

Bodyhammer:

Tactics and Self-Defense For the Modern Protester

Version 1.0

by sarin





"I will force my body to be my weapon and my statement so..."
-The Stranglers, "Death & Night & Blood"

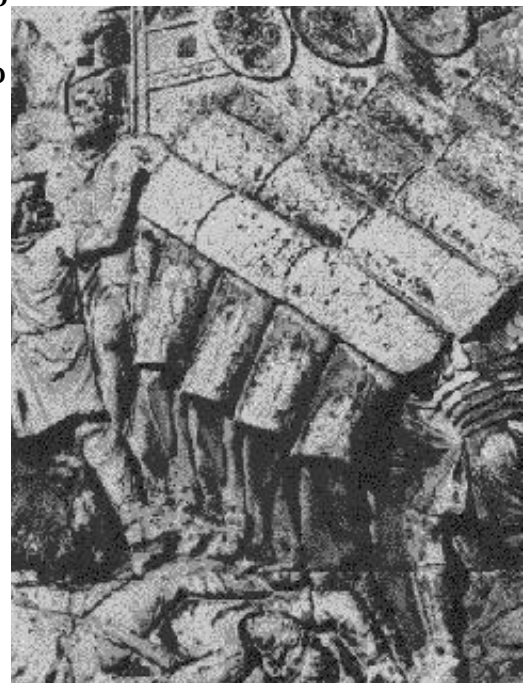
Introduction

Technology has changed the street protest. In centuries past, a mass of people wishing to express themselves could only be silenced by live gunfire. But the advent of riot armor, lacryXXX gases and "less-lethal" projectiles have allowed ruling establishments to squelch the voice of protesters with great ease, and even better PR.

It is the interest of this booklet to help preserve our freedoms of speech and public movement in expressing ourselves. The objective is not to 'up the ante' or encourage street battles. No one sets out to engage the police or the army. We are on the streets to be seen and heard, but find it ever more difficult as arrests and injuries from policing forces aim to shut our voices out of the general equation.

One benefit of our modern and wasteful mass consumption society is that it allows us to protect ourselves from these forces. We have the material and the means to defend our protests and to keep the police at a distance. Our method is self-defense. We march with a mission and should those in power order others to stop us, we have a right to defend our bodies as much as our message.

This booklet has been written in the basic interest of alerting protesters in North America to the need of self-defense tactics. Most of this book was heavily inspired to the White Overalls movements in Europe who have a much longer history of effecting change through powerful demonstrations. We owe our thanks to them and hope that we in the Americas can also find such strength in our voices.



A Roman relief depicting a *testudo* formation.

Part I

Shield varieties and construction

The type of shield you are looking to use depends on the main factors of speed of construction, concealment, the actions you will be involved in and materials on hand.

Selecting a shield type

As persons who perform self-defense presumably without the use of a weapon, there are a wide array of options in shield tactics. For our purposes, we are interested in forming a shield wall formation providing for freedom of movement and defense. This means that you can choose between using a shield with the traditional one-arm method, or a two-handed method. While a one-armed shield provides more maneuverability, two-armed shields give greater strength in defending oneself and pushing away the attacker. As a person is otherwise unarmed, the two-handed shield should be considered a strong choice and critical to the center of any shield wall. The methods of both will be described below.

The other issue is the type of shield design. While much of this is based on costs and available materials, there are other factors to keep in mind.

Transportation: If your action requires the crossing of a border bring materials for shields that can double as everyday items. A large cardboard box (filled with old books perhaps) in the back seat or a few non-inflated inner-tubes for your river-rafting trip will be easy to slip by authorities.

Concealment: Taking the shield in transit from where you are staying to the action's convergence spot could find you some trouble. Large shields of course are harder to conceal. The advantage of inflatable shields is that they can be constructed while actually at the convergence spot pretty quickly.

Movement: If you are expecting to have to run some and fear that there wont be enough members of a shield wall to provide walking protection, larger scutum (tower) shields can be very difficult to run with. While being held in position your knees may hit the bottom of the shield and otherwise its rather bulky.

Type of action: Hopefully you will have a sense for what type of direct action is being planned in general as well as what means of force the police plan on using. Larger shields are better for protecting against projectile weapons, while smaller ones are more maneuverable for defending against truncheons. Never underestimate what the police will do, but if you know that their force is not equipped with rubber bullets or the like, you can presume that hand to hand fighting is more likely. Also, if the type of action requires defending a perimeter, larger shields are better if nothing else for their imposing appearance.

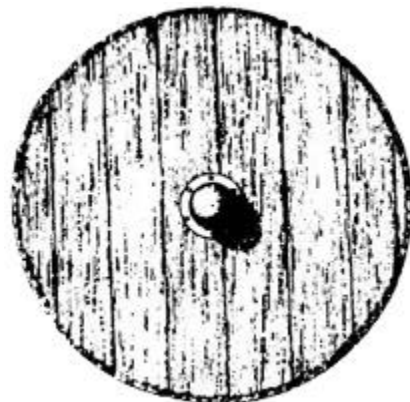
Shield shapes and advantages

A note: The simpler, DIY method presumes that shields will be made more flat, while traditionally, all shields were rounded to better deflect blows and cover the body. Rounded shields are considerably more difficult to construct with most materials. Also, for our purposes here, shields with hard an not rounded corners are generally more adaptable, so consider squaring out a shape (e.g. the basic curved round shield becomes a flat "square"

shield).

Round shield:

The most basic (and simplest to construct with a garbage can lid) are small round shields usually measuring 2 1/2 to 3 feet in diameter. This is a common shield size for the police in several European countries. It is compact and easy to use, providing protection for the head and torso. This is also the shape you will have using an inner-tube variant.



A viking era round shield.



A heater-shaped shield.

Heater:

The heater shape is the classic medieval looking shield with a flat top and rounded, tapering bottom. It provides the hard edge top, which can be used as a tool in grappling as well as better lower protection. If you follow any given SCA directions, you will probably end up with something like this.

Kite shape:

the kite shape is the traditional Viking and Norman pattern with either rounded or sharp edges generally resembling a kite. The elongated bottom protects more of your lower torso (privates included) and parts of your legs, and yet isn't as difficult to walk with as a tower shield.



A Norman kite shield.

Scutum or Tower shield:

The tall, slightly curved on the horizontal plane shield is the old standard of the Roman Testudo formation. It is also approximately the style which most police riot shields are shaped as. Police variants differ from about 30-40 inches in height, whereas the old Roman shield could reach some 4 1/2 feet (or at least that high, relative to how short they were back then). At the larger size end, make the shield so that you have space for both your feet to walk underneath and your eyes to peer over. The advantage is clearly full body protection without having to move the shield. Visually, it is also the most imposing, and it provides ample space for a message to be written. Ideally, no formation is without some of these, however it is a shield that is cumbersome, difficult to transport and almost impossible to use offensively other than pure shoving. This is the default size if using the pool raft inflatable variant.

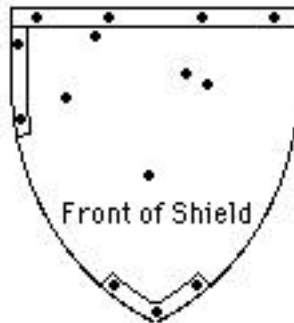


Roman scutum shields.

Handles

One-handed handles:

First of all, we should cover the format in which handles are applied, which is universal for any one-armed design. Simple grip handles in the middle of your shield will always work in a pinch. But they do not allow for the control that might be necessary in a hot situation. They are easy to pull away and don't allow for as much flexibility. Really, if you don't care to be precise than they will do fine in general situations.



Depiction of handle placement on a heater-style shield.

Constructing the handles themselves depend on the material you are using. You may need to drill holes, or perhaps you can just punch them through. This also depends on if you wish to use a rope or leather strap or will need a straight hole for a store-bought metal handle.

One-armed handles:

The traditional shield handles function with one strap that your forearm passes through, up to just before your elbow. Then a handle should be found just where your hand can grasp. The angle of this set up is at 45° from the top and side of the shield. A quick way to determine the angle is to hold one corner of the shield and let it dangle, then draw a line straight down, perpendicular to the ground. Of course if you are building a round shield, this angle aspect doesn't matter. Place the handle relatively close to the upper corner. You can determine the exact position by holding the arm you will be using across your chest. The top of the shield should be a few inches above that. The horizontal position is dependant on the width of the shield, but remember that that corner is what will become an extension of your arm, so leave it near enough to the edge.

Two-handed handles:

Shields with two hands require a different sort of handle configuration. As one-armed shields are carried for left-right sweeps and up-down pivoting at the elbow, two-handed shields are primarily used for moving them back and forth. For this, position two vertical handles perpendicular from the top of the shield. The distance between the two vertical handles should be just about the width of your arms. The idea is to allow for a perfect pushing action from your elbows bent at your sides out. If the spacing is a little more narrow than this, it will work almost as well. Adjust as feels comfortable.

With any style of handles you use, remember that you will want to either wear thick gloves, or make sure that your knuckles have some clearance. Once the shield gets hit, your knuckles will be receiving the brunt of the blows.

Part II: Shield Employment

One-armed method (traditional)

The traditional method of employing a shield is to use one's non-dominant arm extended through the loop of the shield up as far as the end of the forearm with the handle gripped by the hand. However, if the shield is the only thing you will be carrying, you may wish to use your dominant arm instead. For purposes of explaining stance and movement, we will presume it is the left arm that is holding the shield. If not, simply reverse these directions.

Adjustments in shield position are made by pivoting at the elbow, while keeping the upper arm firm and in place. The defensive reaction is a sweeping one, outward and to the left. Since the upper-left corner of the shield is close to your gripping fist, that edge can be used as a tool. For instance when facing a shielded opponent you can use that edge to either pin their shield down, or by sliding your in and pulling back, you can pry their shield away from their body which would have a disorientating effect and they would presumably retreat. If necessary, this corner can also be used for body checks. Practice feeling it as an extension of your arm. However it is important to remember to not get carried away with this tactic and forget the shield's primary purpose - protecting your body and that of others.

If you are outnumbered in a melee, you should never become too focused one opponent as described above. Defensive stance for a left-handed shield is to have the left leg partly extended forward with the foot facing straight ahead. Your right leg should be back and both knees should be slightly bent with your body weight centered. This allows for strong resistance to being pushed back as well as the ability to quickly move forward, backward or laterally. The shield can be swung outwards in a natural manner, with no loss in balance. If pressed badly, this will allow for a blow to be partially absorbed by moving the left leg back but understand that as you do, the more exposed right side of your body will now be facing your opponent.

Two-handed method

If you have chosen to use a two-handed shield much of the tactics in a skirmish described above apply. The main difference is that as a two-handed shield operator, you are much more powerful in a pushing/resisting position. As such, you should be at the very front, allowing for those with smaller or one-armed shields to be behind and at your sides for protection.

When advancing your arms should be positioned with your elbows loose and at your chest. When contact is made, your action is a simple shove forward. With both hands on the shield, you won't have the opportunity to skirmish in anything but a rigid manner. You can still tilt the direction of the shove as need be, but hopefully you will still be in your line and have compatriots at either side of your body. You can use your arms to either press and lock them at full length, or you can more effectively push forward, pull in and push again, in a pulsing manner. This limits exposure to your body while maximizing your effectiveness. The problem is that in a real situation, you will probably have people pressing on you from behind as well, so your best option is to then press the shield to your body and

use your body weight to press forward.

Your defensive stance will be similar to the one-armed method in that you position one leg ahead of the other, crouch slightly and brace yourself. The arms should be firm, but bend so that you can absorb part of the blow without having something break. Also, if your shield is large enough, you can counter act by crouching further behind and surging forward with a jump. This should be powerful enough to keep your opponent well at bay.

Part III: *Shield varieties, their construction and other equipment*

Garbage can/barrel shields:

The easiest shield to make is often one that is mostly pre-made for you. Found street items can often work wonderfully making construction quick and easy. Plastic garbage cans are the easiest with lids turning into instant shields and the cans themselves requiring little more than being cut in half. Orange construction barrels are a little bit more difficult to obtain, but can similarly be used - however they tend to be much more rounded and hence difficult to grip in a one-armed style.



Protesters crouch behind garbage can shields in Quebec City, April 20, 2001.

Construction:

With a can lid, you should be all set. That is unless you don't want the awkward to use handle, which is not optimal for protecting yourself or advancing, but will do fine if you aren't particular. If you desire a better grip, follow the above instructions. Furthermore, keep in mind that the handle is on the opposite side of what you might prefer. It should be attached so that the concave rounded side is what points outward.

Ideal for tower shields, the body portion of a plastic trash can be used for two or three shields depending on the size of the can and the desired width. Larger, industrial trash containers or barrels tend to be taller and will cover more area. With a saw, remove the bottom of the can and any handles on the side. Then cut the can into the desired portions. Size it up against your own body to find the desired width. Since the can is rounded, applying one-armed handles on the inside of the shield will be a little bit trickier. While it works fine in that manner, trashcan shields are also perfect for the two-handed grip style. If you are using it in this manner and plan on being in the front line of a Tortoise formation, consider using a hot knife to cut a small slit a few inches from the top to peer through.

Inflatable shields:

Quick to construct, easy to transport, inconspicuous and adding an extra bounce, inflatable shields are a very clever variant. On the opposite extreme of an imposing shield wall, using inflatable shields gives the disarming appearance that the police are busting up a beach party.

There are two main variants of inflatable shields - rounded lifesaver style and the tall, flat pool raft. The lifesaver style is basically a round shield with some added thickness,

whereas the pool raft can provide full body protection, although they tend not to be very thick.



Innertube shields on the move in Cancun, Mexico.

Given what you will find, there are two variants of the lifesaver style. The slightly smaller and lightweight option is to purchase a small, inflatable personal pool flotation device. These are made from plastic and are easier to puncture plus have thinner walls, but are much easier to wield. Doubling up of two of these light tubes is also an option. The heavy and strong choice are large inner-tubes, often used for sitting in. These are thick, bouncy but quite heavy. Given their weight, they make considerably better options as a two-handed shield, providing for strong shoving action.

The pool raft variant provides for a sort of tower shield, quite possibly one that is larger than your own body. If available, purchase rafts of the smallest variety, although due to their lightweight, an overly tall raft should not be too obtrusive. Because such cheap pool rafts are rather thin and not very rigid, it is recommended that you try to affix two of them together. Thicker, heavier and much sturdier rafts also exist for about four times the cost of a cheap one.

Construction:

Inflatable shields have the enormous advantage of being quick to construct just before a demonstration kicks off. With hard effort, it should take no more than 30 minutes to construct any of the variants in any style. Remember that while uninflated rafts are easy to explain to inquisitive officers, some of the other materials needed might not be.

Option 1: The first option simply requires an awful lot of tape. Packaging tape or duct tape will work just fine. The key here is to strengthen the center area of the shield with tape so that it can sustain blows without puncturing. Of course this is especially critical with lifesaver rafts that have an open center. Second of all, the tape is then used to fashion handles. This is where you decide if your shield will be a one- or two-handed variety. Follow the patterns for determining handle position and angle as universally described above. The tape is wrapped around and given slack in these areas and the slack portion is wadded so as to provide a thin grip. Make several passes to ensure strength. For raft shields that would require excessive amounts of tape when wrapped vertically, make the handles from small strips, place them in position and then secure them down at the top and bottom of the handles by wrapping tape horizontally.

Option 2: Option two utilizes some sort of thick plastic wrap such as a tarp, or failing that, a strong bedsheet or other large fabric. The intention here is to substitute the massive amounts of tape in option one with a basic covering that can sustain blows while maintaining the bounce effect of the rafts. Either a small section of the tarp or fabric can be cut out to cover the needed area, or a much larger amount can be used to wrap the entire shield. Then use strong tape to tightly secure the material and make sure it is taut enough to maintain the bounce factor. Be aware that packaging tape does not stick well to fabrics and that duct tape should be used in this case. Finally, fashion handles in the same manner as in option one.

Cardboard based shields:

Cardboard shields are relatively simple to make, or with a variety of construction options, can become more complicated. The simpler variants are of material that would be simple to pass off under scrutiny by authorities. Carrying a cardboard box and a having a few strands of rope in your pocket probably wont bring much suspicion s you walk to a convergence location.

But bear in mind that cardboard shields, without much reinforcement, are not going to be very effective against baton blows. They serve a perfect place in further back rows where say, in a Tortoise formation, they work well enough to deflect projectiles. So if you are planning on being on the frontline, try to avoid using cardboard, . However, if you catch yourself early in a day where you predict a shield will come in handy, this type is simple and quick enough to build.

Construction:

Option 1: The most basic variety is a relatively large panel of a cardboard box, at least 24" x 24" - enough to cover your face and upper torso. Then with two strands of rope, or a good deal of string, affix handles as per the above positioning instructions by punching holes and tying knots at the ends so the ropes don't slip through. If you have the chance, add some glue to the area the rope slips through to prevent tearing where the knot might be ripped out.

Option 2: Simply glue or tape on added layers of cardboard for more durability. If you lack much extra cardboard, use small strips along the perimeter and in the center between two full size panels which will give the shield at least a degree of increased strength. Even if a baton hits a shield that is mostly air on the inside, it will at least absorb that much more of the blow.

Option 3: A peculiar but incredibly simple variant is to use an entire box with no top. When worn as a shield with straps on the bottom of the box, the open-box shield is an odd but clever frontline shield. Its advantage is the fact that an opponent has great difficulty landing a solid blow against you, and more than likely will have his or her truncheon wind up stuck inside the box. If you are surging forward, that weapon will be difficult to extract and you have just rendered it ineffective. Additionally, a tall box (of at least 8") has a frame that when hit head on will dent, but not break. The dangerous disadvantage is that you lose many angles of deflection, meaning that a baton may hit the side of your box, slide forward and still strike you. But it does have many disorientating possibilities. An option I have not put probably enough thought into is affixing an open box on a larger base, serving a dual function of containing a baton and deflection. (Really this could all just be a bad concept, but I'm not yet sure.)



Foam and innertubes clash in Prague, Sept. 26, 2000.

Soft foam shield:

A simple design for a super lightweight and quick to make shield that is to use soft foam, such as the kind found in chairs and soundproof padding as a core. You should be able to find a fairly large sized block, which can then be cut to size with a knife or scissors. If the foam is less than two inches in thickness, consider doubling it up. You will also want a piece of card or tack-board for the front. This sort of shield looks very non-offensive and is quite cushy if possible bodily harm is a concern to you.

Construction:

Once you have the size of the core correct, duct tape your board surface to the front. You will have to punch holes through the entirety to position your handle. The best option for that is rope or any sort of firm strap. Other than that, there is very little to this design.

Plexiglass shields

Plexiglass is a highly versatile material since it can be cut and manipulated, and is fairly lightweight. Home improvement stores sell plexiglass in a variety of sizes. One could cut anything from a small one-armed shield, to a massive multi-person shield wall. The only draw back is the lack of flexibility means that not only are rounded shapes near impossible, but that the material can snap easily. In order to sustain baton or projectile blows the shield would have to be at least a 1/2" in thickness. If the material does not come that way, it can be layered and glued with a mixed epoxy, super glue or glue gun.



Two giant plexiglass shields envelop police in Italy, March 17, 2001.
more easily, screws or bolts.

Construction:

Plexiglass can be roughly cut with a hand-saw, but a band saw is much preferred. If you lack an electric saw, consider drilling multiple holes in a line and snapping off the excess. Hopefully you can acquire the size you want right away though.

A good idea for added reinforcement, especially if your shield is extremely large, is to affix planks of wood along the oblong sides. A full frame of wood will help that much more. Just remember that wood adds a great deal more weight. Wood can be affixed either by strong wood glue, or

For the handles, remember that plexiglass is a hard surface and you will want padding under the place where your arm will go. Leather straps or ropes can be easily affixed by tying them through holes made with a drill. Again, wood helps to add stability on the points where your handles connect to the plexiglass.

Hard foam core shield:

One of the more difficult to make but longest lasting and versatile construction methods is to use firm foam core boards, possibly wrapped with fiberglass. These can be made to any desired size and thickness. Plus, the foam core is easy to carve, allowing you to shape rounded edges into it.

Construction:

Foam core is most easily obtained as blue insulation foam boards that are sold cheaply at hardware stores in thicknesses usually under an inch. Purchase enough to allow for double or triple layers. Make sure the plastic covering it comes with is removed too. After you cut the shape, be it circular, tower or the like, use a glue or liquid cement to sandwich layers together.

If you wish to make your shield more durable and not subject to cracking in half upon first impact, consider epoxying an added layer of fiberglass cloth to the front. Most glues won't stick well to foam core and fiberglass, so a mixed epoxy is necessary. This is obtainable at any hardware or home goods store, usually as auto or boat repair kits. Make sure you know the sizes needed ahead of time. This should be cut after you have shaped and rounded your foam core. Then epoxy along the edges and center and attach one to both front and back. You can trim extra cloth after all has dried.

At this point your handles can be attached. You will probably need a drill, or a corkscrew to dig out a firm hole. This style should be thick enough to accommodate firm metal handles with screws and wing nuts as well as simple ropes. Remember that since this is a firm shield, you will want protection for your knuckles or a groove in the shield where your knuckles would be placed.

Improvised backpack shield:

In a pinch, simply placing a flat piece of plywood, layered cardboard or tagboard in an otherwise empty backpack can make a small sized two-handed shield. The idea is to maximize the surface area, which should garner you something approximating 15" x 12" given an average backpack size. You will have to remember to cut the board(s) down to a size that fits before the day of action.

The added advantage of this is its complete concealability. Apart from the rough corners, it would be hard to judge what your backpack is truly going to be used for to an outside observer. The downsides are pretty clear though. Not only is the shield of small size, the straps are too large to be very practical to use in a one-handed manner. One way to remedy this is to use a piece of soft rope or another non-chaffing material and wrap your forearm in place on the backpack strap. Otherwise, use the backpack in a two-handed manner.

Other shield concepts:

All in all, most anything can easily become a shield so long as you adapt it to your liking. There are some materials you would wish to avoid, such as wood due to its weight. Also metal, specifically lightweight aluminum seems like an immediate choice, it is expensive, very difficult to work with and can be painful to the bearer should it wind up jabbed back

into your face.

Yet anything you think that will be lightweight, firm and easy to affix handles to will work fine. An old thumbtack board or plastic tabletop you might find in the trash would do fine.

Tip: Is your found-object shield too small? A garbage can tower shield might not fully extend down your legs - a choice place for police to fire and bounce projectiles at. A small one or two foot extension of plexiglass can be screwed into the bottom of your shield. To make sure that the plexiglass doesn't snap at first impact, consider bolting pieces of 2x2 wood down the sides for added durability.

Shield construction is all just a matter of the time you are willing to put in it, or dumb luck as per what you might find.

Other Equipment

Helmets:

Helmets are a critical part of any defensive tactic, be it a shield wall or a simple and open direct action where attack is a major risk. As police forces have regularly demonstrated that they do not follow their own guidelines of avoiding blows to the head, a helmet is an important piece of protection.

Unfortunately a helmet is too tricky a piece of equipment to make appropriately, that you will have to acquire something pre-made.

The most basic helmet with the minimal amount of protection is a construction hat. These can usually most simply be found in a toy store, provided they are large enough. Wadded newspaper inside will help soften blows. The next easiest helmets to acquire are bike or motorcycle ones. Thrift stores should have a selection of these, but otherwise they are a little expensive.

The ultimate option, although quite conspicuous in transporting are military helmets.

Modern helmets are made from Kevlar meant to stop a bullet. These are extremely costly and not necessary. What can be acquired quite cheaply are surplus steel helmets, often of foreign make, that are sold in military surplus catalogs. Do a web search for military surplus or militaria, or otherwise ask a local army surplus store for catalogs.

For personal protection a solid helmet is probably the most important thing one can bring to a demonstration after a gas mask.



Helmets, cardboard and life-jackets make up the body armor in this Italian march.

Improvised body armor:

For body armor, we are basically just talking about padding and forms of wearing it. Homemade chain mail is nice, but too costly and time consuming to construct for the average protester. There are two basic variants of body protection that can be employed, or there is the more complicated segmented armor described later.

The first is simply added layers of clothing. A few pairs of long underwear, sweat suits or an extra heavy coat can go a long way to soften a blow. The main draw back here is the impeded movement at the joints and the fact that you will be sweating like a pig for most of the time.

Other items can be improvised that are not normally worn. For example, life preserver vests work wonderfully as a strong padding over your chest and back. Football and other sports padding is obviously another option.

Basic body armor:

The next step in body armor is affixed padding. The best material for this is foam padding, which should be available at hobby stores, or at a place that sells packing materials. Even densely rolled newspapers or clothes can work.

If you have enough material, a make shift suit can be made simply by wrapping portions and taping them together with duct tape. Otherwise the best option is to cover your most exposed and vulnerable parts. These would be your arms, chest and back. After that, cover your legs and stomach area. If you lack a helmet though, the first thing you should do is tape a few pieces to your head, provided you value your skull more than the fear of looking like an idiot. If you are using a large shield and feel pretty secure, consider still padding your upper back side and arms for they can still be struck if you are attacked from the sides.

To keep the padding better in place, consider affixing it to an undershirt, then wearing another piece of clothing over that. Additionally, scour thrift stores for used sports pads. Cheap shin pads can usually fit high up on your arms, and other items such as foam splints work as improvised armor as well.

Lorica Segmentata:

Keeping in step with our reversion to ancient technologies we can find a cheap means of making segmented body armor. The segmentation means that you don't have to be adept in shaping parts or even being very careful, for you can attach new parts as needed. This also allows for a degree of versatility to only cover certain body parts that you may think are critical.

Lorica Segmentata, which basically means a hardened and segmented sheath for the body, is simplest to construct using hard and thick, but cheap and still malleable plastic. A good source for plastic that is pre-shaped with a curvature are pickle buckets, like the kind that can be taken from the dumpster of a McDonald's.

First of all, prioritize the type of armor you think you'll need. As a shield bearer, you will probably want protection for your upper shield arm(s). Following that, covering for your other arm and then both shoulders is important. From there the chest and backside are should follow given the amount of material you have.

Construction of a lorica pattern is basically subject to the amount of material, you have, skill and luck. Since we really don't care how it looks or if its perfectly uniform, we don't need to have a set pattern. The one key thing to keep in mind is that each individual section should be only covering a single moving part of your body. For example, a piece should cover only your chest area and not impede the movement of other parts such as on your shoulder and upper arm.

Construction

To begin and not take the half-assed route, you should use a tape measure to determine the length or the parts you wish to cover. The width of parts that will go over your arms needs only to be long enough to wrap around a bit. Of course, this can all be done by sight, and parts that are too large can always later be cut or shaved down. Next use a small toothed saw or a heavy-duty cutting scissors or the like to cut out the right-sized portions.

Then, place the portions into an oven, baking at a high temperature of about 400*. Wait until it warms up substantially, but try to avoid melting it. Then, while still hot, use oven mitts to shape your pieces. Generally you want flatter portions for your chest and back, and rounder portions to cover parts like arms and shoulders. For ease in bending, use a thick wooden dowel to obtain a more uniform shape. Remember that your shoulders shape differently along the length, so be sure to leave more room on the side closest to your neck.

While still warm, drive an awl or other sharp item through two or three holes on the sides of your pieces. The holes need to be wide enough for string, or can be smaller if you use wire ties. Otherwise, wait until the pieces are cool again and use a drill. If you have a chest or back armor set that is made up of many smaller pieces, you will probably need holes on all four sides to make sure it stays in place.

Next, you fasten your lorica sections together, using any strong material you wish. This can range from thick string, to actual grommets connected by leather. If you are just making arm pieces, be sure to leave enough slack so you can tie your armor tight so it stays in place. If you are making a full armored set that will cover shoulders, arms and chest/back, you can fasten the pieces tightly and securely together and slip the set on over your head. You will still want a loose string at the bottom of arm portions to tie them down. It is probably easiest to stand as a model and have someone else custom tie your pieces to the contours of your body. Presuming your armor was made without much pre-planning, you will probably have large gaps between pieces. The key here then is to position your pieces so key parts are covered, such as shoulder bones, diaphragm and other sensitive parts.

Remember in fashioning your armor that deflection can count as much as contour fittings. You can either spend time meticulously shaping a piece to fit snugly over your shoulder, or you can lay a roughly flat piece on it and have edges over hang. Make sure the overhang isn't so much as to impede arm movement though.

Finally, for added protection (and much comfort), you can add strips of foam, or even glue styrofoam peanuts to the underside of your armor to soften blows. Soft padding ripped from chairs and sofas are ideal for this. Otherwise, just add a layer of garments underneath.

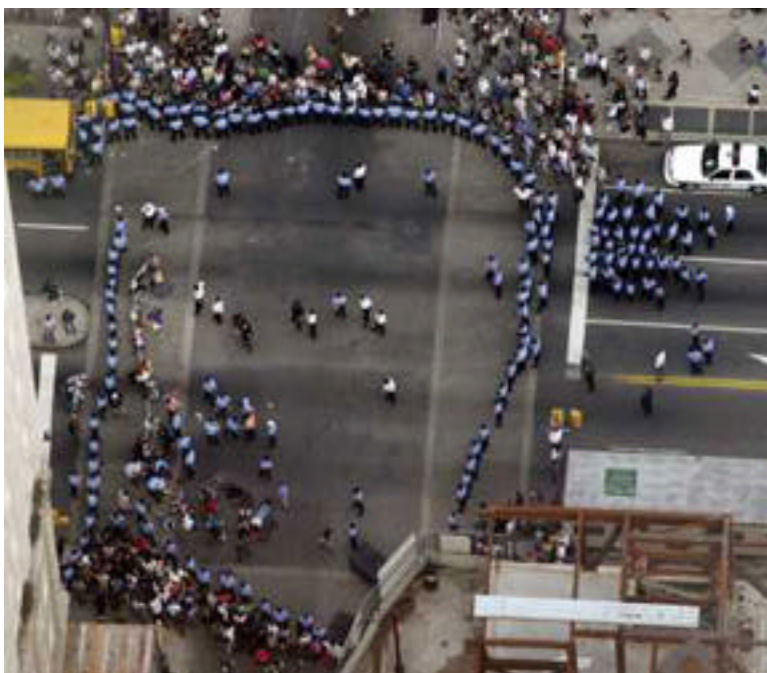
Part IV: Group movement situations

Understand your target and your position

The police are much easier to predict than most people fear. Too often, the paranoia of being surrounded occurs in situations where the police are fairly static in their positions. Is your target a building that the police are surrounding in full force? Have they left the streets outside of that perimeter free to protesters or do they have roving columns ready to strike? Have you completed your objective of blockading a conference and the police are trying to break through your formations? Are you just having a spontaneous street party and don't know when, if or where the police will show?

Answers to these questions seem simple and obvious, yet too often mobile protesters do not have a clear picture of what the situation is like and communication has broken down too much. Issues like this are what drove armies to have set hierarchies thousands of years ago, and in the framework of avoiding set leadership, communication is our only answer.

Before the day of action, you should already know what to expect. Also pay attention to what the police are intending to do or what extent they want to go to. Is it a city that has sworn off using projectiles? Is the event you are demonstrating at, such as an outdoor



Police in Philadelphia split up protesters, August 1, 2000.

swearing-in ceremony, a place where the police are afraid to use tear gas? Have previous police actions demonstrated their intention to make sweeping arrests or do they only pick off stragglers?

While it's critical to always be on your toes and never trust the police to operate in a certain way, there are always warning signs you can look for. If an empty bus appears, then you can expect sweep arrests. If a squad of bike police disappeared in another direction, they are probably out to outflank you.

Conversely, always be ready to exploit your own successes. Too often protesters, unready for a success or a hasty police retreat will merely remain in place and not seize their gains. Sticking your neck too far out can be dangerous, but that's when

it's crucial to have the protection of the masses following up behind.

Movement in a shield wall

For typical movement when not immediately in a confrontational position, you should still be at the ready. Traditionally defensively aware marchers have linked arms to prevent individuals from being nabbed. While carrying a shield in a wall formation, the threat of this is probably much less. But if necessary, persons using one-armed shields can use their

free arm to grasp the shield arm of the adjacent person. This becomes problematic with different-handed people however. Furthermore, this tactic should not be employed when in a confrontation so as to allow freedom of movement for the shields.

The critical aspect to moving in any shield wall formation is unison. While demonstrators would discourage any individual to marshal a march, a form of organization is necessary. Unless it is possible to prepare and practice these tactics ahead of time, the best way is the use of simple commands that can be shouted (examples below), including warnings of what is ahead for those who cannot see.

For keeping tight in a march at any pace, the best method is a drum near the front (a drummer in the back won't know what is going on well enough) or the calling off of steps ("1, 2, 1, 2..."). Given that most marching routes will be pre-determined, directions should not be a major factor - apart from the tendency to lose formation when making turns. Should the shield wall be freely roaming or have loosely laid plans, calling out for slow turns is important ahead of time, especially since intersections are where a shield wall or any march is most vulnerable to ambush.

Scouting

A system of scouts is critical to effectively moving a shield wall, especially when it is unknown where confrontation is to be expected. This does not necessitate a series of out-post necessarily, although that would be useful as well. What a mobile shield wall needs is eyes, which should be on at least all four corners of the march. Bicyclists or possible regular-looking pedestrian scouts can cover their own angle of view and operate half of a block to a full block ahead watching their respective side. Communications should be kept with one or more people in the shield wall - presumably in the second row - who are known by others to be in touch with the scouts so that they will be given some priority in emergency situations.

Proper scouting afield can also relay information concerning vehicular movements, such as extra police units arriving in APC's, cars or vans. Another good warning sign is empty buses used for detaining large numbers of protesters.

If there are multiple targeted locations where the march is trying to head (such as trying to breach the perimeter preventing access to a public area), scouts are crucial as to informing which location would be best given shifts in the police strengths.

Barriers

Metal inter-locked barriers are the typical means of blockading marches by the police. When a shield wall approaches a barrier it must be opened or knocked down prior to penetration by the wall. If police protection of the barrier is minimal, people in the back rows should be called ahead to remove the barriers so that the shield wall does not lose its cohesion in the act.



Protesters appropriate metal barriers in Cincinnati on November 16, 2000.

If police are present behind the barrier and safe from an advance, the shield wall should advance close enough so that people reaching from within the wall can pull it down. If the police resist the movement of a barrier, persons in the shield wall should try to advance so that their shields extend over the barriers protecting hands that are pulling it down and knocking away those of the police.

Splitting formations

The tendency for demonstrators to seek safety in numbers sometimes precludes wise tactical decisions. When safety is just as guaranteed with your march split in two, than it would be almost foolish not to split into two shield-wall covered marches that keep in contact. Simply put, a shield wall of 1000 people rushing a barricade on a street that is 60 feet wide will probably leave some 800 people standing around not helping because of a lack of space. Your odds improve the more the police are thinned and caught by surprise.

The most effective thing a shield wall can do is confuse authorities as to the intent of the march. To that end having one or more factions split up and take different routes will throw a police operation into disarray. Because the police are restricted to following ranking officers and their commands (at least while maneuvering) if your march splits while the shadowing police force only has one officer among itself, it cannot break in two to follow both groups.

A shield wall should consider the possibility of splitting up tactically only when there are enough shields. This can be judged knowing if forming a testudo later on might be critical, but if not, than only a few rows of shields and the perimeter and rear groups are needed. A mass of 1000 shields isn't going to be any more effective as a shield wall than 500. Keep in mind if you might end up in an open space like a square or a park where the potential width of your wall may have to grow or your density of shield might be important to defend against flank attacks.

Knowing when to split up also depends on the local situation, but is definitely most effective when trying to breach a perimeter that has multiple entry points. The police work on a system of reserves, sending more officers to points that may be or are in trouble. So if two barricades are rushed simultaneously, the chances of one or both succeeding is significantly higher.

The main question is then, when can you split? A good rule of thumb for safety with a march is that there are enough people to cover slightly more than one city block. This is necessary to prevent being boxed in from two intersections at once. If numbers are double this, than splitting up is not only feasible but a very smart move. Also, keep in mind that the odds of getting boxed in a trap are greatly lessened when there are, say, three marches walking along different streets as the police have far more repositioning to do and are probably spread too thin if they didn't expect your move. Multiple shield walls roaming a city also provide far better coverage for affinity groups that may wish to perform more dangerous operations.

Retreat

So should a situation come to this and the possibility of arrest or extreme caution becomes necessary, it might be time to beat a retreat.

Historically, retreating armies suffer the worst losses. The same is true in demon-

strations when people break and run in fear. While there is no real practical means of teaching people to avoid this panic, a few cool heads can save the day. The first critical thing a person can do in this situation is to yell "Don't run!" as the first fear should be stampeding other people - a horrible and demoralizing possibility.

The shield wall then in the frontline must act to play rear guard, which can be done by walking backwards at a good pace. If needed, a one-armed shield holder can brace him or herself by grabbing the arm of the person next to them. Calling out with "Hold the line!" may also help in keeping cohesion.

This should also provide physical and visual coverage for those who may have taken "illegal" actions and are a target for police forces. It also will provide grounds for those that find it critical to use projectiles to stem the police onslaught.

This type of situation is the most difficult to maintain cohesion during, but arguably the most important. If individual police officers are allowed into protester lines, they will begin arresting and beating those particulars. A shield wall that is maintained can save scores - but always remain wary of being boxed in at such times.

A scout in the rear can be used to determine which direction the retreat should take as well as to observe when it is safe to stop.

Part V: Shield Wall Formations and Tactics

Setting up your formations

The only way to guarantee maximum effectiveness of the variety of shields and body armor employed is that every affinity group uses similar equipment as much as possible. Since rows are set up of one or more affinity groups marching together and it is in no one's interest to break up affinity groups, it would be foolish to have some people in your group arrive with massive shields, and others with just a helmet.

Once converging, everyone participating in shield wall formations can agree among each group as to who goes where. Groups with inner tube or tower shields will be urged to be near the front or at least highly exposed. Remember this isn't a demonstration of heroics - it is a matter of practicality as to which affinity groups are in the front because they are helping to defend the entire march. By visual consensus it should not be hard to determine who should position themselves where, unless certain groups do not feel comfortable near the front. Remember that DIY equipment is made to be disposable, and swapping equipment might be an important function of solidarity even if you labored for hours on your particular shield.

Formations

Wedge Charge

This method, requiring much coordination is derived from a classic Viking method of charging. It requires a good deal of discipline, not to mention an awful lot of courage on the part of the person in front. This method also requires the space to make for a near running charge to provide maximum disarray and psychological intimidation against opponents.

A wedge will have one or two persons in front, using the two-handed method with as large a shield as possible. The two lines that follow to the right and left of the focal point slightly angle their shields to the outside direction. Once in position a countdown to a charge should be given and the charge should be made at a quick pace of short steps to keep tight, as full sprinting will lose cohesion.

The wedge works by focusing on one point and pressing upon it while the two angled sides deflect forces attempting to aid the one point and widening the breach. It also keeps a degree of cohesion for those attempting to break through. A normal flat line of attack may open a hole in one or two places, but they are difficult to expand upon and to even notice for reinforcements to converge upon.

Another advantage of the wedge is that if a person in the lead is about to be nabbed,



A classic v-shaped viking wedge formation.

there is immediate support behind him or her to pull them back away from arrest. It is then critical to remain close to the person in front of you. A wedge need not be more than 7-11 persons across or about 4 persons deep. Extra bodies can be used to fill the inside of the wedge, and form a solid line behind it - although at the ready to push through the breach.

Pulse charge

This is another method that takes discipline, and planning ahead of time. It probably is too complicated to be considered, but it's included for the concept anyhow. The pulse, as the name implies is a series of quick and short engagements that are just as quickly broken off. This should work to throw the police off balance and catch them by surprise when the real push is made. If pre-arranged, such that 3 pulses will occur before the real press, then simple shouting commands will work.

The difficulty is being able to disengage - as people behind you may not be aware of your methods. A possible effective manner is to use only one line of shields, having a few people behind to ask the rest of the crowd to wait until the final real charge. Otherwise, this is probably a move too difficult to coordinate.

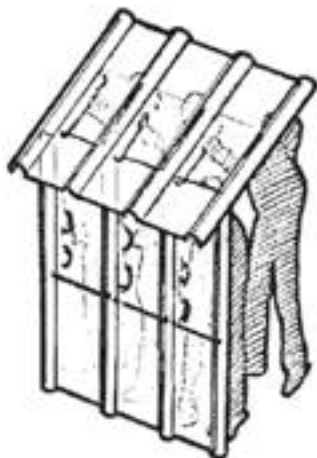
The Echelon Charge

Similar in effect to the wedge, but easier to set up, the echelon also works in a defensive manner. It is set up such that a given wing of the shield wall is extended ahead, sloping down to the other side of the wing, like the shape of a guillotine blade. Each person stands slightly behind and to the side of the person in front.

The principle behind this tactic is to turn the flank of a cordon of police and execute a breakthrough there. Traditionally, this is done on the right wing of the shield wall, turning the left wing of the police formation and for the sake of preparation, it is a good idea to keep this as a standard - unless the police have caught on of course. To add to the effect of pressing one corner of the opposing line, the weight of added bodies should be added to this side.

In effect, the one edge pushes through on one corner, turning the flank while the other end of the echelon advances enough to keep those police at bay. Hence the weight pushes through one side and the other wing of the police is helpless to come to their aid. This method not only breaks the police line, it also boxes them in to a degree, forcing a very disorganized withdraw on their point. The confusion should be enough to deter the police from pressing your weakened left wing.

Alternately, if an echelon is too difficult to form, a simple straight line with added weight to one side can have a similar effect.



A simple tortoise formation.

Tortoise or Testudo

The tortoise formation is the essence of the shield wall. Now while typical advancements may only require a front row of shields, the tortoise formation aims to protect both the front and the top from raining projectiles such as tear gas canisters. A tight wall above and in the

front can also protect against direct spray items such as pepper spray nozzles and water cannons.

Traditional tortoise formation dictates that the first row of shields lay theirs at ground level while the second row reaches over the shoulders of the first at an angle to double the front protection while then the third and subsequent rows protect the top. Additionally members on the side would protect the flanks if necessary.

As the tortoise was employed for protection against arrows and javelins in antiquity, it is only crucial today in situations where police projectiles are thrown. As it is naturally a slow moving formation, it is not recommended for actions in defense against batons for the loss in visibility in finding gaps among the police lines.

For the purposes here, a formation with one front row of shields and the remainder providing ceiling support should suffice. As moving fast invariably develops cracks in the formation, move to a slow rhythm or the chant of "1, 2, 1, 2..." A tactical objective of the Tortoise is to get close enough to police rounds to render projectile weapons ineffective. This will relieve protestors in the rear of the need for flight. Immediately once contact is made with the police lines, the tortoise should break into supportive rows of frontal shields aimed at defending each other against baton blows.



Riot police advancing in a tortoise formation.

Square

This defensive tactic, or a loose derivative of it should be employed when you have a single position to defend against imminent attack, and your numbers are rather small. This can arise typically when trying to block the path of vehicles in a spontaneous move.

The traditional square was a formation the British Imperial armies would use to defend from massed cavalry attacks. For our purposes, it works to prevent or at least prolong arrest even when surrounded or when injecting yourselves into a compromisable position.

The square is simply set to face around a point with your shields out. As you are immobile, kneeling will provide a smaller space for the police to try to crack. In reality, you will probably end up with more of a circular formation than an actual square, but the idea is the same. And if you happen to find a stockpile of muskets, what the hell, have a go at it.

Extreme self-defense tactics

When facing an opposing force that is hell bent on breaking laws and violating your rights by viciously attacking you, any code of self-defense allows for extreme measures. By this we mean to include the throwing of projectiles and use of bludgeon weapons

which serve to distract and disorientate the opposition so that the demonstrators might regroup or escape.

While injury to others is never a facet to embrace in self-defense, we must recognize this possibility as it has happened in the past, and will probably occur again. If the police are prepared for the worst, so should we. While this is not the place for a moral treatise, the general philosophy is that we are fighting for life and freedom, and so long as we don't fight for death and oppression as our enemies do, we have moral fortitude on our side.

Grease guns, smoke and paint bombs and other items don't necessarily injure and also can provide tactical advantages in disorientating the police.

But, as this is a booklet concerning self-defense tactics, we won't get into specifics on more aggressive street fighting manners. And hey, how much do you need to know about throwing a brick?

This booklet is in a rough form and will be updated with more diagrams, construction images and concepts as time goes on.

Contact the author with ideas, field testing, more images and criticisms at sarin@devo.com
My thanks to all of those that have contributed thus far.