

Making Things Work

September 18, 2012

© Alan Drysdale, 2012

There are a number of ways used to make aikido techniques work. There is some overlap, however, particularly in how they are described. The effects of these should be studied both as nage, to make your techniques work, and as uke, to understand how to deal with them and protect yourself while allowing counter techniques. Each of them provides some benefit, but there is usually also an associated weakness.

I have described some ways here. It is probably not a comprehensive list and other people might prefer to describe these ways differently. We tend to systematize things, breaking them up into manageable chunks and naming these chunks, and different people might choose different chunks. However, aikido is the synthesis of all of these and probably some others, and O Sensei did not name the techniques as he taught them. As I understand it, the names we are familiar with were mostly established by his son, Kisshomaru.

Typically, these ways only loosen up uke so that you can do technique more easily, but often they lead to total collapse. If uke falls down, it is not necessary to attempt to “complete” the technique.

The most basic way to make the technique work is the technique itself, though this involves some others, particularly leverage and extension. The techniques are designed to work on the standard human body, giving an advantage that may be sufficient to beat a bigger, stronger, and more aggressive opponent. However, each technique involves a number of the ideas listed in detail below.

Details

| Method | Description | Practice/Exercise |
|------------|---|---|
| Leverage | All three types of lever are used in the various techniques. In fact, some of them can be done in different ways using different types of lever. Ude kimi nage is often done as a first order lever, with uke's upper arm (anywhere from the elbow to the shoulder) being the fulcrum, the force being applied to uke's forearm or wrist, and with uke's body as the load. Uke kimi nage can also be done as a third order lever, with the pivot being nage's forearm or wrist and the load applied to uke's upper arm. Kaiten nage can be done as a second order lever, with the force being applied to uke's forearm/wrist and uke's foot being the pivot. The body is generally the load, though in some cases, nikkyo, for example, the load is the rotation of the bones of the forearm, twisting them against each other. | Practice 1st Order: kosa dori uke kimi nage with upper arm used as a pivot. 2nd Order: any kaiten nage. 3rd Order: kosa dori uke kimi nage with hand held still. |
| Extension. | This applies in a number of ways. For kote gaeshi, if you get stuck, sliding an inch away from uke and taking his hand with you (extending him) will make the technique easier to apply. For irimi nage, it is often important to reach up towards the ceiling to take control of uke and throw him. (This is identical in its effect on uke to the prior example.) | Practice. Kosadori iriminage. Focus on extending uke as you move, taking balance, and throwing. |

| | | |
|---------|--|--|
| | Often we want to change the degree of extension. For example, in defending against a tsuki we want to reach out to make contact with uke's arm as soon as possible - early contact allows us both to more easily perturb his movement, and gives us a long time to influence him (building our momentum and deflecting his momentum). Shortening our extension brings him in to our power zone, where we can do more to him with less effort and risk of damage to ourselves. Of course, shortening our extension too much will be detrimental. We may want to extend again as we throw. | |
| Atemi | This is often used in applying a technique. It can be used in several ways: as a sensory distraction, as an application of pain (see below) to whittle away an opponent's ability to fight, or as a finishing technique (disabling or even killing the opponent). Generally in aikido, the first is focused on, but the other applications should not be forgotten. It can also take away uke's ability to see, momentarily or for a longer time, such as an atemi to the face or eyes. Atemi can move uke in a particular direction. Atemi is generally with the hand, but the elbow, foot, knee, shoulder, head, and hip can all be used to effect. | Practice Yokomen uchi kote gaeshi. Focus on moving their head back, then atemi to the ribs. |
| Pain | Pain can be applied as an inherent part of the technique, e.g. nikkyo, sankyo, and yonkyo, or to help the technique along, as in an atemi. People tend to flinch away from pain, though a few people lean into it to give them an advantage in a fight. Extreme pain can render somebody unable to fight, but aikido rarely focuses on this. | Practice. Nikkyo - moving uke back, forwards, up and down. |
| Kuzushi | This translates as "undermining" (per Jun Akiyama, personal communication), though I was initially told it meant unbalancing, and perhaps has some of those aspects. For example, in tenchinage, you can bend uke backwards (undermining his structure) without knocking him off balance. This makes it easier to then throw him down, but does not necessarily make him fall. Similarly, in nikkyo, uke's body is twisted up and while it can still be on balance, uke becomes easy to move. | Practice Ryote tori tenchi nage, bending them back over then throwing them sideways (after Toyoda Sensei). |
| Balance | Uke can be pushed or drawn off balance. If his center of mass falls outside of the line drawn around ukes feet, he will either fall or move. More generally, if the line of force from uke's center falls outside the box, he will either fall or move. If uke has momentum, the line of force from his center of mass is not vertically under his body, so he can still fall over even with his center over his feet. Balance can also be used to move uke in a particular direction. | Exercise Ryote tori. Push to the 4 corners and feel the resistance. In particular study how the resistance to movement changes according to the orientation of the force vs the orientation of the line through the feet. |

| | | |
|-------------------------------|--|---|
| Disturbing mental equilibrium | <p>This can be affected in many ways, including atemi and pain (addressed above), threats, surprise, and perceptual confusion. It is heavily dependent on uke's internal state. A well-centered mind is more difficult to disturb than a poorly centered one. This can be done in many ways, including getting the sun behind you (and so in your opponent's face), taking the high ground (physically or culturally), and becoming physically more imposing (e.g. standing up straight and wearing clothes considered threatening, like a hoodie).</p> | |
| Kiai | <p>This is a sort of distraction, like an auditory atemi. I discount stories of kiai knocking birds out of trees as hyperbole, but a kiai can be distracting. In this aspect, it is a subset of disturbing mental equilibrium, but it also can help nage focus his efforts, both physical and mental, and has some prominence in the literature. (While the prominence is more in other arts than aikido, there is ample evidence that O Sensei used lots of kiai.)</p> <p>In some karate kata, a foot stamp is used as a distraction. This does indeed work, and would be sort of a kiai.</p> | |
| Momentum | <p>Momentum, particularly with changing vectors, is used in all throws. Typically, nage builds momentum and then passes it to uke, overloading his ability to adjust to it. Ideally, uke also contributes his own momentum, which nage then redirects to accomplish uke's downfall.</p> | <p>Practice</p> <p>Shomen uchi kote gaeshi, starting from static contact, nage moving, then moving uke.</p> |
| Sente | <p>Timing is a critical part of any technique, particularly any throw. If uke is given time to resist, any technique, even pain compliance techniques like nikkyo, are harder to do. Even things like absorbing a punch depend on timing. Houdini died when punched before he was ready. Typically, aikido techniques are initially taught with a middle timing (sen no sen) where nage blends with uke's attack and redirects it. However, middle timing is generally the least desirable one. Early timing (sen sen no sen) involves "beating uke to the punch", moving and taking control before uke expects it and before his full force has developed. Late timing involves moving to let uke expend his full force, generally overextending him a little (or a lot), and then taking control.</p> <p>Often, rather than an extreme difference in timing, all that is needed is a slight change.</p> <p>The key to sente is to see what uke is going to do before he does it, ideally before he realizes what he is going to do. You have to practice reading his body language.</p> <p>Besides this small scale sente, there is a longer scale that is important. Musashi talks about "collapse". When uke collapses, drive in and finish the technique. If you pause even slightly, he may recover, and things may not go as well the second time around.</p> | <p>Practice</p> <p>Shomen uchi irimi nage, early, middle, and late.</p> <p>Irimi movement to one side or the other from shizenhontai. Uke is to step and tag you. You must move to evade his tagging. If you move too early, he will follow and tag you. If you move too late, he will tag you where you stand.</p> <p>Kosa dori or katate tori. Move your hand and hip just a little as they grab, then do</p> |

| | | |
|-------------------------|--|---|
| | | technique. Compare to them just grabbing and getting set. |
| Attack the corners | <p>Generally, we want to affect uke's center. However, particularly for a big uke, this is hard to move. Hence we tend to attack the corners. Move the corners, and this is transmitted to the center.</p> <p>This is part of what Ikeda does. He pushes against one corner, then another. It is particularly effective as it is done imperceptibly, so that uke is just not set up to resist any more.</p> | Morote tori kokyu nage. Moving body off-line then pushing. |
| Steering uke | If you push directly at a bigger uke and he pushes back, he will push you over. If you get an angle on uke's arm, and push at the end of that, you have a lot of leverage (as long as his arm is stiff), and if you line up your power to be strong that way, you will easily overpower a much stronger uke. | Kokyu ho |
| Connection | <p>We can be closely or loosely connected to uke. If we are closely connected, a 1" movement causes a similar movement in uke's center. With leverage, it can even be greater. We can connect, taking out the slack, in a number of ways, e.g. by moving our arm until there is no more movement then moving our center, or by twisting uke's arm until there is no more movement then moving our center.</p> <p>In some positions, it is easier to get good connection with uke not being able to do much about it. Pushing uke arm behind uke's shoulder, for example, forces him to turn his body. Pushing it the other way allows him to turn his body or rotate his arm at the shoulder and not move his body at all.</p> <p>Sometimes I talk about not pushing a chain. A chain is strong in tension and has no strength in compression. If you take the slack out of uke's arm, you transmit all of your motion to uke.</p> <p>Connection is strongest with middle timing (sen no sen). Often, people move too soon, trying to use sen sen no sen, so that uke doesn't follow, and there is not much connection. You can not use sen sen no sen unless you can also make the connection</p> | Move uke's arm, and move uke's center through his arm. Try with the arm in a natural position, and then twisted up awkwardly. |
| Misdirection (feinting) | <p>This is Sun Tsu's classic "make a noise in the west and strike in the east". I also sometimes refer to it as "bait and switch". For example, in kosa dori ikkyo irimi, I might offer my hand at a middle height, and as uke grasps it, move it higher and perhaps off line. Similarly, for katate tori tenchinage, I might offer my left hand, and as uke comes to grasp it, move it to the side, just out of reach, and step in with my right hand, connect to uke's arm, and throw by stepping in.</p> <p>Remember that misdirection can work both ways.</p> | Kosa dori ikkyo. Offer middle, move to high as uke grabs it. Slide to the side as you make contact. |
| Force | Use of force is usually disparaged in aikido, and generally only works when nage is bigger and stronger than uke, in fact it is often not considered to be aikido at all. However, all aikido techniques do involve | Let uke grab you, and see how hard it is to move him. |

| | | |
|------------------|--|--|
| | <p>application of force, though judiciously and more to steer uke than to directly oppose his force. Force in aikido should generally be generated by the legs. The arms should generally be connectors, transmitting the force generated by the legs.</p> <p>Stance and posture are critical to application of force. We want to generate force along the longest line between our feet, and to have our feet far enough apart to generate adequate force. We want to apply force to the shortest line between uke's feet, generally at a right angle to their longest line. (However, a long strong stance is also slower, so we do not want to overdo it.)</p> <p>Generally, you want to apply force at 90 degrees to uke's arm (attacking the corners – see above). E.g., try different angles of force during the actual throw for kote gaeshi. If you push more inwards, uke can just allow his arm to bend at the elbow. If you push more outwards, uke can allow his arm to straighten (though this does expose his elbow to hyperextension). If you rotate uke's hand at 90 degrees to his forearm, you do several things: twist the bones like a reverse nikkyo (pain and taking out the slack), and work at the most favorable angle to apply force to him.</p> <p>Generally, you want to apply force without using your arms a lot. Instead of using your upper body strength, step forwards while extending with your arms. This allows you to use your entire body momentum, to drive from your legs, and often to use gravity as well. I suspect that there is better impedance matching also. Using our arms as the motive force will often move part of uke too fast while not moving his body (center), but moving your body to move them moves them at about the right speed.</p> | <p>Then move your body to 90 degrees and try again. Try pushing directly at uke, then at 90 degrees with the feet the same, then with feet at 90 degrees also.</p> |
| Gravity | <p>Gravity is free, though to use it you have to have something high, so that it can be brought low. Typically, in aikido we want to load up uke with our weight in a fashion that is awkward for him to carry, compromising his position. Try getting close to uke and pressing down on his shoulders. He won't move. Try pressing down on an extended arm, and he will be forced to move.</p> | <p>Kosa dori irimi nage when uke has a firm grip.</p> |
| Sensory overload | <p>This was touched on above, but I want to particularly address overloading uke's proprioception system. You can do this by rapidly changing direction, such as shaking uke's arm.</p> | <p>If you take uke's hand for kote gaeshi and give him time to set, you can just apply the technique and rotate the hips to take him to the floor. (I.e., use technique, leverage, and applying force from the legs through the arms.) If you shake uke's arm as fast as you can, then rotate, uke will be much easier to throw.</p> |

| | | |
|--|---|--|
| Twitch reflexes. | When you move suddenly, uke reflexively compensates. If you make them twitch in the right direction, it can help you do technique. | If you do katate tori gyaku hanmi kokyu nage by moving offline, and then bounce uke's arm down, if he is holding strongly his muscles will contract to resist the push. If the push is at the end of his arm, he will be taken off balance by his own reaction, perhaps enough to throw him. |
| Flowing | If nage moves smoothly and continuously, it is harder for uke to counter the movement. | Katate hachi no ji gaeshi with a jo or sword. |
| Controlling the point of contact/leading | <p>If uke grabs you where they expect you to be, they will be strong. If you move slightly so that you are not where they expect or when, they will be substantially weaker. Of course, if you are too obvious, or move too much, uke will probably not grab at all. If you move the point of contact just as uke grabs, they will move.</p> <p>If you move your hand as uke grabs, they will be weak. (See above.) They will attempt to adjust, but they can either miss the target, or be off balance when they grab. Different people have different responses to this. Some folks will follow to a ridiculous degree on the mat, but IRL I'm not sure how much people will follow. However, you can increase the connection by how you present your hand. Pressing towards the face or groin will tend to make people hold tighter. Rotating the hand to wrap the fingers tighter will tend to make people hold tighter. You can often press against the hand so that it can not rotate to let go.</p> <p>Generally, pulling straight away from uke will encourage him to let go. Pressing at a 90 degree angle tends to minimize this.</p> | <p>Katate tori sumi otoshi. Ryote tori ten chi nage. Practice moving at an uneven pace, so that you meet them just before they are ready. In principle, you can move away from them, but this tends not to work as easily.</p> <p>Try moving uke with the contact between their hand. Look to see how they hold and try different ways to move them, and see when they tend to let go, and when not.</p> |
| Change the tempo | Generally, you want to gently accelerate uke all the way to the ground, or at least until they totally lose kuzushi. Sometimes, however, you want to modulate the speed, e.g. to allow uke to catch up before reversing the direction. | Tsuki kote gaeshi. Try throwing with a constant speed, vs varying it. Try accelerating constantly. Try slow, fast, slow, fast. |
| Move the | Instead of trying to move uke by upper body strength - particularly poor for small people and most | Ryote tori tenchinage. Try |

| | | |
|---|--|--|
| body: the legs provide the effort, the arms are connectors. | women - move them by connecting to them and moving your body. Another way of looking at this is: connect by moving your arms (take out the slack), move uke (take kuzushi) by moving your body, and then finish with the arms. | standing still and using arm force, and then by moving body. |
| Control Ma Ai | Ma ai is distance, particularly fighting distance. Too far, and neither of you can do anything. Too close, and the first one to move wins (sudden death), and you can not correctly apply force. | Practice techniques with different distances. Escapes from tsuki, for example, are quite difficult if the ma ai is too short. Practice starting out of range, and taking control as contact is made (vs waiting until contact is made before doing anything). |
| Maintaining the pressure | If you move uke, then let him stand back up, you have not only wasted the movement, but have alerted him to what you plan to do, so it is less likely to work again. So your technique should feel like a wedge: getting a little at first, and getting more and more until uke collapses and either falls or is controlled on the ground. This is related to “flowing”. Often, you want to continuously change the direction of the pressure a little. | Kaiten nage. Do not allow uke's head to rise once you get it down. Escape from katate tori gyaku hanmi. If you move to the side and atemi, then stroke your striking hand down uke's arm to his hand, he will lose balance more effectively. (After Kensho Furuya.) |
| Reversing the pressure | This is the opposite of “maintaining the pressure”: you press uke until he fights back, then you take him in the new direction. This is related to “sensory overload”. | Go from ikkyo to kote gaeshi. |
| Blending with movement | As uke attacks, nage should make contact softly, blending with uke's movement rather than a sudden block or grab. | Any technique from yokomen uchi. |
| Keep your center | If nage remains upright and centered, while uke is bent over and twisted, it is very easy for nage to do technique, and very hard for uke to resist. | Tai no henko when being pushed. |

| | | |
|-------------------------|--|--|
| Work in your sweet spot | You are strongest with your arms right in front of your chest. Too high, too low, too far to the side, too close or too far, and you will be weaker. If you try to force a technique when your arms are in a weak position (e.g. irimi nage with nage's arm behind the line through his shoulders), you can injure a shoulder. | |
|-------------------------|--|--|

Techniques as Examples

Kosa Dori Ikkyo - Offer your hand in a middle position, and as uke grabs it move it to high and off to the side (bait and switch). Make the sideways movement by moving your body, and extend uke as well as pushing against his weakness. Maintain a steady flowing movement, accelerating slightly. When uke is bent over, allow a moment for his body to catch up before changing direction and knocking him to the floor then laying him out. Use body movement again to knock him down and lay him out. Kneel, with a knee in his ribs and extend his arm out and up. Roll it away from you. As he pushes up, push it away from you. When he taps, stand, maintaining control and ma ai.

Kosa Dori Kote Gaeshi – Offer your hand in the middle position and as uke grabs it draw it out, down, and back. Break free from his grip using leverage. Move behind uke in a circular fashion to use body weight to draw him out. Smoothly, continue to draw him around and low. As he catches up, lift the arms in a circular fashion, so that he loses traction, and throw by continuing the circle. You can apply an atemi with the free hand to his face as you go to grasp his hand with the second hand. As you throw, keep uke extended, flex his hand to provide a convenient lever, and rotate his forearm using the lever to apply pain if uke resists.

Shomenuchi Irimi Nage – Extend in to meet blow, and blend with it as it comes at you.