Gandalf Mod documentation:

For Gandalf Mod 0.022

Credits:

Thanks to Griffith, The_Stranger, Timelord and Merkraad for technical assistance; to Kirky Picard for permission to use graphics from BNW 2.0, and to Munataros, Griffith, LunaPark, DarkKrystal, Vampireking and others for testing and feedback on the mod.

Graphics from BNW 2.0:

The following graphics are taken directly from BNW 2.0: New item graphics libraries, Black Rider (NB_BLACKRIDER.ILB), Magma Elemental: (NB_MAGMA_ELEMENTAL.ILB). A number of other graphics (like the Coati and Frost Giant) also come from BNW 2.0 originally, although I took it from CoMA mod.



Fools die; friends die, at last you die yourself. But one thing never dies, the reputation of those who died. - Havamál

Why play Gandalf mod?

Regretably, there are very few online players left, and even amongst those, my mod isn't being used as much as I'd hoped for, although personally I like it much better than either the MP mod, COMA or the Upatch (naturally, for otherwise, why should I make this mod?). What follows on this page, then, is a bit of a sales pitch for the mod, to explain why I've designed it as I have, and what I think are its best features.

Heroes:

The mod contains 5 level 1 heroes as well as 2 level 3 heroes for each race, which is a total of 84 heroes. This means that all races have a hero for nearly all the 6 classes of heroes: Warrior, rogue, shaman, priest, ranger and paladin, so a lot more heroes are available. On top of this, the heroes are stronger: They start a little stronger than in upatch 1.4, and better upgrades (determined by what class of heroes they belong to, so that priest heroes generally get magic updates, and warrior heroes get fighting skills etc.) are available to them, all of which make the heroes more useful in the game. The new level 1 heroes still follow the same templates as the originals, however, so they are all mounted and look like the race they belong to; only the level 3 heroes (which, sadly, you can only recruit in inns, and even then rarely) are custom-made to different body types, and named after well-known AOW players.

Items:

I've made a large number (probably around 60, but I don't remember) of new items for heroes, so more diverse skills are available with the items; this of course further increases the usefulness of the heroes.

Extra units:

I have added 1 extra unit for each level (0-4) of each race to give the races more diversity. In adding these units I have taken great care that the new units follow the racial theme and add abilities that the specific race needs (or, as a minimum, which complements the other units); for instance the undead level 0 is a good scout, something which that race in particular needs a lot.

New machines and transports:

I've also added new machines; mainly catapult-type machines, which are very useful both in attack and defense and should increase the value of machines in the game. The catapults (depending on their race and price) have several different types of attack: Hurl boulder and firebomb (the traditional setup, which combined with seeker in the trebuchet makes for an excellent attack unit) – for neutral races; bombard (death and magic damage) – for evil races; holy bombard (holy and lightning damage) – for evil races. To further increase the usefulness of machines and slow units, I have also given each race a cheap racial transport, which is available in early game and can therefore be used to transport units like catapults of dire fungus along in an attack so they are not reserved only for defense purposes.

Finally, there are far more ships available; this generally doesn't mean a lot in the game, since sea battles are rare, but if you're air specialist or have 3-4 air picks, you can cast wind walking on them, which makes them formidable attack and transport weapons.

More morphing units and better upgrades at medals:

In online games before the later versions of the MP mod, people chose pacifist by default, because the disadvantage of this was minimal. To avoid this, and to spiff up the game, unit in the Gandalf Mod gets better upgrades at medals, and around 10-15% of them can morph into stronger forms

when they get gold medal.

Changes in racial bonuses and in building costs and bonuses.

The racial bonuses are changed, the details can be seen in further down. The main purpose of this is to a) create more variation in the bonuses and b) make the bonuses more consistent with the 'racial features', although this is a bit difficult (how exactly do you determine the features of the race?). The tower shooter is more expensive and more effective (because of my desire to make a stronger defense possible – but then, also costly). The town income system is changed, so that more income derives from the buildings rather than the town itself, which again means that if you don't invest in structures in your towns, they will give less income – which makes perfect sense from a 'natural' viewpoint.

Diggable UG available:

Finally, this mod has diggable UG available. To get it, you need to start with the ROCK version of the game, then save the game (after turn 1, or later as you prefer). Then close AOW, select the EARTH version of the mod in aowsetup.exe and load the save game again. Now there is diggable UG in the underground. Because of the diggable UG, all races have the drill available, and more races have 'natural' diggers (faster then the drill).

Advantages in single player games:

These various changes both mean that the game is a lot more fun and varied in multiplayer settings, but it certainly also spiffs up the gameplay in for single player maps, which is one reason I think more of the single/PBEM players should try it. Given that a lot of effort in single player games are made on levelling up heroes and units, Gandalf mod is ideal for this, and the extra available units provides for more variety.

Changes in Gandalf mod compared MP 1.6 fix rock

New items:

Lots of new items added, including new graphics from BNW 2.0.

Changes in city income, building income and requirements for buildings:

The MP 1.6 / Upatch setting is that everything is available in a village, but outposts can't build anything except a wooden wall. Only the *changes* are listed below.

Town size required for:

Stone wall, siege workshop, champion's guild, monastery, all racial buildings Wizard tower I

City size required for:

Wizard tower II and all dependent structures Master's Guild Sanctuary

These changes approximates Gandalf mod a little bit to the situation in AOW1, where only a few select cities can produce level 4 units – but of course all towns will eventually grow into cities unless you take population growth off.

Reduced income from towns, added income from building:

The income from various town sizes has been reduced, and income from buildings has been added: Wooden wall: +5 gold +5 growth (was 0 of both) Builder's hall: +5 gold (was 0) Shipyard: +20 gold (was 10) Siege Workshop: +10 gold (was 0) Master's Guild: +15 gold (was 0) Stone wall: +5 happiness +5 growth (was +5 growth) Monastery: +10 mana, +5 research (was +5 mana) Sanctuary: +10 research +15 mana +10 happiness (was +15 mana) Tower II: +10 mana, +10 research, price raised from 150 to 200 gold. Tower III: +10 mana, +10 research, price raised from 150 to 200 gold.

The results of this can be seen in the table; the idea is that it pays off to invest in your towns, and costs to just let them idle, thereby adding a tiny element of city management to the game.

City Size:	Outpost	Village	Town	City
MP 1.6/Upatch	10	20	30	40
Gandalf Mod min/max	5/10	10/20	20/40	25/60

To the income values given in the table must be added 20 gold if there's a shipyard in the town, gold income from shrines, 24 gold for full crops, racial bonuses and perhaps spell bonuses (Golden Age, Spring Rains). An extreme example could be a halfling city with full crops, nature shrine, master's guild, shipyard and spring rains active: 25 (base city income) + 5 (wooden wall) + 5 (builder's hall) + 10 (siege workshop) + 20 (shipyard) + 15 (master's guild) +15 (nature shrine) + 48 (2x normal crops) + 10 (racial bonus) = 153 gold. Producing merchandise would give an extra 20% of some of this, perhaps bringing it up around 170.

Shrine bonuses/penalties:

Magic Shrine: Gives 10 mana 20 research (was 10 mana 10 research) Nature Shrine: Gives 40 growth 15 gold (was 30 growth 15 gold)

Order Shrine: Gives 10 gold, 15 production, 30 happiness (was 15 production 40 happiness) War shrine: Gives -20 gold -10 happiness (was -10 gold). This of course because the medals are more valuable in this mod and to prevent war shrine being the default choice.

Spell changes:

Life sphere: Fairy summon (level 2) replaced with summon nature elemental (level 3) and moved rejuvenate from level 3 to level 2 (so there's 5 spells for each level in life sphere).*

Dire Penguin summon (secret) replaced by fire bird (new level 3 unit that grows into a phoenix at gold). Available as nature and war quest reward and in recruitment structures). *

Clear terrain radius extended to 2 instead of 1, casting cost increased to 30 mana.

Stone skin changed to casting cost 10 and upkeep 6 (was 8,5)

Wizard skill changes:

Pacifist no longer excludes war mage Other changes might be added (but are not at present), these are: Conqueror = 2 picks and 800 research cost Constructor = 2 picks and 800 research cost

Ability changes:

Doom gaze changed to damage type death (was magic; due to the name I think this makes more sense; it also means that more units will be immune).

Bombard changed to attack type death+magic (was death only)

Cursed: Units with death immunity (including all undead units) can't be *cursed* anymore, whether by death strike or through the damnation spell (they are immune to death magic; it always bothered me badly to see a stack of reapers getting hit by that damnation spell, esp. Since poison immune units are not affected by poison domain, and fire immune units unaffected by fire domain); this was set up by making undead and death immune mask cursed.

Shoot Javelins (this is the ability used by the repeater ballistas): Renamed to 'Shoot fire javelins'. Changed from att 13 dam 5 to att 15 dam 5, damage type physical+*fire* (makes it a little different from the normal ballista). *

Taunt: Changed to all damage types except physical. This means that magic immune units are no longer immune to taunt. However, most magic immune units already have will power; I think the fairy is the only unit for which it will really matter.

Hurl Lightning renamed to Holy Bombard (att 11 dam 4, lightning and holy damage).* If you have the Gandalf Mod spell names on, you will see it as Holy Bombard, otherwise you will still see it as Hurl Lightning. All the units (Lightning Catcher, Storm Mage, Azure Drake, Force Ship, a few heroes) that had the hurl lightning ability has been given Lightning Bolts instead (if I missed some, please let me know!)

Lightning Bolts: Changed to att 11 dam 4 (was att 8 dam 3). The higher values is because it replaces hurl lightning, which had area damage; and now it only hits one unit.

*) These changes is what makes it necessary with a new spell name file.

Unit changes, new units and morph paths:

A number of existing units have been changed for balance purposes. One new unit has been added to level 1-4 + the racial building. A number of the new units as well as of the existing units have been given the ability to morph into a stronger unit at gold.

I don't currently plan to add any level 5 units, but perhaps units can be added to be buildable at temple etc. If you want to see the stats and abilities of the new units, look in the editor at the bottom of the units list. or each race I've started by placing the level 0 unit of that race, so you can see what race we're dealing with.

My criteria for the new units were:

1: They should be somewhat aligned with the 'theme' of the race they are added to.

2: They should complement the units of that race, i.e. bring something new to the race.

3: They have to be balanced in strength, cost and abilities, of course.

The criteria for selecting what units morph – and into what – are harder to describe. For some units (Berserker - Veteran, Chaos Spawn - Chaos Lord, Fire bug - Fire Bug Queen) there is a natural progression, for most others (cavalry – knight, pony rider – sheriff) there's a certain likeness between the units which makes it logical that the weaker unit could evolve into the stronger one.

For each group/race is first listed the *unit changes*.

Then which *new units* have been added (in this order: level 1, level 2, level 3, racial, level 4) Finally a list of the *morphing units* and their morph paths for each group/race (unit -> morph into)

<u>Machines:</u>

Pioneers have been given strike, 5 attack, 3 damage, fire crossbow (3/3) and a tiny racial feature. This doesn't make AI build them as I had thought, but it means a single bird can't kill them, which is

fair enough IMO, they're suppossed to be 250 people on their way to build a new outpost. *Air galley: -fire cannon at start +3x fire xbow lv.2 (att 18 dam 9, unlimited). Repeater Ballista*: Renamed to Fire Ballista, and shoots javelins with fire+phys damage, see ability changes.

Drill: Loses double strike and block

Tower builder: Price down from 100 to 80. It was 50 in MP 1.5 and people built lots of cheap watch towers; but 100 is a bit too expensive IMO, so taking 20 gold off.

Balloon: Added fire crossbow (3/3) and ram -3 (att 8 dam 4) from start, price stays at 120 gold.

New units:

Basic transports (with racial names) have been added to all races, generally with 32 move points and transport 7 at a cost of 55-80 gold, from builder's hall.

Bone Machine (evil races), *Holy Bombard* (good races), *Trebuchet* (neutral races), *Pixie Catapult* (good races) all from Siege Hall (if I place them in Master's Guild, they come into play too late in the game). *Frigate, War Catamarane* (both in shipyard).

<u>Summons:</u>

Unicorn +animal (I forgot this in MP 1.6, compensates for healing at silver), lose Healing II at gold. Boar Rider: -fury +block at gold Fairy: +healing II at gold (but no longer available as summon, as it's replaced by the nature elemental, it will only be seen as a guard). Great spider: +will power at silver,-smoky haze +UG concealment +trap at gold Bone dragon: -vision IV at gold +unholy champ Minotaur: +block at silver (it does have a shield, but if it starts with block, it's too powerful for a level 2 summon and so we'd need to downgrade attack and defense). Basilisk: -stone skin +cause fear at silver. Gold: +dominate Hell Hound: +cause fear at gold Efreet; +Whirlwind (3/3) at gold. Phoenix: -cause fear at gold +divine breath (3/3)Lurker: +will power at silver Water dancer: +blurred at gold Chaos Spawn: -death strike+extra strike at gold Gold Dragon: +true seeing and night vision from start, +holy champ at silver, +cause fear II at gold. Black dragon: +true seeing from start, +holy champion at silver, +cause fear II at gold.

New summons:

Nature Elemental (life level 3, replaces fairy, which was level 2) Firebird (level 3 secret summon)

Morph abilities for summoned units: Lurker - Deep Lurker Wolf - Dire Wolf Spider - Great Spider Air Elemental - Storm Elemental Firebird - Phoenix Chaos Spawn - Chaos Lord Golden Dragon - Ancient Dragon (Ancient dragon downgraded from original stats and cost 700) Black Dragon - Ancient Dragon (Ancient dragon downgraded from original stats and cost 700)

Stronger priest units: All priest/monk units were given +1 defense (from 6 to 7) – because they are under-used.

Humans:

Human cavalry: gold:+extra strike+throw spear *New Units:* Surveyor, thief, spy, sentinel, ninja assassin *Morph paths:* Halberdier - Sentinel Thief - Spy - Ninja Assassin Cavalry (renamed Squire) - Knight Monk – Chaplain

Tigrans:

Fire cat: +fire immunity at silver (not gold) Cat Master: Gold: -fire protection +desert concealment +control animal Mystic: Gold: +Whirlwind -drain will Sphinx: Gold: -haste +Drain Will II +dominate II Tigrans have few morph units. To compensate, Cat Master is given better upgrades at silver and esp. at gold. Mystic +blessed at gold, manticore: willpower at silver. *New units:* Scorpion, courtesan, Temple Guard (Arshint'tai), Desert Lion, Fedaykin *Morph paths:* Hunter - Prowler Priest - Mystic

Frostlings:

Frostling Ice drake (frostling): Silver -cold strike silver, +cold immunity +enc weapon. Gold: +cold breath +cold strike Berserker: +Charge at gold *New units:* Penguin, lesser northern Gnome, Polar Bear, Dire Boar, Frost Giant. *Morph paths:* Snowscaper - Frost Witch Icedrake Rider - Ice Dragon Yeti - Storm Giant

Nomads:

Nomad elephant: gold: +block+extra strike Nomad pit guard: Reverted to stats almost identical to the 1.3 values (single strike, 10 damage) Roc: Gold: Grasp II (will be very powerful, but they don't get gold often, and the other level 4 units get good upgrades at gold too) Few morph units, although the barbarian should be a good one. Compensation: Horse Archer: MM4 at gold. Djinn: Extra strike at silver. Chieftain: -fury +leadership 4 at gold. *New units:* Sand worm, Mashat'tapei, gladiator, Gypsy Dancer, Azrac Avatar *Morph paths:* Spearman - Elephant Rider Barbarian - Pit Guard

Draconians:

Hydra: -animal at start +water concealment -will power at silver. *New units:* Salamander, Javeliner, Stegadon Rider, Azure Drake, Fire Incarnate *Morph paths:* Charger - Javeliner Priest (draconian apprentice) - Elder Azure Drake - Sky Dragon (new level 4 unit, only available in this way)

Elves:

Nymph: -drain will at gold +taunt (=irresistable sex appeal, but the game doesn't have a "come here" ability other than taunt)

Elf Scout: Silver: +concealment. Gold: -holy champion +haste, free movement, 1st strike. Treeman: +Path of life (at start)

Fairy dragon: +holy champion at gold.

New units: Dryad, Woodland Fairy, Elven Sharpshooter, High Wolf Hound, Ent.

Morph paths: Dryad - Treeman - Ent Priest (druid apprentice) - Druid Alf Archer - Elven Sharpshooter Woodland Fairy - Fairy Dragon

Halflings:

Peasant: Silver: +grass concealment Gold: +taunt

Slinger: Gold: -grass concealment -seeker +mighty meek

Rogue +taunt at silver (-sabotage which is not useful against walls/doors due to the wall climbing), increase price to 70 gold. This will be controversial, so let me hear people's opinions. I think that unit needs taunt, but 70 gold is cheap compared to the swashbuckler's 80 gold - but again, this is only taunt at silver.

New units: Wolf puppy, Satyr, Shire Adventurer, Grove Keeper, Great Eagle. *Morph paths:*

Wolf Puppy - Halfling Wolf (only available this way, similar to dire wolf) Pony Rider - Sheriff Rogue - Shire Adventurer Eagle Rider - Great Eagle

Dwarves:

Engineer: Gold: -tunneling +sabotage II+repair machine III

Steam tank: Gold: -tunneling +fire protection. -block (it is still stronger in combat than either the air galley or the force ship)

Gargoyle: -magic immune (they can now be grounded by double gravity, and giving them liquid form will not ensure they only get 50% damage from physical attacks, as magic based attacks will still hit them. Their low (130) cost and good stats for a level 3 flier makes this a bit of an exploit otherwise, but they are still good value for money. -Dispel magic +sabotage +repair machine. Silver: +sabotage 2 (because the Dwarf Gremlin now morphs into Gargoyle at gold). *New units:* Gremlin Scout, Fire Gremlin, Veteran, Stone Golem, Cyclop

Morph paths: Gremlin Scout - Gargoyle Fire Gremlin - Fire Elemental Berserker – Veteran

<u>Syrons:</u>

Syron spellbinder: Gold: +blurred

Syron changeling: Gold: +holy strike

Syrons have the least valuable morph abilities of all races. To compensate: Syron Gremlin: MM4 at gold. Syron Rider: +mountaineering at start. Giant Warrior: +extra strike at gold. Force Ship: Holy

Bombard (3/3) at silver. *New units:* Syron Fairy, Syron Gremlin, Coati, Syron Magician, Thunderbird. *Morph paths:* Spellbinder - Syron Magician Syron Healer - Syron Magician

Archons:

Legionary: Gold: -sabotage at gold +blessed *New units:* Spirit Puppet, Temple Virgin, Vampire Hunter, High Seer, Cardinal. *Morph paths:* Militia (acolyte) - Priest - High Seer - Cardinal Avenger - Vampire Hunter Cavalry – Charioteer

Dark Elves:

Succubus: Silver: -drain will at silver (too powerful) Gold: +drain will +seduce II at gold -unholy champion *New Units:* Spider Spawn, Shadow, Storm Mage, Nightmare, Naga. *Morph paths:* Spider Spawn - Great Spider (same stats as the shadow demon one, but not racial) Cavalry - Evil Knight (this unit is available as 'upgrade' for dark elf, orc and undead cavalry and is a level 3 cavalry somewhat weaker than the human knight) Priest - Storm Mage Shadow - Shade – Incarnate

Orcs:

Abomination: Gold: +entangle II New units: Kobold, Orc Sniper, Orc Assassin, Warg, Black Knight. Morph paths: Axeman - Warlord Orc Archer - Orc Sniper - Orc Assassin Orc Battlemage - Shaman Orc Cavalry - Evil Knight

Goblins:

Goblin bomber: Silver: +Taunt II. Buildable from temple now, not siege hall). Goblin butcher: Gold: +unholy champ Goblin wyvern: Gold: +cause fear+dark gift Karagh: Silver: +death protection +magic strike *New units:* Grey Gremlins, Goblin Bandit, Goblin Shaman, Dire Fungus, Elder Wyvern. *Morph paths:* Grunt - Butcher Shaman (apprentice) - Goblin Shaman Wyvern Rider - Elder Wyvern

Shadow Demons:

Shadow Demon larva: -infect at silver (parasite has infect). Shadow demon bombard: Gold: -haste +seeker Shadow demon lord: Gold: -haste +cause fear II Few morph units, but they are powerful. Upgrading the lower levels a bit: Stag Mount: Throw spear +MM1 at silver, +Grasp -2 (att 12 dam 10), +death strike at gold. Skimmer: +venomous spit (3/3) at silver, +MM2 at gold. *New units:* Parasite, Firebug, Great Spider, Firebug Queen, Hive Queen. *Morph paths:* Fire Bug - Fire Bug Queen Brain - Hive Queen

<u>Undead:</u>

Vampire: Gold: +seduce II
Bone Horror: Gold: -swallow whole+resurgence
Reaper: Gold: -animate dead +doom gaze +marksmanship I +cause fear II
Necromancer: Start: -dispel magic +MM2 +energy drain. Silver: MM3+resurgence. Gold: MM4, cause fear, path of decay, morph to Soul Collector. Cost increased to 110 gold.
Not that many morph units, to compensate: Swordsman +resurgence at gold. Plaugebringer: +haste and holy immune at gold. Spectre: +true seeing at silver. *New units:* Undead Gremlin, Plaguebringer, Soul Collector, Werewolf, Animated Armor. *Morph paths:*Priest - Necromancer - Soul Collector
Death Knight - Evil Knight

<u>Special units:</u> Parasite: -death imm at silver, +phys protection+phase (this is for fun, how often will we see a silver parasite?) Baby Dragon: -animal

All units that can be morphed INTO get the ability 'shadow walker' (which masks changeling). This has no practical effect (unless shadow world is on!); just explaining why for instance the pit guard now suddenly has shadow walker.

Heroes in Gandalf mod:

Each race now has 5 classes of heroes available (before it was 3-4). There are 6 classes in total: Warrior, Rogue, Ranger, Paladin, Shaman, Priest, and here's a list of which hero type is *not* available to each race:

Humans: Shaman Tigrans: Paladin Draconians: Paladin Frostlings: Paladin Elves: Shaman Halflings: Warrior Dwarves: Shaman Archons: Rogue Dark Elves: Shaman Orcs: Priest Goblins: Priest Undead: Shaman Nomads: Paladin Syrons: Shaman Shadow Demons: Rogue The idea is to provide more heroes (there are 10 level 1 heroes for each race now, while earlier there was max. 6) and to give each class unique upgrade paths (and starting abilities). The characteristics of each hero class is:

Warrior: Strong melee abilities, low resistance. Upgrades primarily fighting skills (extra strike, block, charge etc.), spells not available as upgrade. Double strike no longer available as upgrade, it was too powerful.

Paladin: Good ones start with holy champ, evil with unholy champ, all have magical mount and true seeing. Phase and fighting abilities available as upgrades.

Priests: Start with healing and 20 cps, weak melee stats (-1 att, def and damage compared to the non-warrior heroes). Block, extra strike etc not available as upgrades (weak units, have to be protected by others). A few female priests start with seduce, but this ability is not available as upgrade. Resurrect is available as upgrade for good aligned priests/shamans, animate corpse is available as upgrade for evil aligned priests/shamans.

Rangers: Start with free movement and concealment + ranged attack (darts, arrows, bolts) and marksmanship II (at least), faster than other hero classes. Upgrades along lines of marksmanship, stealth and speed + control animal..

Rogue: Start with concealment+throw blade/arrows/poison darts/bolts +some of these: taunt+wall climbing/sabotage. Upgrades include marksmanship, invisibility, liquid form, no spell casting.

Shaman: Start with control animal+10 cps. Resurrect is available as upgrade for good aligned priests/shamans, animate corpse is available as upgrade for evil aligned priests/shamans.

=Spell casting is available as upgrade = Spell casting *not* available as upgrade

Resurgence upgrade is not available because the hero resurgence is bugged. The hero templates can be seen in the mod under heroes – resources.

Level 5 heroes:

23 level 5 heroes have been added so far. They are very strong, and can only be hired in taverns/inns, price is 350 gold. I may add more heroes, the present heroes are all named after AOW players.

Spirit quest rewards:

Here's a list of the rewards that the shrines can give (well there will be if I get the time!) Note that the game doesn't distinguish between the rewards for an average and a hard quest, so you can get hellfire, for instance, both from an average and a hard quest (and nothing the modmakers can do about it – we would if we could!).

War Shrine: Order Shrine: Magic Shrine: Nature Shrine:

Structure guards and recruitable units:

Structure guards on recruitment structures are generally a bit stronger now. Similarly, the units that can be hired are a bit stronger. There is a precise connection between how strong the guards are, and

how strong the units that can be hired are – the stronger the guards, the stronger the hired units (due to a bug in the code, this isn't always the case in Upatch and MP mods).

Race	Upatch values	MP values	Gandalf Mod	
Humans	Production	Production	50% growth, 100% production -50% mana	
Frostlings	Mana	Mana	-50% growth, 100% mana, 50% production	
Tigrans	Gold	Gold	100% research, 50% gold, -50% growth	
Nomads	None	None	100% gold	
Draconians	Research	50/50 Res/mana	100% research	
Elves	Mana	Mana	100% mana, 50% research, -50% growth	
Dwarves	Production	Production	50% gold, 100% production, -50% growth	
Halflings	Gold	Gold	100% growth	
Syrons	Mana	Mana	100% mana	
Archons	Research	50/50 Res/mana	100% research	
Dark Elves	Mana	Mana	50% research 50% mana	
Orc	Production	Production	100% production	
Goblins	Growth	Growth	150% growth, -50% mana	
Shadow Demons	Production	Production	50% growth 100% production -50% research	
Undead	Research	50/50 Res/mana	50% growth, 100% mana, -50% gold	

Change of racial bonuses:

Any bonus in Upatch or MP 1.6 (except the 50/50 research/mana) adds +5/10/15/20 (outpost/village/town/city) to the resource in question. The 50/50 bonus in MP 1.6 work like this: (mana-research): Outpost/village/town/city: 2-3/5-5/7-8/10-10

The thoughts behind the new bonuses are:

Humans: AOW lore specifies they grow fast; their production bonus is perhaps less well founded, but is 'traditional', the mana penalty follows logical from their lack of spirituality.

Frostlings: The growth penalty is a logical consequence of the harsh environment they live in. The mana bonus is 'traditional', the production bonus to make them viable despite the growth penalty. From a logical viewpoint they should have penalties on all resources...

Tigrans: Research bonus because of their spiritual nature devoted to research. Growth penalty due to harsh environment. Gold bonus is 'traditional'.

Nomads: Gold bonus from the slave trade. That their cities can be relocated doesn't justify denying them a bonus, it is as much a curse as a blessing.

Draconians: Traditional bonus

Elves: Multiply slowly. The bonuses are a function of their spiritual nature

Dwarves: Industrious race, and they love collecting gold, but they multiply slowly. **Halflings:** Multiply fast

Syrons: Hard to justify values on their 'history', using traditional value.

Archons: 'traditional' bonus, insight into higher mysteries

Dark Elves: Could be same as elves, but these value is another possibility.

Orcs: Traditional bonus.

Goblins: Well AOW lore says they multiply REALLY fast, mana penalty is a fine balance. Shadow Demons: Efficient hive society and reproduction, but society type not fit for research. Undead: Multiply fast by scouring the graveyards, and suck mana from the air, but aren't good merchants, as people tend to shy away from them, and they aren't good farmers either...

It is tempting to play around a lot more with these racial bonuses and make the races more unique, but the problem is if you give one race a decisive advantage (for instance super growth to the goblins), you would need to weaken its units or make them more expensive, or of lower quality, and this would remove Gandalf Mod more from MP and the Upatch than I am interested in at present. More radical changes in bonuses than what I'm doing here really would be a new mod (which is interesting enough in itself), but I'm actually trying to stick with the original concept here.

	New town/city bonuses:					
Race	Gandalf Mod	Outpost	Village	Town	City	
Humans	50% growth, 100% production -50% mana	+3 growth +5 prod. -3 mana	+5 growth +10 prod. -5 mana	+7 growth +10 prod. -7 mana	+10 growth +20 prod. -10 mana	
Frostlings	-50% growth, 100% mana, 50% production	-3 growth +5 mana +3 prod	-5 growth +10 mana +5 prod	-7 growth +15 mana +7 prod	-10 growth +20 mana +10 prod	
Tigrans	100% research, 50% gold, -50% growth	+5 research +3 gold -3 growth	+10 research +5 gold -5 growth	+15 research +7 gold -7 growth	+20 research +10 gold -10 growth	
Nomads	100% gold	+5 gold	+10 gold	+15 gold	+20 gold	
Draconians	100% research	+5 research	+10 research	+15 research	+20 research	
Elves	100% mana, 50% research, -50% growth	+5 mana +3 research -3 growth	+10 mana +5 research -5 growth	+15 mana +7 research -7 growth	+20 mana +10 research -10 growth	
Dwarves	50% gold, 100% production, -50% growth	+3 gold + 5 prod - 3 growth	+5 gold + 10 prod - 5 growth	+7 gold + 15 prod - 7 growth	+10 gold + 20 prod - 10 growth	
Halflings	100% growth	+5 growth	+10 growth	+15 growth	+20 growth	
Race	Gandalf Mod	Outpost	Village	Town	City	
Syrons	100% mana	+5 mana	+10 mana	+15 mana	+ 20 mana	
Archons	100% research	+5 research	+10 research	+15 research	+20 research	
Dark Elves	50% research 50% mana	+3 research +2 mana	+5 research +5 mana	+7 research +8 mana	+10 research +10 mana	
Orc	100% production	+5 prod	+10 prod	+15 prod	+ 20 prod	
Goblins	150% growth,	+8 growth	+15 growth	+23 growth	+30 growth	

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	-50% mana	-3 mana	- 5 mana	-8 mana	-10 mana
Shadow Demons	50% growth 100% production -50% research	+3 growth +5 prod -3 research	+5 growth +10 prod -5 research	+7 growth +15 prod -7 research	+10 growth +20 prod -10 research
Undead	50% growth, 100% mana, -50% gold	+3 growth +5 mana -3 gold	+5 growth +10 mana -5 gold	+ 7 growth +15 mana -7 gold	+10 growth +20 mana -10 gold

Bugs and fixes:

Heroes:

Seduce and dominate should now FINALLY be eliminated as upgrade possibilities. No heroes should *start* with path of frost or path of decay – let me know if any have (names please!) and I'll correct it. Path of frost is available for frostling heroes as upgrade though, and path of decay for evil heroes, path of life for good heroes (only for priests and shamans, in all cases). Pole Arm and double strike should now be removed from all level 1 heroes – and is not available as upgrades. So, if you see a level 1 hero that starts with one of these abilities, or God forbid it, gets it as an upgrade, then PLEASE let me know!

Holy Bombard:

The only unit that's supposed to have the holy bombard ability is the holy catapult (at present). If other units have it, please let me know, they should then be replaced by the lightning bolts ability.

Items:

The armors with resurgence that I made work now (they didn't earlier). If any other items don't work as their abilities say they should, please let me know.

New structure guards and hireable units:

I added a number of new structure guards to mines, windmills, furnaces and to the structures where you can hire units. Also added new hireable creatures. This should all work now, but response as to whether the hired units (or guards) are too strong (or too weak), is welcome. If druid circles or lairs appear *without* guards, please let me know, but that risk should be eliminated.