Fudge Superheroes

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in *Fudge 10th Anniversary Edition*

This chapter looks at ways of using ***Fudge*** rules to describe beings with superhuman powers. It's written in terms of comic–book style superheroes, who are the most familiar example. But the same methods can work for other sorts of superhuman beings, such as government–funded cyborgs, vampire hunters, legendary demigods, or cybernetic messiahs.

Superheroes are one of the biggest challenges to a gaming system. The nature, magnitude, and source of their powers are all incredibly varied. A super–team may bring together mutants, magicians, gadgeteers, highly trained fighters, and completely unique beings, at power levels suited to everything from beating up thugs in an alley to wrecking a planet. Fitting all this into a single system of game mechanics is a challenge. It's an even bigger challenge if the same system has to work for ordinary human beings as well.

Fortunately, ***Fudge*** has everything that's needed to define superpowered characters. The standard categories of ***Fudge*** traits — attributes, skills, gifts, faults, and scale — are all that's needed to represent any superheroic concept. The trick is to pick the right trait to represent each power or weakness. That's what this chapter is for.

Here's a quick overview:

To describe a character who is essentially human, but incredibly talented or trained in some field, use Legendary attributes and skills. To describe a character who can do the same kinds of things that a human being can do, but with more power, use Scale. The basic Strength/Mass Scale is a good starting point, but you can reinterpret it to describe many other common powers.

Finally, for characters who can do entirely different kinds of things, from hurling lightning bolts to reading minds, use gifts. Likewise, use faults to define special superheroic weaknesses, such as vulnerability to some particular substance, inability to affect it, or dependence on it. Combine gifts and Scale to represent abilities outside the normal human spectrum at a high power level.

The rest of this chapter explores the details. There isn't space here for a comprehensive list of powers (and such a list wouldn't be very ***Fudge***–like, anyway). But numerous examples illustrate the main ideas and suggest ways to treat a variety of superpowers.

Scale

To describe characters who can do more than human beings, ***Fudge*** uses the concept of Scale. The version of Scale that's easiest to quantify and generalize is Strength Scale. Strength translates easily into the energy output of the muscles, and energy is the common currency of all physical processes. Superheroic ***Fudge*** generalizes Strength Scale into Energy Scale.

Size and Strength Scale

In real living organisms, strength depends on size. No matter what animal it comes from, the same weight of muscle has the same energy output. For an animal (or a human) to be stronger, it has to be bigger. The Scale table reflects this.

The basic Scale table has Strength multiplied by 1.5 for each increase in Scale, with some rounding off for simpler calculation. For example, four Scale increases multiply Strength by 5.

A superhero might attain tremendous strength in this way, either by being huge and strong, or by being able to grow larger or change shape into a larger creature. For example, Captain Cretaceous might transform himself into a Tyrannosaurus rex. His dinosaur form weighs 5 tons or 10,000 pounds; the average human weighs 150 pounds. So the Captain is multiplying his size by 67. This is close to ten increases in scale (multiply by 60). So this form has +10 Scale, giving it +10 offensive factors in determining damage, and +10 Damage Capacity in withstanding it.

It's convenient to assume that height (for humans) or length (for quadrupeds) is proportional to the cube root of weight. So each three increases in Scale for size grant one increase in Scale for height. The Captain's +10 Scale gives him +3 Scale for height, making him 3.5 times as tall; his 6' human body becomes a 21' tyrannosaur body.

Super–strength Scale

Unlike real living creatures, superheroes can exert strength or withstand damage out of proportion to their body size. They may have denser body materials and the strength to move their massive bodies, or more powerful muscles, or cybernetic body armor that magnifies their strength. Such enhancements let them be as powerful as a dinosaur, or a tank, without being any bigger than other human beings.

Other than size, Scale has three main aspects: Mass, Strength, and Damage Capacity. Many physical superpowers can be defined by pinning down which of these three they benefit.

Increased density means increased mass and weight. The densest materials found on Earth are about Scale +8; a realistic superhero with the ability to increase his density would have the same limit. Density–powered comic book heroes can withstand more powerful attacks and are strong enough to move their massive bodies easily, so this Scale increase would affect all three aspects.

Simply boosting muscle power will affect Strength. The superhero's muscles don't tear his own body to pieces when he uses his strength, so he probably has increased Damage Capacity, at least for blows and other physical attacks. This may not be true for superheroes who augment their strength in some other way, such as telekinesis, a force field, or a powered exoskeleton.

It's also possible to create a character who's simply hard to hurt. This would count as increased Scale for Damage Capacity in relation to any sort of impact, pressure, or energy flow, but wouldn't do anything for Strength.

Because their Scale isn't tied to their actual size, superheroes can have extremely high Scale. The standard Scale table needs to be extended. Here is a version that does this:

Scale	Multiplier
+1	1.5
+2	2.3
+3	3.5
+4	5
+5	7.5
+6	10
+7	15
+8	25
+9	40
+10	60
+11	90
+12	130
+13	200
+14	300
+15	450
+16	650
+17	1000
+18	1500
+19	2500
+20	4000
+21	6000
+22	9000
+23	13,000
+24	20,000
+25	30,000
+26	45,000
+27	65,000
+28	100,000
+29	150,000
+30	225,000
+31	350,000
+32	500,000
+33	750,000
+34	1,000,000
+35	1,500,000
+36	2,000,000
+37	3,000,000
+38	4,500,000
+39	7,000,000
+40	10,000,000

If you need an even bigger scale, subtract 40 from the scale you want, look up the resulting number on the table, and multiply it by ten million. For example, if Cosmic Woman has Scale +60 for her strength, subtract 40 from 60 to get 20. The multiplier for Scale +20 is 4000. Multiplying this by ten million gives 40,000,000,000 (forty billion).

Energy Scale

Normal human beings expend energy mostly by muscular effort, moving their own bodies or other objects. But superheroes can use or control other forms of energy. The ability to do this is a gift (see Gifts and Supernormal Powers, p. 3), but the magnitude of the energy is a Scale.

The progression for Strength Scale can be used for any type of Energy Scale. In fact, human strength can be equated to energy: a human being of average strength can do useful work for several hours at a rate of 75 watts. So a superhero with Strength Scale +6 can produce 750 watts, or roughly one horsepower. A superhero with electrical powers at Scale +6 could produce 750 watts of electrical energy for several hours. One with thermal powers at Scale 0 could heat a pint of water one degree Fahrenheit per fifteen seconds.

The same Scale can apply to powers based on absorbing energy, such as cold or darkness powers.

In most superheroic campaigns, one of the main uses of superpowers is to inflict bodily harm. A human punch delivers about 50 joules of energy (a watt is a joule per second); higher power levels can be scaled up from that. For exam- ple, Scale +11 is 4500 joules, or about the energy of one gram of TNT. It's convenient to assume that all forms of energy are about equally efficient in damaging the human body. An attack then starts out as the equivalent of a punch, and each increase in Scale adds one level of damage.

Non-physical scale

What about non–physical powers, which don't involve energy? Many are best defined simply as gifts; invisibility, for example, is either on or off, rather than having a magnitude. But a power that involves controlling something can be scaled like strength (which, after all, lets you control things by picking them up and moving them) or energy (which lets you control the energy you release).

For example, a telepath can reach out to another mind and implant a suggestion or impulse into it. The other person may act on the suggestion. If it's against the target's convictions, or just a strange thing to do, the target may try to resist. This requires an opposed action based on the two characters' strengths of will. If the Mesmerist has Scale +4 on his telepathy, he can reach out and implant a suggestion in five other people, not just one (the same suggestion in all of them, normally). Or he can focus on just one person and apply his Scale to his opposed action roll, giving him a good shot at totally dominating an average person's will.

Scale and geometry

The effects of a fist blow are felt at a single point. The same is true of many superpowers. But other superpowers have effects that extend out for a distance, over an area, or through a volume. Each of these possibilities is a variation on Scale.

Suppose a power naturally works over a distance of one yard. Increasing this to five yards multiplies the distance

by five, which is equivalent to Scale +4. But if a power works over an area, such as a square, changing a square from one yard by one yard to five yards by five yards makes its area 25 square yards, or Scale +8. And a cube five yards by five yards by five yards is 125 cubic yards, or Scale +12. The Scale for the two–dimensional square is two times as great, and the Scale for the three–dimensional cube is three times as great.

One–dimensional powers involve reaching out to a distance, or throwing or jumping to a range. For example, if an alien can stretch its tentacles to five times their normal length, it's working with five times as long a lever in handling things, and needs to exert five times the force. The Scale of its reach is the same as the Scale of muscular force it needs to exert. For another example, suppose the superpowered thief Macavity has the power of teleportation at Scale +6. An average human being can jump about three feet horizontally or half as far vertically (assuming a standing start; a running start won't do much for a teleporter). Macavity can teleport thirty feet horizontally or fifteen feet vertically.

Most energy powers are two–dimensional; the energy forms the surface of an expanding sphere or the projected area of a beam. For example, the energy of sunlight averages 165 watts on a square yard, of which 39%, or 65 watts, is visible light. So Scale 0 darkness powers could black out one square yard. Eclipse, with Scale +8, could black out an area of 25 square yards, such as a square five yards on a side.

The energy from an explosion fills a volume of space; explosions are three–dimensional. For example, one gram of TNT, which is energy Scale +11, will incapacitate anyone in a one–yard radius. Incapacitation requires +7 damage levels, so the Scale +11 explosion can be analyzed as Scale +7 for damage and Scale +4 to fill a volume one yard in radius. If the whole charge applies at a single point (such as a soldier who throws himself onto a hand grenade), the entire Scale +11 applies as increased damage. A 125–gram charge (roughly the amount in the grenade), increasing Energy Scale by twelve to +23, increases the radius by four steps, to five yards.

Super-speed Scale

Fudge has a scale for speed of action (see Speed, p. 21). But really high–speed movement works slightly differently. Superpowered characters need a somewhat different Super–speed Scale, based on energy.

Consider the Mongoose, who moves five times as fast as a normal person. What happens if he hits someone? His fist is traveling five times as fast. That gives it 25 times the kinetic energy — each of his blows is Scale +8 in the damage it inflicts. And because he's faster, he can strike five blows for each one that a normal person can strike. So in terms of total damage, he's getting the equivalent of Scale +12.

To reflect this, use the following Super–speed Scale. For Scale higher than +12, take a multiplier from this table and multiply by five for every twelve increases. For example, Scale +5 gives two times speed, so Scale +17 gives ten times and Scale +29 gives fifty times.

Scale	Multiplier
+1	1.15
+2	1.3
+3	1.5
+4	1.7
+5	2
+6	2.3
+7	2.7
+8	3
+9	3.5
+10	4
+11	4.5
+12	5

Unlike other Scales, Super–speed Scale also enhances combat skill, because a faster blow is harder to stop. Divide the Scale by three and round off; the result is the Scale modifier to combat. For example, the Mongoose, with Scale +12, gets +4 to all combat skills.

Gifts and Supernormal Powers

Some superheroes rely on augmented versions of normal human abilities. Normal humans can move, lift and handle things, hit people, and withstand injury; superhumans just do it better. But as the genre developed, writers came up with superheroes who could do much stranger things, either in addition to enhanced physical Scale, or in place of it. Describing the full range of superheroes requires more than Scale. Their abilities differ from normal human abilities not just in degree, but in kind.

In ***Fudge***, the ability to do something other people can't do is a gift. A superpower is a very powerful gift, which no ordinary human being could have at all. An average superpower is equivalent to two normal gifts. For example, a superhero might be able to generate electricity within his body, become invisible, or read minds.

At the GM's discretion, certain abilities can be treated as ordinary gifts. This is plausible for talents that some real people have, such as photographic memory; for realistic biological traits, such as a rattlesnake's infrared sensors; and for "psychic" abilities as they appear in folklore. For example, the Oneiromancer's dreams sometimes bring psychic visions of distant or hidden events. Because this is at the GM's discretion, serving mainly as a way to advance the plot, it counts as a standard gift, not a supernormal one. It's also possible to start with a supernormal gift and attach a modification that makes it less effective; see Power Modifications and Options.

A supernormal power, by itself, grants the ability to do things at a magnitude comparable to that of normal human actions — to exert similar force, expend energy at a similar rate, move at a similar speed, and so on. Many superpowers are both different in kind and greater in magnitude. The basic kind of ability is a supernormal gift; the magnitude is a Scale. Only supernormal gifts are eligible for increased Scale.

A power that only affects the character who has it usually doesn't require a roll. An invisible character simply goes about unseen. But a power may require a roll if it requires active adjustment. For example, the Chameleon would have to perform an unopposed action to match his color pattern to a background, with difficulty based on how complex the background was. And almost any at-

tempt to affect another character should require a roll. Most rolls will be made against an attribute, but a superhuman character may develop a skill that permits more sophisticated feats. For example, an illusionist might develop an Artist skill to create convincingly realistic images.

Weaknesses and Vulnerabilities

Superheroes often have unusual weaknesses or disabilities, as well as unusual abilities. Most of these can be described as faults. Generally they should be treated as ordinary faults, not as supernormal ones, because most heroes' weaknesses only cause problems once in a while.

Common weaknesses include suffering extra harm from a certain type of attack (treat the effects as one wound level higher); suffering harm from exposure to something that doesn't harm other people (one wound per turn); being unable to affect certain targets; and being dependent for survival on something ordinary people don't need, such as regular immersion in water (one wound per hour for deprivation). Not being able to affect certain targets is a type of power modification (see below).

Power Modifications and Options

Supernormal gifts can be modified in various ways, for better or worse. These modifications can be treated as gifts or faults. As a rule, treat them as ordinary gifts or faults, rather than as supernormal gifts or faults. A supernormal power with two ordinary faults attached to it is effectively free. Treat this as a limit; don't let a character acquire a power at negative cost by applying more restrictions!

Superheroes sometimes have secondary powers based on their main powers. For example, Poltergeist can use her telekinetic powers to levitate herself. If a power can be interpreted as an application of another power, treat it as an ordinary gift, not a supernormal gift.

A major enhancement of a power's usefulness may be treated as a second supernormal gift. For example, the ability to generate electricity from one's body is a supernormal gift. But what about Will–o'–the–Wisp, who can command electricity mentally, generating charges or currents anywhere she can see? Her electrokinesis counts as two supernormal gifts: one representing the basic electrical effect and one the ability to generate it mentally.

Scale normally applies to only one aspect of what a character can do: to strength, speed, or indestructibility, for example. But a superhumanly strong character might be able to use the internal energy of his muscles as a power source for bioelectric shocks or superhuman speed. The ability to apply Scale to more than one capability is a gift. Applying it to two related powers is a standard gift; applying it to all the abilities of the body, of the mind, or of the spirit is a supernormal gift.

A restriction on the usefulness of a power is a fault, usu- ally a standard fault. For example, not being able to affect a certain type of target is a standard fault.

An important type of fault, especially with energy–based powers, is dependence on an external power source. A generator can actually produce energy within his own body or mind; a channel can only divert an external stream of energy; a transducer can absorb one kind of external energy and emit another. Being either a channel or a transducer is a major restriction and can be treated as a supernormal fault. For example, Santa Ana can magically command the desert winds.

This counts as two supernormal powers, one for the wind effects and one for the ability to produce them at a distance; but it only works when the air is actually in motion, which is a supernormal fault.

A little creative thinking may suggest other ways to apply this restriction. For example, the Catalyst can speed up or slow down chemical reactions in any substance she touches. She isn't actually producing chemical energy, but directing it, so she can be defined as having the power of chemical control and the channel restriction.

Another modification for energy–based powers is to treat them as powered by an internal battery. Rather than being able to produce a certain amount of energy, more or less as long as the user wants, the power has a fixed number of charges. When they're used up, the power stops working. However, several of them can be expended at once, attaining an increased Scale for one action. This is called the battery option.

A battery has 25 charges. Spending one charge is good for one action at whatever Scale the character has paid for. Spending two at once is good for an added +2 Scale; spend- ing three for +3; spending five for +4; spending eight for +5; spending twelve for +6; spending sixteen for +7; or spending all twenty–five for +8. But spending more charges at once uses up the battery in fewer actions.

How long an "action" lasts is at the GM's discretion. It could be a single blow or energy blast in a fight. Or it could be an hour's sustained effort. For example, in battle against the unenlightened, Narasiddha suffers serious wounds. Calling on his yogic mastery, he uses his body's entire reserve of healing energy, gaining the benefit of a full 24 hours of healing in a single hour.

At the GM's discretion, the battery option can also represent powers that are used passively. For example, Earthman can use his control of the earth to cover himself with a thick layer of sand or clay that protects him from blows. But each time someone hits him, some of his armor breaks off. After 25 blows, he's unarmored again.

Non–humans

Many superheroes are not humans, but aliens, robots, demons, or other exotic beings. A system of rules for supers needs to provide for them.

Being non–human, but of some other natural biological species, is neither a gift nor a fault, but an option. Human capabilities include two major distance senses (sight and hearing), communication (speech), manipulation (two hands), and movement (running, and secondarily climbing, jumping, and swimming). Give the other species a similar range of abilities, though not necessarily the same ones.

Some non–humans have natural advantages over humans. For example, a robot doesn't need food, water, or air (most robots have internal batteries, and some run their physical actions on the battery option); it isn't affected by poisons or diseases; and it has at least light metal armor. Treat being a robot as a supernormal gift. The same could apply for other powerful inhuman beings, such as a fairy or vampire.

Some non–human beings can be described as "incomplete" in a certain sense. Humans have the three aspects of body, mind, and soul or spirit. In many universes, a robot will not have spirit; spirit applies only to living creatures. An animal or plant will not have mind; mind applies only to beings that speak and reason. A ghost will not have a body. Any of these lacks can be treated as a double–value fault. They can be used to balance out a supernormal gift; for example, a character might have the supernormal gift Robot and the supernormal fault No Soul. This would account for such "robotic" qualities as lack of creativity and inability to grasp social nuances. In a campaign with fantasy elements, robots would also be unable to cast spells or perceive spiritual entities.

Legendary Attributes and Skills

Some superheroes don't have superhuman powers at all; they're just incredibly skilled at what they do, innately talented, or both. This was even more common in the adventurers of the pulps. A character of this type should have one or several Legendary skills, backed up by Great, Superb, or Legendary attributes. The GM may want to allow additional levels of Legendary skill in one area. For example, if Dragon is the world's greatest master of the katana, she may have Kendo at Legendary 2, backed up by Legendary Dexterity, Superb Will, Great Health, and a gift for sensing danger in combat situations.

Gadgets

Gadgets are an important part of the superhero genre. From the midnight avenger with his climbing line and exotic missile weapons to the galactic policeman with his incomprehensible alien artifact, superheroes often rely on equipment for many of their abilities.

There's no real difference between abilities gained from a gadget and abilities of a hero's body or mind. Theoretically the gadget might be taken away, or destroyed; but a hero with vision powers might have his eyes put out or glued shut, too. In the comics, if a gadget is taken away, it's a temporary plot twist. Taking it away permanently would destroy the entire concept of the hero, making him unpublishable. In a roleplaying game, destroying or taking away a gadget would make a hero unplayable, and should be treated with as much caution as crippling the character or killing him outright. So having powers based on a gadget, as such, doesn't count as a fault.

Gadgets can be large and inconvenient to move around. A piece of equipment that's heavy or awkward, such as a rocket launcher or a motorcycle, has a fault attached to whatever gifts or Scale it grants. A piece of equipment that's mounted on a structure or vehicle, or that is a vehicle bigger than one person can move around, has a double–value fault.

What Gadgets Do

Mundane equipment can be bought off the shelf, or requisitioned from one's superiors. Generally, superheroes will have whatever mundane equipment is needed to use their skills, with its quality and quantity adjusted to reflect the owner's wealth. Gadgets aren't so commonly available. They have special capabilities that have to be acquired as character traits.

One type of gadget has improved functions. A motorcycle might be faster than any ordinary model, or a sword might have a sharper edge. These improvements can be treated as Scale increases. For example, if a normal motorcycle can manage 110 mph, a motorcycle with +3 Speed Scale would have a multiplier of 1.5, raising its speed to 165 mph. Scale is always relative to the functioning of a normal, unimproved version of the device.

Another type of gadget has added functions. These can be defined as gifts or supernormal powers. Added functions that are simply advanced technology for their period count as gifts; more wildly speculative functions count as supernormal gifts. For example, a helicopter with a voice–controlled computer autopilot would have a supernormal gift; so would a car that could become airborne.

Finally, gadgets can have entirely new functions, not modeled on the functions of any real devices, such as a suit that makes the wearer invisible or a belt that generates a force field. Those capabilities are treated as supernormal gifts. Any of these sorts of gifts can also have Scale.

How Gadgets Are Created

Some superheroes don't just have specific pieces of equipment, but the ability to create new equipment.

The ability to create advanced devices, whose capabilities are state–of–the–art or a little better, is a gift. This is good enough to add a function to a device that can be represent- ed as a standard gift, or to increase its Scale by a step or two.

The ability to create truly super inventions is a supernormal power. The capabilities of the resulting devices can include supernormal gifts. In addition, supernormal aptitude for inventing can be taken at an increased Scale, representing the ability to create devices with increased Scale. The kinds of devices that an inventor can create depend on his skills. For example, if Vector is skilled in rocketry, he can use his inventive gift to create rocket belts or rock- et pistols. But if he wants them to have artificial intelligence, he needs to have a computer–related skill as well.

Normally, creating a device takes a fair amount of time, from hours to months. (An inventor with a supernormal gift for invention can work much faster than an ordinary inventor.) The ability to create a new device more or less instantaneously counts as an additional supernormal gift. Inventing may require a large, bulky toolkit (a fault) or a workshop carried in a substantial vehicle or set up at a headquarters (a double–value fault). Any device created in this way lasts only for one adventure. To keep it in use permanently requires the GM's approval to spend experience points on it. Until paid for with experience points, the device is not part of the character's core concept. It can be destroyed, stolen, or even used against the inventor.

Magical spells can be treated like created gadgets. The spell has no physical substance, but the magician's ritual equipment can be defined as a toolkit or workshop. Being able to make subtle forms of magic effective is a gift. Flashy comic–book wizardry is a supernormal gift.

Campaign Scale

With these rules, you can improvise a campaign of superheroic adventure. But what kind of adventure are you looking for? Backstreet brawls with drug dealers, or planet–shaking wars? Different superheroic power levels are suited to different types of adventure. What power level do you want, and how narrowly do you want to define it?

For a typical one–city superhero campaign, start the characters out with Scale +12, one supernormal power, and skills and attributes suited to a competent normal human. If the players want less power and more versatility, let them swap at the following rates:

1 Scale level = 1 gift and 1 attribute level
2 Scale levels = 3 gifts
1 supernormal power = 2 gifts

They can also use the usual tradeoffs among standard gifts, attribute levels, and skill levels. A character with a double–value fault can have an extra supernormal gift. For more powerful supers, start with some multiple of this; for example, Scale +36 and three supernormal gifts. To keep power levels in the same range, don't let players reduce Scale by more than twelve steps. On the other hand, if you want a team with very different power levels, let players reduce Scale by as many steps as they like, or just let them describe their characters and figure out how to turn the description into ***Fudge*** terms. The important issue for many super–teams isn't that different members are equally powerful, but that each one has distinct abilities and can do things the others can't.