectives. One of the intentions is the intention for desired output or goal (the output intention). Another one is the intention for desired movement with leading edge (the movement intention)<sup>1</sup>. The last one is the intention to support the body advantageously (the support intention). They are thus the fundamental intentions that we should have in action.

Among these 3 fundamental intentions the support intention is both the most forgettable one and related to the cause of our disadvantageous use, so we had better keep it in mind whenever we want to change our use.

### Tasks of supporting the body advantageously

To know concrete contents of the intention (what to intend) we should recognize both what we do and what we need to do in order to support our body advantageously. Most of the tasks in our supporting the body were learned through non-declarative (implicit) way and done by auto-pilot, and we may not be sure what we are doing and what we need to do. The followings are main tasks:

In static condition (standing and sitting),

- 1) Placing the center of the gravity of the body on certain center position in the base of support and balancing the body
- 2) Placing the head at the highest position

<sup>&</sup>lt;sup>1</sup> The movement intention is sometimes the same as the output intention.

- 3) Keeping the pelvis angle standing<sup>2</sup> (not being in retroversion) against the pull by the gravity force
- 4) Leaning forward very slightly (i.e. Being in condition that generates a slight moment of force for forward tilting in the body)
- 5) Hanging the arms
- 6) Releasing excess muscle tension (especially the muscle tension around the hip joints, the lower trunk (the abdomen and lower back), the neck, and the shoulders)

In movement,

- 1) Balancing the body on the base of support
- 2) Utilizing the friction to stop the base of support
- 3) Utilizing the floor reaction force to move something upward
- 4) Stabilizing some parts of the body based on the stop of the base of support while moving other parts of the body
- 5) Keeping the head position and angle against the pull both by own muscle contraction and by the force of inertia
- 6) Keeping the pelvis angle standing (not being in retroversion) against the pull by own muscle contraction
- 7) Keeping leaning forward very slightly (i.e. Being in condition that generates a slight moment of force for forward tilting in the body)
- 8) Keeping hanging the arms as much as possible
- 9) Choose adequate speed of movement (or acceleration)<sup>3</sup>
- 10) Releasing excess muscle tension as much as possible (especially the muscle tension around the hip joints, the lower trunk (the abdomen and lower back), the neck, and the shoulders)

All of these tasks are original objectives for us to support the body advantageously. Ideally we had better intend all of these. However, it's difficult for us to manage all. It's better for each person to find out which task is not controlled well. We then try to manage some of them in action with intending these original objectives.

<sup>&</sup>lt;sup>2</sup> This is to make the pelvis "bone stand state". "Bone stand state" is the desirable skeletal angle at the joint which is neither flexed nor extended. It is defined by Paul Aoki, and more explanation is in the online report (https://advantageousintention.com/2017/10/an-advantageous-way-of-using-our-body/.html)

<sup>&</sup>lt;sup>3</sup> If the speed of the movement is too fast, it will be difficult for us to relax the muscle tensions coming from our supporting the body because the fast speed movement requires certain level of the muscle contraction.

### Placing procedure: 3 key intentions

There are 3 key intentions out of the tasks above, which I recommend to control in order to succeed in advantageous body support to some favorable level. The procedure consisting of 3 key intentions is like a short version of the full control procedure.

I call this procedure "placing" because the body would be just like a placed object without tensional support scheme through this procedure. We are thus able to support our body without heavily depending on the muscles' tensional support, and it will be easy for us to release excess muscle tension. The followings are concrete content of each intention and some variations:

## 1) Give the body weight on the base of support, and think of its stop. (Intention of the base of support)

(ex.)

- Give the whole body weight on the floor through the feet (standing position).
- Think of the feet on the ground.
- Think of stopping the feet on the ground (in movement).
- Push the floor through the feet (when moving something upward).

## 2) Control the head position and angle, and release muscle tension in the neck by resting the head. (Intention of the head)

(ex.)

• Place the head at the highest position and the face facing forward, and rest the head easy at ready-to-move state.

• The head forward and up, and release muscle tension in the neck by resting the head.

• Move with the head, and release muscle tension in the neck as much as possible (in movement).

• The face facing downward to some extent, or just the chin down and release muscle tension in the neck as much as possible (in effortful activities).

## 3) Breath out in action, and release muscle tension in the abdominal muscle. (Intention of breathing)

(ex.)

• Breath out in easy way like sighing, and the surface of the abdomen moves inflated and deflated automatically along with breathing cycle<sup>4</sup>.

### Give the body weight on the base of support

Since the biggest cause of our disadvantageous use is our disadvantageous way of supporting the body, we need to intend to change its way. By having the original

<sup>&</sup>lt;sup>4</sup> While we pay more attention to move air from the mouth or nose rather than the abdominal muscle tension, it's good sign to get that the surface of the abdomen moves inflated and deflated involuntarily (or automatically) along with breathing cycle. We should avoid from intentionally trying to move the abdomen along with breathing cycle.

objective intention "give the body weight on the base of support", we pay attention to the base of support and to the sense of the contact to the floor. Since we usually don't recognize what we do with the base of support, this attention and sense generated by this intention help us to change our habitual pattern of supporting the body sufficiently, and we are able to create tension-releaseable condition throughout the body to some extent.

### Intention for releasing muscle tension

Both 2) and 3) intentions are for releasing excess muscle tension. The intention of the head 2) is for the neck muscles, and the intention of breathing 3) is for the abdominal muscles. It should be noticed that by these intentions a person tries to control the objective action that these muscles take charge of in order to release their tension. A person does not just pay attention to the muscles.

A functional objective of the neck muscles is to support the head. Through changing the way of supporting the head into the tension-releaseable condition a person tries to loosen the neck muscles.

### Active control of breathing pattern

As well as the releasing process in the neck muscles, a person tries to release excess tension in the abdominal muscles by changing the breathing pattern, which the abdominal muscles take its part.

The abdominal muscles take a part of breathing activity, and thus there is strong connection between its tension and breathing. For example, when we stop breathing, the abdominal muscles contract simultaneously. When we contract the abdominal muscles (try to make the abdomen tight), we stop breathing simultaneously as well. Since there is strong connection between them, once the abdominal muscles get involved into our support activity in an unnecessary manner and contract excessively, our breathing is going to be restricted simultaneously. It is our exhaling to be restricted by its contraction.

Those who have habitual pattern to involve the abdominal muscles excessively in their way of supporting the body have shallow breathing pattern maybe with cutting breath habit or frequent Valsalva maneuver<sup>5</sup>. Intentional exhaling can break out these disadvantageous habitual patterns and help them to release excess tension in the abdominal muscles.

Many people tense the abdominal muscles excessively by promoting excess cocontraction for their supporting the body. It is more difficult for us to release excess muscle tension such as in the neck, the shoulders, and the hip joints without releasing excess muscle tension in the abdominal muscles. Contrarily it is easier for us to

<sup>&</sup>lt;sup>5</sup> Valsalva maneuver is the procedure of promoting muscle contraction in the torso (the abdomen, the chest) together with closing the throat tract by tightening the muscles in the larynx. Its normal function is to assist us in exerting strenuous physical effort or in forcing things out of the body as in defecation.

release excess muscle tension in these main joints after releasing excess muscle tension in the abdominal muscles. This is because excess muscle tension in the main joints are co-occurrence response in our way of supporting the body, and the abdominal muscles affects more muscles and functions because of its center location of the body.

It is strongly recommendable to have intention to release excess muscle tension in the abdominal muscles. Actively control of breathing pattern to release the abdominal muscle tension is an effective technique, and we had better manage it as often as possible.

### Choose the speed of movement is also effective

Besides with the "Placing" procedure, controlling the speed of own movement is effective management for avoiding excess muscle tension in movement. People usually don't choose the speed of own movement and end up with moving by relatively fast speed. If the speed of the movement exceeds a certain level, it will be difficult for us to relax the muscle tensions coming from our supporting the body because the fast speed movement requires certain level of the muscle contraction. This movement tendency is usually common in all of the activities a person does. By slowing down the speed of movement for any activities we will be able to break out own disadvantageous habitual pattern, and we will have more rooms both physically and psychologically to change own use to the better one.

### Need to manage few things simultaneously

For practical application, a person who wishes to practice better performance in a certain activity had better intend the 3 fundamental intentions (output, movement, support) and tries to manage their objectives to be accomplished with allocating his/her intention and attention. A person also needs to do (intend) few things simultaneously.

For example, a tennis player hits a ball back with intending both to stop the feet on the ground and to move the racket-head (the leading edge). The same tennis player may hit a ball back with intending: 1) to stop the feet on the ground, 2) to move the racket-head in a certain path, 3) to move with the head with partial attention to the head, and 4) to hit a ball with breathing out. The same tennis player may hit a ball back with intending: 1) to stop the feet on the ground, 2) to hit a ball out, and 3) to hit a ball back to a certain area in the court with a certain speed.

There are some combination patterns as the above example. I recommend having both the intention of the base of support (give the body weight on the feet / stop the feet / push the floor through the feet) and the leading edge intention (move a certain part of the body or a part of the tool that will lead the movement) simultaneously. After starting from here, a person will add other intentions to these 2 intentions, maybe one by one. By practicing like this, we are able to manage most of the effective intentions in our activity.

### Placing could be an alternative of Primary control

The procedure of the Placing could be an alternative of the Primary control coined by Frederic Matthias Alexander. The Placing enlarges and makes additions to the Primary control with effective intentions for our advantageous postural control of the whole body.

The Primary control (PC) consists of 2 intentions (directions): the head forward and up and release the tension in the neck, and the back lengthen and widen. People who practice the AT keep managing the PC while doing an activity. Although there are some variations, people who practice the AT usually pay attention more to the head and neck relationship and change its relationship through the PC.

The PC is helpful because it encourages intending some of our original objectives for our postural control. One is to place the head at the highest position with the face facing forward. Another is to release excess muscle tension in the neck. The intention "the back lengthen" could indirectly help us to lean forward very slightly, an original objective, and the intention "the back widen" could indirectly help us to hang the arms, also an original objective.

However, an inferior point of the PC against the Placing is that all these intentions (directions) in the PC are given without knowing true objectives behind them, which is for our advantageous postural control. In other word, a person who practices the PC tries to get advantageous postural condition without knowing what they are. The PC is just a skill set without its background theory for now. A person who practices the PC may be able to get advantageous condition even without knowing what they are for. However, a person who practices the Placing would have more possibility to get advantageous postural condition because he/she knows its true objective. This is my belief that we would have more possibility to accomplish the ideal objective if we intend the objective rather than if we just practice its procedures without intending the objective.

The intention "the back lengthen and widen" consists only of kinesthetic sense without objective movement or state. There is no leading edge in this intention so that we may leave excess muscle tension in the back by paying attention directly to the back muscles. It could also be difficult for us to reproduce the ideal condition or to apply it in different circumstances.

The PC takes into its account only releasing the neck muscle tension but not releasing the abdominal muscles. According to the fact that the abdominal muscles affects more muscles and functions because of its center location of the body, a person who practice the PC may not be able to release excess muscle tension fully even in the neck.

Another inferior point of the PC against the Placing is that the PC doesn't fit well to activities with a lot of full body motions and forceful motions like sports, martial arts, and dances. The PC fits more to relatively static activities like music performance

(playing instrument and singing), and communication (presentation and talking). This is because the intentions in the PC miss the intention of the base of support. A person who practices the PC may not be able to utilize the reaction force and the friction force that are important to utilize in activities with a lot of full body motions and forceful motions.

## 5. Conclusion

### Principles and tips for practicing advantageous use

I rap up with 7 ideas for practicing advantageous use. The first 5 are the principles, and the last 2 are the tips for effective way of intention.

- 1. We tend to have excess muscle tensions in many muscles throughout the body, and they become habits. Excess muscle tensions impose both limitations on function and extra burden on the body. We will have stiffness or pain and will not be able to perform with our full ability because of it.
- 2. These excess muscle tensions in the form of excess co-contraction are originally caused by our excess way of supporting the body.
- 3. We need to be conscious of own use in order to change habitual disadvantageous use.
- 4. When we want to alter our use to advantageous one with minimum muscle contractions, we suppose to intend to carry out an original objective of an action when we are in action, and think as if the muscles and joints that make the movement happen worked automatically.
- 5. It's going to be multiple tasks and multiple objectives. Each task should be carried out with the original objective intention or the leading edge. We need to manage multiple objectives with adequate allocation of intentions. We also need to do few things simultaneously.
- 6. There are 3 fundamental intention that we should have for practicing better use: 1) the intention for desired output or goal, 2) the intention for desired movement with leading edge, and 3) the intention to support the body advantageously.
- 7. There are 3 key intentions for practicing advantageous way of supporting the body: 1) give the body weight on the base of support, and think of its stop, 2) control the head position and angle, and release muscle tension in the neck, and 3) breath out in action, and release muscle tension in the abdominal muscles.

Again, this idea has been only tested in my teaching practice. Although it is still a hypothesis, it has been very helpful for many clients of mine so far to improve their use and cope with their physical problems.

There seems to be a general principle of the original objective intention. All I have derived come out of this simple principle, intending to do the original objective, through thinking what we actually do and what we need do for the better. Some of the tasks within them have been hidden because of our non-declarative way of learning, and thus we may have missed chances to improve our use. The ideas here in this report help to make up them.

### AUTHOR BIOGRAPHY

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